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February 25, 2019
File No. 20.0155935.01

Mr. Michael M. Schmoller, Advanced Hydrogeologist
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, Wisconsin 53711-5367

Re: 2018 Semi-Annual (November 2018 Event) Groundwater Sampling Report
Trent Tube Plant No. 1
2188 Church Street
East Troy, Wisconsin
BRRTS #02-65-245827

Dear Mr. Schmoller:

GZA GeoEnvironmental, Inc. (GZA) is pleased to submit the 2018 Semi-Annual Groundwater Sampling Report on behalf of EnPro Industries, Inc. (EnPro Holdings) for the Trent Tube Plant No. 1 site in the Village of East Troy, Wisconsin ("Site"). This report presents a summary of the groundwater sampling activities performed in November 2018, and provides a geochemical evaluation of the current groundwater conditions relating to the degradation of chlorinated hydrocarbons dissolved in groundwater. Please note that this report is subject to the limitations provided in Attachment 1.

From November 27 through 29, 2018, GZA completed semi-annual groundwater monitoring and sampling field activities at the Site. The field activities included measurement of groundwater levels, collection of groundwater samples, and the measurement of field parameters from 18 monitoring wells across the Site. This event did not include collection of samples from the recovery wells associated with the Groundwater Extraction and Treatment System (GETS).

During the period since the annual groundwater sampling report was submitted in August 2018, the GETS operated with required and routine operation and maintenance activities. Effluent samples were collected from the groundwater discharge and the volatile organic compound (VOC) concentrations were below permitted limits established in the General Wisconsin Pollutant Discharge Elimination System (WPDES) Permit. The results of the discharge monitoring are reported to the Wisconsin Department of Natural Resources (WDNR) quarterly on the Discharge Monitoring Report form.

This report, including the groundwater sampling results, is being submitted to satisfy the requirements for submittal of progress in accordance with Wisconsin Administrative Code (WAC) Chapter NR 724.13(3) for operation and maintenance of remedial systems. The results of this most recent groundwater sampling will also be used to confirm the mass of chlorinated hydrocarbons in groundwater and partitioning from soil to groundwater, and to evaluate cost-effective alternative remedial measures to promote the re-use of the Site and closure under WAC NR 726.

GROUNDWATER MONITORING AND SAMPLING RESULTS

Groundwater samples were collected from 18 monitoring wells from November 27 to 29, 2018 using low-flow sampling techniques in accordance with the procedures specified in the WDNR Groundwater Sampling Field Manual (PUBL-DG-03896). The sampled wells included the wells

previously approved for sampling by the WDNR. Ten of the monitoring wells were also sampled using bailer purging and sampling methods to compare the results of the two sampling methods. The low-flow sampling technique and monitoring of field parameters (pH, temperature, specific conductivity, dissolved oxygen [DO], turbidity, and oxidation-reduction potential [ORP]) were performed by GZA prior to the purging and sampling using the bailer method performed by a representative from RJR LLC, the previous environmental consultant. This comparison was performed to evaluate if and to what extent sampling methods influence sample concentrations.

Water Level Measurements

Water level measurements, referenced to the top of PVC monitoring well casing, were measured in each well prior to well purging and sampling. The water levels were measured using a Solinst™ water level indicator. GZA decontaminated all equipment prior to and between sampling of each well location.

The depth to groundwater varied across the Site from approximately 1 to 15 feet below ground surface (bgs) depending on location. The depth to groundwater on the northern portion of the Site, near Church Street, ranged from 4 to 6 feet bgs; this depth to groundwater appears to be consistent with the depth to water in the Mill Pond on the east side of Highway 120. On the eastern portion of the Site, east of the area of consolidation, the depth to groundwater ranged from 1 to 2 feet bgs; this is consistent with the topography, as this area is at a lower elevation than the western portion of the Site and the monitoring wells are in the area of the former lagoon and channel used by the former manufacturing processes. On the southern portion of the Site along Highway 120, the depth to groundwater ranged from 9 to 15 feet bgs, as this portion of the Site appears to be filled to accommodate the former buildings, the depth to groundwater appears to increase in the direction of Honey Creek.

The depth to groundwater measurements collected from each well were used to calculate the groundwater elevation in each well and to prepare a groundwater potentiometric surface map for the shallow groundwater system. Table 1 presents a summary of the groundwater elevations. Figure 1 presents the potentiometric surface for the November 2018 sampling event.

The horizontal direction of groundwater flow at the Site is generally to the south toward Honey Creek. As groundwater treatment system was operating at the time of the measurements, a depressed area of groundwater is located around the extraction wells along Honey Creek. The horizontal hydraulic gradient varies across the Site. The average horizontal hydraulic gradient on the northern portion of the Site is 0.019 feet per foot (ft/ft). Along Honey Creek, the average hydraulic gradient increases to 0.042 ft/ft. The horizontal groundwater flow direction and hydraulic gradient are consistent with the topography of the Site. Flow is toward Honey Creek, which represents a discharge point for shallow groundwater flow at the Site. There is limited groundwater elevation data in the area south of Honey Creek, but the creek appears to provide a hydraulic barrier that limits migration of groundwater beyond the creek.

The area of consolidation in the eastern portion of the Site does not appear to change the shallow groundwater flow direction or depth to groundwater. The area of consolidation is an area of fill that meets the existing surface grade on the west and is approximately 6 to 8 feet above the apparent grade to the east. The depth to groundwater in this area is approximately 9 feet bgs.

Groundwater Sampling

Following the collection of groundwater level measurements, GZA purged 18 of the monitoring wells using low-flow sampling techniques. The wells were purged using a peristaltic pump equipped with dedicated polyethylene tubing and a multi-meter equipped with a flow-through cell to measure field parameters (pH, temperature, DO, ORP, turbidity, and specific conductance). In accordance with WDNR's sampling requirements, the tubing intake was set in each well based on the mid-point of the screen if the top of the well screen was below the groundwater interface or in the middle of the water column in the well if the groundwater interface was within the well screen section.

The well purge rate (typically less than 300 milliliters per minute [ml/min]) was set to minimize drawdown. The well was purged until the field parameters stabilized with specified limits for the low-flow sampling techniques. The groundwater samples at each well were collected directly from the polyethylene tubing by disconnecting the tubing between the peristaltic pump and the flow-through cell. The groundwater samples were collected directly into laboratory-supplied and properly preserved sample containers. The groundwater purged from each well was collected in 5-gallon buckets and placed in a sump that discharges to the on-Site GETS for treatment.

During purging, field parameters were measured using a YSI 556 MPS Multimeter water quality meter and a Lamotte 2200we turbidity meter. A summary of the final stabilized field parameter measurements for each well is presented on Table 2.

Following sample collection, the samples were placed on ice in an insulated cooler and were shipped to Pace Analytical Services, Inc. of Green Bay, Wisconsin (WDNR ID No. 405132750) via overnight carrier. The groundwater samples were analyzed for VOCs by United States Environmental Protection Agency (USEPA) Method 8260, ethene and ethane by USEPA Method 8015B Modified, dissolved iron and manganese by USEPA Method 6010, nitrate and sulfate by USEPA Method 300.0, alkalinity by USEPA Method 310.2, and total organic carbon (TOC) by EPA Method SM 5310C.

For quality assurance/quality control (QA/QC) purposes, one set of duplicate samples was collected from MW-19 and analyzed for ethane and ethene, dissolved iron and manganese, VOCs, nitrate and sulfate, and alkalinity. Two trip blanks were analyzed for VOCs. Equipment blanks were not collected because GZA used new disposable tubing and laboratory-supplied transfer containers to sample at each well. QA/QC samples were processed and handled using the same protocol as the actual samples. Concentrations detected in duplicate samples were similar to concentrations detected in the corresponding original samples. The trip blank results showed no detected constituents. The laboratory analytical reports, and chain-of-custody forms for the groundwater samples collected in November 2018, are provided in Attachment 2.

Groundwater Analytical Results and Interpretations

The groundwater contaminants of concern at the Site are chlorinated hydrocarbons, primarily, trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride. Two areas at the Site exceeded the WDNR Enforcement Standard (ES) for chlorinated hydrocarbons. One area is on the northern portion of the Site near MW-17. The second area is on the southern portion of the Site along Honey Creek. Figures 2, 3, and 4 illustrate the groundwater distribution of TCE, cis-1,2-DCE, and vinyl chloride, respectively.

TCE exceeded the ES in the following six monitoring wells: MW-2, MW-4, MW-16, MW-17, OP-2, and OP-3. Tetrachloroethene (PCE) was detected above the ES in monitoring well MW-2, and at concentrations that exceeded the Preventive Action Limit (PAL) in the following four monitoring wells: MW-4, MW-16, MW-17, and OP-3. The wells with concentrations of PCE or TCE are located in areas that are beneath or downgradient of the former building.

The groundwater analytical results indicate the presence of not only TCE, but also the daughter products of TCE, confirming that natural processes are degrading the chlorinated hydrocarbons in some portions of the Site. A review of the detections of daughter products in groundwater indicated the following observations:

- MW-2 and MW-4 have TCE concentrations exceeding the ES. There is limited cis-1,2-DCE in the groundwater and no vinyl chloride detection in these wells. This is an indication that the geochemical parameters for natural attenuation, namely organic carbon and Eh, are limited in this area. These wells are located on the west side of the Site near Highway 120.
- MW-16, MW-17, and OP-3 have TCE concentrations exceeding the ES. Daughter products (cis-1,2-DCE and vinyl chloride) were detected in these wells. The detection of the daughter products in these wells suggests that natural degradation processes are occurring and that groundwater conditions are favorable for enhancement of reduction dechlorination.

- Ethene was detected in MW-17, MW-19, OP-3, and OP-9. The presence of the dissolved gas ethene in the groundwater samples suggests that geochemical conditions of the shallow aquifer in certain areas of the Site are favorable and that the dechlorination process is proceeding to completion. The completion of the dechlorination process may be limited by other geochemical factors that can readily be enhanced to increase the rate of natural attenuation.
- The groundwater samples collected from the wells south of Honey Creek (MW-25, MW-27, and MW-29) did not have detections of chlorinated hydrocarbons in the groundwater. The continued absence of chlorinated hydrocarbons in these wells confirms that Honey Creek represents a hydraulic barrier to the migration of contaminants beneath and south of Honey Creek.

A further discussion of the natural degradation of the chlorinated hydrocarbons and the groundwater conditions at the Site is provided in the Field Parameter Results section below.

To evaluate the change in constituent concentrations over time, the groundwater analytical results from the November 2018 sampling event were compared to the groundwater results of the November 2017 sampling event. Observations noted from this comparison are:

- TCE increased in concentration in the following three monitoring wells: MW-2, MW-16, and OP-3. The increase of TCE in MW-2 (3,370 micrograms per liter [µg/l] in 2017 to 13,800 µg/l in 2018) was the greatest fluctuation observed.
- TCE decreased in concentration in the following five monitoring wells: MW-04, MW-17, MW-37, OP-2, and OP-9.
- TCE decreased to concentrations less than the ES in the following two monitoring wells: MW-37 and OP-9.

Table 3 presents a comparison of the groundwater results from the November 2017 and November 2018 groundwater sampling events.

The concentration fluctuations observed between the groundwater sample results from 2017 and 2018 may be related to normal seasonal groundwater fluctuations and partitioning from soil to groundwater, with the possible exception of the increase of TCE in the groundwater sample collected from MW-2, which may be the result of TCE-affected groundwater migrating from a source area in the South Pickling Area toward the extraction wells. Changes in constituent concentrations will be monitored in the future sampling events and in performance evaluations following pilot testing of remedial alternatives.

The results of the comparison between the low-flow and bailing sample methods were inconclusive. Variations included both increases and decreases in concentrations. The comparison data will be further evaluated and will be included in the Conceptual Site Model (CSM) document.

Field Parameter and Geochemical Results

The field parameter measurements provide an indication of the groundwater geochemical conditions that exist at the Site. The chlorinated hydrocarbons present in groundwater can degrade through natural processes by serving as an electron donor or acceptor, if favorable groundwater conditions exist and persist. In general, chlorinated hydrocarbons are degraded most efficiently under anaerobic, reducing conditions. The field parameters that indicate these types of conditions include DO and ORP. Degradation of chlorinated hydrocarbons is most favorable and can proceed to completion in the absence of DO. As such, DO concentrations less than 0.5 milligrams per liter (mg/l) generally represent favorable conditions for the degradation of TCE. The ORP (Eh) indicates if the groundwater conditions are oxidizing or reducing. Chlorinated hydrocarbons are degraded under reducing conditions. The ORP measurements favorable of degradation are generally less than 0 millivolts (mV).

Table 4 presents a graphical summary of the indicator parameters with optimal values that indicate favorable conditions for the reductive dichlorination of TCE. On Table 4, the plus (+) sign indicates that the parameter meets the optimal values

and groundwater conditions for reductive dechlorination are favorable for that parameter. The minus (-) sign indicates that the parameter does not meet the optimal value and may need to be enhanced to promote the reductive dechlorination of TCE in the area. The double arrow (↔) indicates that the parameter is near, but does not meet the optimal value, and may also need to be enhanced to promote the reductive dichlorination of TCE.

In general, the two parameters that may be limiting the reductive dichlorination of TCE in groundwater at the Site are DO and TOC. The DO was less than 0.5 mg/l in only four monitoring wells. However, the DO measured in the groundwater samples collected from seven other monitoring wells had values near the optimal value. The TOC concentrations were significantly less (1.6 to 7.9 mg/l) than the optimal value 20 mg/l. The TOC provides an electron donor and energy source for naturally occurring microbes to use during the degradation processes, where TCE serves as the electron acceptor. The limitation of the TOC concentration reduces the amount of microbial activity and also likely influences the DO concentration in the groundwater. However, the TOC can readily be increased in the aquifer through the addition of reagents, an approach that will be evaluated further by GZA as an alternative remedy.

In the area of MW-2 and MW-4, there are concentrations of TCE, but limited daughter products. In these wells, the DO ranged from 2.02 to 6.79 mg/l and the Eh ranged from 26.5 to -193 mV. There are indications that the reductive dechlorination of TCE is likely possible but is not currently occurring either to completion or at a rate to reduce the chlorinated hydrocarbon concentrations in groundwater. In this area, the Eh appears to be favorable, suggesting that an amendment to the groundwater could significantly enhance the natural degradation processes.

In the area of OP-3 and MW-16, there are concentrations of TCE and daughter products that indicate the reductive dechlorination of TCE is occurring. In addition, the DO and ORP in this area are favorable for the reductive dechlorination of TCE.

In MW-17, the concentrations of TCE and daughter products indicate that the reductive dechlorination of TCE is occurring. However, in MW-37R, located approximately 60 feet downgradient of MW-17, the TCE concentration is less than the ES and the daughter products were not detected above the method detection limit in this sample. This is an indication that the reductive dechlorination processes are controlling the migration of the chlorinated hydrocarbons.

Overall, the field parameter and geochemical analyses indicate that the groundwater conditions at the Site are generally favorable for, but could be enhanced to promote the reductive dichlorination of TCE to completion.

CONCLUSIONS

Based on the results of the groundwater sampling performed in November 2018 and a comparison with the November 2017 sampling results, a summary of the groundwater conditions at the Site are presented below:

- The horizontal direction of groundwater flow across the Site is to the south toward Honey Creek at an average horizontal hydraulic gradient of 0.018 ft/ft. The hydraulic gradient near Honey Creek increases due to the operation of the GETS wells along the creek.
- Chlorinated hydrocarbons were detected above the ES in two general areas of the Site: one on the northern portion of the Site along Church Street and one area along Honey Creek near the GETS wells.
- The groundwater results indicate that in the area of MW-2 and MW-4, the constituents detected were primarily the parent product (TCE) with little or no daughter products.
- The groundwater results in the area of MW-16 and OP-3 indicate the constituents detected included both the parent product and the daughter products.
- A comparison of the groundwater analytical results from November 2017 and November 2018 indicate that the concentrations have increased and decreased in individual wells due to seasonal variations with the possible

exception of TCE detected in the groundwater samples collected from MW-2, which increased in concentration by several orders of magnitude.

- The field parameters indicate that reductive dichlorination of TCE may be limited, but could be enhanced in the area of MW-2 and MW-4.
- The TOC concentrations measured in groundwater indicate that dissolved organic carbon may represent a limiting factor in the reductive dichlorination of TCE, as organic carbon was reduced and can serve as an electron donor. However, the organic carbon could be amended to create favorable conditions for the reductive dichlorination of TCE to completion.

NEXT STEPS

Based on the groundwater sampling performed from November 27 to 29, 2018, the following activities are anticipated to be completed by GZA in 2019:

- A comparison of the mass of dissolved chlorinated hydrocarbons in groundwater from 2018 to previous sampling events;
- Completion of a CSM that describes the geologic and hydrogeologic conditions at and near the Site, the distribution and fate of the chlorinated hydrocarbons in groundwater, and the existing geochemical conditions;
- Development of a work plan for pilot testing for the delivery and performance evaluation of an electron donor to promote the reductive dichlorination of TCE to completion; and
- An evaluation of the GETS to determine its effectiveness at groundwater capture and possibly also recirculation as part of a comprehensive remedial strategy to address the groundwater contaminants at the Site.

Thank you for your consideration of GZA. If you have any questions regarding this information, please contact me at (262) 754-2578 or by email at kevin.hedinger@gza.com.

Sincerely,

GZA GeoEnvironmental, Inc.

Kevin M. Hedinger
Senior Hydrogeologist

James F. Drought, P.H.
Principal Hydrogeologist

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Attachments: Tables 1 through 4
Figures 1 through 4
Limitations
Laboratory Analytical Reports and Chain-of-Custody Forms

cc: Benne Hutson, EnPro Industries, Inc.
Charles Merrill, Husch Blackwell LLP
Phillip Bower, Husch Blackwell LLP

TABLES

TABLE 1
GROUNDWATER ELEVATION SUMMARY
November 27-29, 2018
Trent Tube Plant No. 1
East Troy, Wisconsin

WELL ID	DATE	GROUND SURFACE ELEVATION* (feet amsl)	TOC ELEVATION (feet)*	DEPTH TO WATER (feet)	DEPTH TO BOTTOM (feet)	GROUNDWATER ELEVATION (feet)
MW-1R	11/27/18	838.16	839.95	13.46	25.06	826.49
MW-2	11/27/18	834.33	836.80	10.93	13.97	825.87
MW-4	11/27/18	837.25	839.97	13.03	22.20	826.94
MW-4A	11/27/18	837.40	838.76	14.16	NM	824.60
MW-6	11/27/18	831.28	833.21	19.87	NM	813.34
MW-6A	11/27/18	830.94	833.29	15.62	NM	817.67
MW-7R	11/27/18	820.44	824.44	6.48	13.80	817.96
MW-8	11/27/18	818.54	821.61	3.61	NM	818.00
MW-11	11/27/18	837.80	844.33	11.59	18.65	832.74
MW-12	11/27/18	832.84	839.27	12.91	20.70	826.36
MW-15	11/27/18	830.17	832.63	13.58	19.00	819.05
MW-16	11/27/18	837.20	839.39	11.64	26.50	827.75
MW-17R	11/27/18	837.12	839.24	7.13	19.20	832.11
MW-19	11/27/18	818.80	822.59	4.70	10.41	817.89
MW-20	11/27/18	819.58	823.72	5.41	11.55	818.31
MW-21	11/27/18	837.31	840.18	7.83	NM	832.35
MW-22	11/27/18	837.27	836.89*	NM	NM	NM
MW-23	11/27/18	817.81	820.69*	NM	NM	NM
MW-24	11/27/18	817.38	820.19*	NM	NM	NM
MW-25	11/27/18	824.42	823.63	5.63	14.95	818.00
MW-26	11/27/18	819.51	822.02*	NM	NM	NM
MW-27	11/27/18	820.59	827.52	4.43	14.05	823.09
MW-28	11/27/18	820.25	823.01*	NM	NM	NM
MW-29	11/27/18	825.57	828.91	5.92	14.98	822.99
MW-30	11/27/18	820.45	822.57*	NM	NM	NM
MW-31	11/27/18	821.10	824.01*	NM	NM	NM
MW-32D	11/27/18	820.86	823.61*	NM	NM	NM
MW-32S	11/27/18	820.57	822.88*	NM	NM	NM
MW-33	11/27/18	840.86	840.61*	NM	NM	NM
MW-34	11/27/18	833.05	832.64*	NM	NM	NM
MW-35	11/27/18	827.32	829.87*	NM	NM	NM
MW-36	11/27/18	826.97	829.47*	NM	NM	NM
MW-37R	11/27/18	837.6	839.41	7.90	20.75	831.51
OP-1	11/27/18	836.56	839.55	19.70	NM	819.85
OP-2	11/27/18	833.55	836.69	17.1	22.65	819.59
OP-3	11/27/18	830.74	831.29	16.53	19.50	814.76
OP-4	11/27/18	832.8	836.07	18.09	NM	817.98
OP-5	11/27/18	831.53	833.12	15.57	NM	817.55
OP-6	11/27/18	829.86	830.78	DRY	NM	NM
OP-7	11/27/18	828.27	831.71	15.00	NM	816.71
OP-8	11/27/18	819.61	830.30	13.68	NM	816.62
OP-9	11/27/18	836.26	838.54	11.73	27.35	826.81
OP-10	11/27/18	830.33	832.72	7.66	NM	825.06
OP-11	11/27/18	837.48	839.17	13.80	NM	825.37
OP-12	11/27/18	837.82	840.09	DRY	NM	NM
OP-13	11/27/18	837.78	839.93	DRY	NM	NM
OP-14	11/27/18	834.9	837.86	13.79	NM	824.07
OP-15	11/27/18	834.51	838.50	16.95	NM	821.55
OP-16	11/27/18	834.99	837.99	18.53	NM	819.46

TABLE 1
GROUNDWATER ELEVATION SUMMARY
November 27-29, 2018
Trent Tube Plant No. 1
East Troy, Wisconsin

WELL ID	DATE	GROUND SURFACE ELEVATION* (feet amsl)	TOC ELEVATION (feet)*	DEPTH TO WATER (feet)	DEPTH TO BOTTOM (feet)	GROUNDWATER ELEVATION (feet)
PZ-1	11/27/18	NA	839.76	15.44	NM	NM
RW-1	11/27/18	833.9	831.94	17.44	NM	814.50
RW-2	11/27/18	830.23	829.30	11.11	NM	818.19
RW-3	11/27/18	831.4	830.35	16.58	NM	813.77
RW-4	11/27/18	831.81	830.40	14.53	NM	815.87
RW-5	11/27/18	832.21	830.34	16.16	NM	814.18
RW-6	11/27/18	831.75	829.65	16.95	NM	812.70
RW-7	11/27/18	830.2	827.94	15.36	NM	812.58
RW-8	11/27/18	836.9	840.48	12.60	NM	827.88
RW-10	11/27/18	830.05	828.79	17.64	NM	811.15
RW-11	11/27/18	829.67	828.09	16.20	NM	811.89
RW-12	11/27/18	829.93	827.86	14.52	NM	813.34
RW-13	11/27/18	830.12	830.23	15.50	NM	814.73
RW-14	11/27/18	830.08	829.30	15.22	NM	814.08
RW-15	11/27/18	829.42	827.80	13.78	NM	814.02
RW-16	11/27/18	835.09	833.66	20.92	NM	812.74
RW-17	11/27/18	836.19	834.54	20.72	NM	813.82
RW-18	11/27/18	836.03	834.55	20.60	NM	813.95
RW-19	11/27/18	836.37	834.70	21.20	NM	813.50
RW-20	11/27/18	835.53	833.98	19.82	NM	814.16
RW-21	11/27/18	834.8	833.28	16.36	NM	816.92
RW-22	11/27/18	832.75	832.54	17.88	NM	814.66
RW-23	11/27/18	830.85	830.04	16.77	NM	813.27
RW-24	11/27/18	831.56	830.48	15.64	NM	814.84
RW-25	11/27/18	832.85	831.12	16.94	NM	814.18
RW-26	11/27/18	830.24	829.30	16.62	NM	812.68
RW-27	11/27/18	828.7	826.95	10.54	NM	816.41
RW-28	11/27/18	830.07	828.60	17.20	NM	811.40

Notes:
1. amsl = above mean sea level.
2. TOC = top of casing.
3. NM = not measured.

TABLE 2
SUMMARY OF FIELD PARAMETER MEASUREMENTS
November 27-29, 2018
Trent Tube Plant No. 1
East Troy, Wisconsin

Well ID	Dissolved Oxygen (mg/l)	Oxidation-Reduction Potential (mV)	Conductivity (mS/cm)	Temperature (°C)	pH
MW-1R	3.29	46.2	0.969	12.13	10.24
MW-2	2.02	26.5	0.56	11.13	12.2
MW-4	6.79	-193	0.388	11.78	8.28
MW-7R	1.27	-225.4	0.784	8.98	8.37
MW-11	4.79	19.7	0.5	11.09	11.18
MW-12	1.48	-47.4	0.78	10.63	10.94
MW-15	1.33	-192.6	0.916	9.24	7.68
MW-16	1.63	-290.1	0.518	11.64	8.59
MW-17R	1.2	-4.9	0.61	10.89	14.69
MW-19	0.5	-72.7	0.768	7.81	6.19
MW-20	1.63	-283	0.58	7.88	8.79
MW-25	0.73	-171.5	1.102	8.44	8.7
MW-27	1.6	1.7	1.44	9.8	10.05
MW-29	4.19	-169.1	0.753	7.4	8.56
MW-37R	6.14	34.5	0.32	10.28	10.89
OP-2	2.02	-209.2	0.544	10.75	8.32
OP-3	0.55	-216.5	0.515	9.2	8.21
OP-9	0.53	-196.3	1.421	11.42	7.68

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
November 2017 and November 2018
Trent Tube Plant No. 1
East Troy, Wisconsin

Well Name	Sample Name	Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Benzene	Chloroethane	Methylene Chloride	Naphthalene	Tetrachloroethene	Toluene	Trichloroethene	Vinyl chloride	cis-1,2-Dichloroethene	o-Xylene	trans-1,2-Dichloroethene	Ethane	Ethene	Iron, Dissolved	Manganese, Dissolved	Nitrate as N	Sulfate (mg/L)	Alkalinity, Total as CaCO3 (mg/L)	Total Organic Carbon (mg/L)
	PAL		40	0.5	85	0.7	0.5	0.5	80	0.5	10	0.5	160	0.5	0.02	7	NE	20	NE	NE	NE	60	NE	NE	NE	NE
	ES		200	5	850	7	5	5	400	5	100	5	800	5	0.2	70	NE	100	NE	NE	NE	300	NE	NE	NE	NE
MW-1	MW-1R	11/21/2017	<0.5	<0.2	0.81 J	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	0.37 J	<0.18	<0.26	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-01R	11/29/2018	1.3	<0.55	0.4 J	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	0.37 J	<0.17	0.27 J	<0.17	<0.27	<0.26	<1.1	<0.58	<0.52	<35.4	50.3	680	200	280	NA
MW-2	MW-2	11/21/2017	33.8 J	<7.9	<9.7	<16.4	<6.7	<20	<15	<9.3	<100	<20	<20	**3,370**	<7	<10.2	<20	<10.3	NA	NA	NA	NA	NA	NA	NA	NA
	MW-2	11/28/2018	15	*0.93*	2.3	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	**5.7**	<0.17	**13,800**	<0.17	4.7	<0.26	<1.1	<0.58	<0.52	<35.4	1.9 J	240	97.1	276	1.9
MW-4	MW-4	11/20/2017	9.3 J	<2	9.8 J	<4.1	<1.7	<5	<3.7	4 J	<25	<5	<5	**894**	<1.8	*52.1*	<5	<2.6	NA	NA	NA	NA	NA	NA	NA	NA
	MW-04	11/28/2018	4.1	<1.4	2.9	<0.61	<0.7	<0.62	<3.4	<1.5	<2.9	*2.5*	<0.43	**202**	<0.44	*18.6*	<0.65	<2.7	<0.58	<0.52	<35.4	18.8	<75	48.5	279	NA
MW-7	MW-7	11/20/2017	<0.5	<0.2	0.25 J	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	0.33 J	<0.18	<0.26	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-07R	11/27/2018	<0.24	<0.55	<0.27	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	0.3 J	<0.17	0.28 J	0.26	<1.1	<0.58	<0.52	1380	**638**	<75	44.7	698	7.9
MW-11	MW-11	11/21/2017	<0.5	<0.2	<0.24	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	<0.33	<0.18	<0.26	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-11	11/28/2018	<0.24	<0.55	<0.27	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	<0.26	<0.17	<0.27	<0.26	<1.1	<0.58	<0.52	<35.4	9.3	2400	30.7	333	1.6
MW-12	MW-12	11/20/2017	<0.5	<0.2	<0.24	<0.41	<0.17	<0.5	0.69 J	<0.23	<2.5	<0.5	<0.5	<0.33	0.3 J	<0.26	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-12	11/28/2018	<0.24	<0.55	<0.27	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	<0.26	<0.17	<0.27	<0.26	<1.1	16.2	<0.52	17600	*175*	<380	<5	590	NA
MW-15	MW-15	11/20/2017	8	<0.2	8.1	<0.41	<0.17	<0.5	<0.5	<0.23	*28.1*	<0.5	<0.5	*1.5*	**16.2**	*65.7*	<0.5	0.46 J	NA	NA	NA	NA	NA	NA	NA	NA
	MW-15	11/27/2018	31.6	<0.55	27.2	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	*2.9*	**0.39 J**	1.5	<0.26	<1.1	<0.58	0.57 J	<35.4	4.9 J	<75	173	729	NA
MW-16	MW-16	11/20/2017	*72.1*	<0.2	69.4	*1.2*	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	**36.5**	**0.22 J**	*58.5*	<0.5	0.6 J	NA	NA	NA	NA	NA	NA	NA	NA
	MW-16	11/28/2018	**1,130**	<0.55	*133*	**21.7**	<0.28	<0.25	<1.3	<0.58	<1.2	*0.79*	<0.17	**135**	**3.7**	**1,200**	<0.26	4.5	<0.58	<0.52	396	42.8	<75	59.5	465	3.1
MW-17	MW-17R	11/20/2017	<5	<2	4.7 J	<4.1	<1.7	<5	<3.7	<2.3	<25	<5	<5	**958**	**34.5**	**482**	<5	*45.2*	NA	NA	NA	NA	NA	NA	NA	NA
	MW-17R	11/28/2018	<0.24	<0.55	2.2	*0.97*	<0.28	*0.57*	<1.3	<0.58	<1.2	*2*	0.53 J	**583**	**17.5**	**215**	<0.26	17.9	<0.58	0.95 J	<35.4	<1.1	310	217	61.1	NA
MW-19	MW-19	11/21/2017	<0.5	<0.2	<0.24	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	<0.33	**0.26 J**	<0.26	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-19	11/29/2018	<0.24	<0.55	0.36 J	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	<0.26	**2.1**	<0.27	<0.26	<1.1	3.7 J	1.1 J	21400	**2,300**	<380	12.9 J	728	NA
	MW-19 DUP	11/29/2018	<0.24	<0.55	0.29 J	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	<0.26	**2.2**	<0.27	<0.26	<1.1	4.3 J	1.4 J	20200	**2,220**	<380	12.8 J	673	NA
MW-20	MW-20	11/20/2017	<0.5	<0.2	<0.24	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	<0.33	<0.18	<0.26	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-20	11/27/2018	<0.24	<0.55	<0.27	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	<0.26	<0.17	<0.27	<0.26	<1.1	<0.58	<0.52	127	**422**	<75	53.5	553	NA
MW-25	MW-25	11/21/2017	<0.5	<0.2	<0.24	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	<0.33	<0.18	<0.26	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-25	11/29/2018	<0.24	<0.55	<0.27	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	<0.26	<0.17	<0.27	<0.26	<1.1	<0.58	<0.52	2210	**673**	<75	566	460	NA
MW-27	MW-27	11/21/2017	<0.5	<0.2	<0.24	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	<0.33	<0.18	0.26 J	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-27	11/29/2018	<0.24	<0.55	<0.27	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	<0.26	<0.17	<0.27	<0.26	<1.1	<0.58	<0.52	3370	**944**	<380	<5	497	NA
MW-29	MW-29	11/21/2017	<0.5	<0.2	<0.24	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	<0.33	<0.18	<0.26	<0.5	<0.26	NA	NA	NA	NA	NA	NA	NA	NA
	MW-29	11/29/2018	<0.24	<0.55	<0.27	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	<0.26	<0.17	<0.27	<0.26	<1.1	<0.58	<0.52	<35.4	<1.1	17200	530	221	NA
MW-37	MW-37	11/20/2017	<0.5	<0.2	<0.24	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	**10.9**	<0.18	1.1	<0.5	0.6 J	NA	NA	NA	NA	NA	NA	NA	NA
	MW-37R	11/28/2018	<0.24	<0.55	<0.27	<0.24	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	*3.3*	<0.17	<0.27	<0.26	<1.1	<0.58	<0.52	<35.4	<1.1	<75	34.8	231	NA
OP-2	OP-2	11/20/2017	*264*	<0.99	71.8	**8.8**	<0.84	<2.5	<1.9	3.6 J	<12.5	<2.5	<2.5	**320**	**14.3**	**158**	<2.5	8.6	NA	NA	NA	NA	NA	NA	NA	NA
	OP-2	11/28/2018	*197*	<1.1	29.4	0.96	<0.56	<0.49	<2.7	<1.2	<2.4	<0.65	<0.34	**124**	**2.5**	*29.2*	<0.52	<2.2	<0.58	<0.52	459	**435**	3500	73.5	493	NA
OP-3	OP-3	11/20/2017	**624**	<7.9	*371*	**222**	<6.7	<20	54.5	<9.3	<100	<20	<20	**2,520**	**238**	**1,760**	<20	16.2 J	NA	NA	NA	NA	NA	NA	NA	NA
	OP-3	11/28/2018	*52.3*	<0.55	*120*	**57.4**	*0.74*	<0.25	7.5	<0.58	<1.2	*1.2*	0.86	**4,600**	**410**	**2,970**	0.33 J	11	15.5	13.7	548	**518**	<75	111	356	3.6
OP-9	OP-9	11/20/2017	<0.5	<0.2	5.3	<0.41	<0.17	<0.5	<0.37	<0.23	<2.5	<0.5	<0.5	**10.2**	**13.1**	*24.1*	<0.5	2	NA	NA	NA	NA	NA	NA	NA	NA
	OP-9	11/27/2018	<0.24	<0.55	2.3	0.4 J	<0.28	<0.25	<1.3	<0.58	<1.2	<0.33	<0.17	0.38 J	**67.8**	*9.5*	<0.26	10.4	17.2	4.3 J	16900	**4,140**	<75	1140	592	NA

Notes:

1. Units are provided in micrograms per liter (µg/L), unless noted
2. NE - Not established.
3. NA - Not analyzed.
4. mg/l - milligrams per liter.
5. **BOLD** results indicate an exceedance of the NR 140 Enforcement Standard (ES).
6. *Italicized* results indicate an exceedance of the NR 140 Preventive Action Limit (PAL).

TABLE 4
SUMMARY OF INDICATOR PARAMETERS
Trent Tube Plant No. 1
East Troy, Wisconsin

Well	DO	ORP	Nitrate	Sulfate	TOC	Reductive Dechlorination Evaluation
MW-1R	−	↔	+	−	NA	No Chlorinated Hydrocarbons Detected
MW-2	−	↔	+	−	−	Slight Indications
MW-4	−	+	+	↔	NA	Slight Indications
MW-7R	↔	+	+	↔	−	No Chlorinated Hydrocarbons Detected
MW-11	−	↔	−	↔	−	No Chlorinated Hydrocarbons Detected
MW-12	↔	+	+	+	NA	Favorable
MW-15	↔	+	+	−	NA	Favorable
MW-16	↔	+	+	↔	−	Favorable
MW-17R	↔	+	+	−	NA	Favorable
MW-19	+	+	+	+	NA	Favorable
MW-20	↔	+	+	↔	NA	Favorable
MW-25	+	+	+	−	NA	No Chlorinated Hydrocarbons Detected
MW-27	↔	↔	+	+	NA	No Chlorinated Hydrocarbons Detected
MW-29	−	+	−	−	NA	No Chlorinated Hydrocarbons Detected
MW-37R	−	↔	+	↔	NA	Slight Indications
OP-2	−	+	−	−	NA	Slight Indications
OP-3	+	+	+	−	−	Favorable
OP-9	+	+	+	−	NA	Favorable
Optimal Values	<0.5 mg/L	<50 mV	<1 mg/L	<20 mg/L	>20 mg/L	

\+ Indicates parameter meets the optimal value.
− Indicates parameter does not meet the optimal value.
↔ Indicates parameter is close to the optimal value.

FIGURES

MILL STREET

CHURCH STREET

HIGHWAY 120

MW-11 (832.74)

MW-21 (832.35)

MW-1R (826.49)

MW-2 (825.87)

MW-3 (ABANDONED)

MW-22 (ABANDONED)

MW-17 (832.11)

MW-37 (831.51)

MW-18 (ABANDONED)

MW-16 (827.76)

MW-4 (826.94)

MW-4A (824.60)

OP-12 (DRY)

OP-13 (DRY)

OP-14 (824.07)

OP-15 (821.55)

OP-16 (819.46)

OP-1 (819.85)

OP-2 (819.59)

MW-35 (ABANDONED)

MW-14 (ABANDONED)

MW-9 (ABANDONED)

MW-15 (819.05)

MW-20 (818.31)

MW-8 (818.00)

MW-12 (826.36)

OP-11 (825.37)

MW-13 (ABANDONED)

OP-9 (826.81)

OP-10 (825.06)

OP-8 (816.62)

OP-7 (816.71)

MW-7R (817.96)

MW-19 (817.89)

MW-6A (817.67)

MW-6 (813.34)

OP-6 (DRY)

OP-5 (817.55)

OP-4 (817.98)

OP-3 (814.76)

MW-5 (ABANDONED)

MW-26 (ABANDONED)

MW-32D (ABANDONED)

MW-32S (ABANDONED)

MW-30 (ABANDONED)

MW-31 (ABANDONED)

MW-25 (818.00)

MW-27 (823.09)

MW-28 (ABANDONED)

MW-29 (822.99)

HONEY CREEK

HONEY CREEK

MAIN OFFICE AREA

NORTH BOILER ROOM

POSSIBLE TRANSFORMERS

GAS POWERED GENERATOR

GASOLINE GENERATOR AND SWAGGER AREA

FILTER PLANT

MACHINE SHOP

OIL STORAGE

TRANSFORMER

EPOXY SPRAY BOOTH

MAINTENANCE SHOP

SEPTIC FIELD

FORMER IMPOUNDMENT

FORMER LAGOON

FORMER CHANNEL

832 831 830 829 828 827 826 825 824 823 821 819 818

N

W E

S

0 50' 100' 200'

SCALE IN FEET 1" = 100'

LEGEND

- MONITORING WELL
- FORMER RAILROAD TRACKS
- FORMER LAGOON/ IMPOUNDMENT
- (817.96) GROUNDWATER ELEVATION, FEET
- 831 ISOELEVATION CONTOUR, FEET
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NO.	ISSUE/DESCRIPTION	BY	DATE

FORMER TRENT TUBE SITE
2188 CHURCH STREET
EAST TROY, WISCONSIN

POTENTIOMETRIC SURFACE (NOVEMBER 29, 2018)

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
EN-PRO INDUSTRIES, INC.

PROJ MGR: KMH	REVIEWED BY: JFD	CHECKED BY: KMH	FIG 1
DESIGNED BY: KMH	DRAWN BY: KMH	SCALE: see above	
DATE: FEBRUARY, 2019	PROJECT NO. 20.0155935.00	REVISION NO.	SHEET NO. OF

MILL STREET

CHURCH STREET

HIGHWAY 120

MW-11 (<0.26)

MW-21

MAIN OFFICE AREA

NORTH BOILER ROOM

POSSIBLE TRANSFORMERS

MW-22 (ABANDONED)

MW-17 (583)

5

50

MW-37 (3.3)

MACHINE SHOP

OIL STORAGE

GAS POWERED GENERATOR

GASOLINE GENERATOR AND SWAGGER AREA

FILTER PLANT

MW-18 (ABANDONED)

MW-1R (0.27)

MW-14 (ABANDONED)

MW-9 (ABANDONED)

FORMER LAGOON

MW-15 (2.9)

MW-20 (<0.26)

MW-8

MW-12 (<0.26)

OP-11

FORMER IMPOUNDMENT

SEPTIC FIELD

MW-13 (ABANDONED)

OP-9 (0.38)

OP-10

FORMER CHANNEL

OP-8

MW-7R (0.30)

OP-7

OP-6

MW-6A

MW-6

MW-19 (<0.26)

OP-5

HONEY CREEK

MW-26 (ABANDONED)

OP-4

MW-16 (135)

EPOXY SPRAY BOOTH

500

MW-2 (13,800)

MW-3 (ABANDONED)

TRANSFORMER

OP-12

OP-13

MW-4A

MW-4 (202)

MAINTENANCE SHOP

OP-14

OP-3 (4,600)

OP-15

OP-16

MW-5 (ABANDONED)

MW-32D (ABANDONED)

MW-32S (ABANDONED)

MW-25 (<0.26)

MW-30 (ABANDONED)

MW-31 (ABANDONED)

OP-1

OP-2 (124)

MW-27 (<0.26)

MW-35 (ABANDONED)

MW-28 (ABANDONED)

MW-29 (<0.26)

LEGEND

MONITORING WELL

FORMER RAILROAD TRACKS

FORMER LAGOON/ IMPOUNDMENT

(3.3) TCE CONCENTRATION, µg/L

5 ISOCONCENTRATION CONTOUR, µg/L

NOTES:
THE GROUNDWATER ENFORCEMENT STANDARD FOR TCE IS 5 µg/L

N

W E

S

0 50' 100' 200'

SCALE IN FEET 1" = 100'

NO.	ISSUE/DESCRIPTION	BY	DATE

FORMER TRENT TUBE SITE
2188 CHURCH STREET
EAST TROY, WISCONSIN

GROUNDWATER TCE CONCENTRATIONS (NOVEMBER 29, 2018)

PREPARED BY:
GZA GeoEnvironmental, Inc.
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www.gza.com

PREPARED FOR:
ENPRO INDUSTRIES, INC.

PROJ MGR: KMH	REVIEWED BY: JFD	CHECKED BY: KMH	FIG 2
DESIGNED BY: KMH	DRAWN BY: KMH	SCALE: see above	
DATE: FEBRUARY, 2019	PROJECT NO. 20.0155935.00	REVISION NO.	SHEET NO. OF

MILL STREET

CHURCH STREET

HIGHWAY 120

MW-11 (<0.27)

MW-21

MAIN OFFICE AREA

NORTH BOILER ROOM

POSSIBLE TRANSFORMERS

GAS POWERED GENERATOR

GASOLINE GENERATOR AND SWAGGER AREA

FILTER PLANT

MW-22 (ABANDONED)

70

MW-17 (215)

MW-37 (<0.27)

MACHINE SHOP

OIL STORAGE

MW-18 (ABANDONED)

MW-1R (<0.27)

MW-2 (4.7)

MW-3 (ABANDONED)

TRANSFORMER

OP-12

OP-13

OP-14

MW-4A

MW-4 (18.6)

MAINTENANCE SHOP

EPOXY SPRAY BOOTH

70

700

MW-16 (1,200)

OP-15

OP-16

HONEY CREEK

OP-1

OP-2

MW-35 (ABANDONED)

MW-28 (ABANDONED)

MW-29 (<0.27)

MW-27 (<0.27)

MW-5 (ABANDONED)

OP-3 (2,970)

MW-32D (ABANDONED)

MW-32S (ABANDONED)

MW-30 (ABANDONED)

MW-31 (ABANDONED)

MW-25 (<0.27)

MW-26 (ABANDONED)

OP-4

OP-5

MW-6A

MW-6

OP-6

OP-7

MW-14 (ABANDONED)

SEPTIC FIELD

MW-13 (ABANDONED)

OP-9 (9.5)

OP-8

OP-10

FORMER IMPOUNDMENT

MW-12 (<0.27)

OP-11

FORMER CHANNEL

MW-7R (0.28)

MW-19 (<0.27)

MW-9 (ABANDONED)

FORMER LAGOON

MW-15 (1.5)

MW-20 (<0.27)

MW-8

HONEY CREEK

N

W E

S

0 50' 100' 200'

SCALE IN FEET 1" = 100'

LEGEND

MONITORING WELL

FORMER RAILROAD TRACKS

FORMER LAGOON/ IMPOUNDMENT

(29.2) CIS-1,2-DCE CONCENTRATION, µg/L

70 ISOCONCENTRATION CONTOUR, µg/L

NOTES:
THE GROUNDWATER ENFORCEMENT STANDARD FOR CIS-1,2-DCE IS 70 µg/L

NO.	ISSUE/DESCRIPTION	BY	DATE

FORMER TRENT TUBE SITE
2188 CHURCH STREET
EAST TROY, WISCONSIN

GROUNDWATER CIS-1,2-DCE CONCENTRATIONS (NOVEMBER 29, 2018)

PREPARED BY:
GZA GeoEnvironmental, Inc.
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PREPARED FOR:
ENPRO INDUSTRIES, INC.

PROJ MGR: KMH	REVIEWED BY: JFD	CHECKED BY: KMH	FIG 3
DESIGNED BY: KMH	DRAWN BY: KMH	SCALE: see above	
DATE: FEBRUARY, 2019	PROJECT NO. 20.0155935.00	REVISION NO.	SHEET NO. OF

MILL STREET

CHURCH STREET

HIGHWAY 120

MW-11 (<0.17)

MW-21

MAIN OFFICE AREA

NORTH BOILER ROOM

POSSIBLE TRANSFORMERS

MW-22 (ABANDONED)

MW-17 (17.5)

0.2

2

MW-37 (<0.17)

MACHINE SHOP

OIL STORAGE

GAS POWERED GENERATOR

GASOLINE GENERATOR AND SWAGGER AREA

FILTER PLANT

MW-18 (ABANDONED)

MW-1R (<0.17)

MW-2 (<0.17)

MW-3 (ABANDONED)

TRANSFORMER AREA

OP-12

OP-13

OP-14

MW-4 (<0.44)

MW-4A

MAINTENANCE SHOP

OP-15

OP-16

HONEY CREEK

OP-1

OP-2 (2.5)

MW-35 (ABANDONED)

MW-16 (3.7)

0.2

2

EPOXY SPRAY BOOTH

20

200

OP-3 (410)

MW-5 (ABANDONED)

MW-28 (ABANDONED)

MW-14 (ABANDONED)

MW-9 (ABANDONED)

FORMER LAGOON

MW-15 (0.39)

MW-20 (<0.17)

MW-8

MW-12 (<0.17)

OP-11

FORMER IMPOUNDMENT

SEPTIC FIELD

MW-13 (ABANDONED)

OP-9 (67.8)

OP-10

FORMER CHANNEL

OP-8

MW-7R (<0.17)

OP-7

MW-19 (2.1)

MW-6A

MW-6

OP-6

OP-5

OP-4

HONEY CREEK

MW-26 (ABANDONED)

MW-32D (ABANDONED)

MW-32S (ABANDONED)

MW-30 (ABANDONED)

MW-31 (ABANDONED)

MW-27 (<0.17)

MW-25 (<0.17)

MW-29 (<0.17)

N

W E

S

0 50' 100' 200'

SCALE IN FEET 1" = 100'

LEGEND

- MONITORING WELL
- FORMER RAILROAD TRACKS
- FORMER LAGOON/ IMPOUNDMENT
- (3.7) VINYL CHLORIDE CONCENTRATION, µg/L
- 0.2 ISOCONCENTRATION CONTOUR, µg/L

NOTES:
THE GROUNDWATER ENFORCEMENT STANDARD FOR VINYL CHLORIDE IS 0.2 µg/L

NO.	ISSUE/DESCRIPTION	BY	DATE

FORMER TRENT TUBE SITE
2188 CHURCH STREET
EAST TROY, WISCONSIN

GROUNDWATER VINYL CHLORIDE CONCENTRATIONS (NOVEMBER 29, 2018)

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
ENPRO INDUSTRIES, INC.

PROJ MGR: KMH	REVIEWED BY: JFD	CHECKED BY: KMH	FIG 4
DESIGNED BY: KMH	DRAWN BY: KMH	SCALE: see above	
DATE: FEBRUARY, 2019	PROJECT NO. 20.0155935.00	REVISION NO.	SHEET NO. OF

ATTACHMENT 1

Limitations

LIMITATIONS

STANDARD OF CARE

1. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).
2. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.
3. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

SUBSURFACE CONDITIONS

4. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.
5. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

COMPLIANCE WITH CODES AND REGULATIONS

6. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

SCREENING AND ANALYTICAL TESTING

7. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.
8. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.
9. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

INTERPRETATION OF DATA

10. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

ADDITIONAL INFORMATION

11. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

12. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

ATTACHMENT 2

Laboratory Analytical Reports and Chain-of-Custody Forms

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

December 06, 2018

Kevin Hedinger
GZA
20900 Swenson Drive
Suite 150
Waukesha, WI 53186

RE: Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Dear Kevin Hedinger:
Enclosed are the analytical results for sample(s) received by the laboratory on November 28, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christopher Hyska

Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40180125001	**MW-07R**	Water	11/27/18 12:24	11/28/18 10:20
40180125002	**OP-9**	Water	11/27/18 14:46	11/28/18 10:20
40180125003	**MW-15**	Water	11/27/18 15:36	11/28/18 10:20
40180125004	**MW-20**	Water	11/27/18 11:19	11/28/18 10:20
40180125005	**TRIP**	Water	11/27/18 16:00	11/28/18 10:20

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Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40180125001	**MW-07R**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40180125002	**OP-9**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180125003	**MW-15**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180125004	**MW-20**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180125005	**TRIP**	EPA 8260	HNW	64	PASI-G

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40180125001	**MW-07R**					
EPA 6010	Iron, Dissolved	1380	ug/L	118	12/04/18 20:18	
EPA 6010	Manganese, Dissolved	638	ug/L	5.0	12/04/18 20:18	
EPA 8260	Trichloroethene	0.30J	ug/L	1.0	11/29/18 16:53	
EPA 8260	cis-1,2-Dichloroethene	0.28J	ug/L	1.0	11/29/18 16:53	
EPA 300.0	Sulfate	44.7	mg/L	3.0	11/28/18 20:37	
EPA 310.2	Alkalinity, Total as CaCO3	698	mg/L	47.0	11/30/18 18:22	
SM 5310C	Total Organic Carbon	7.9	mg/L	2.5	12/05/18 17:21	
40180125002	**OP-9**					
EPA 8015B Modified	Ethane	17.2	ug/L	5.6	11/29/18 10:31	
EPA 8015B Modified	Ethene	4.3J	ug/L	5.0	11/29/18 10:31	
EPA 6010	Iron, Dissolved	16900	ug/L	118	12/04/18 20:25	
EPA 6010	Manganese, Dissolved	4140	ug/L	5.0	12/04/18 20:25	
EPA 8260	1,1-Dichloroethane	2.3	ug/L	1.0	11/29/18 17:15	
EPA 8260	1,1-Dichloroethene	0.40J	ug/L	1.0	11/29/18 17:15	
EPA 8260	Trichloroethene	0.38J	ug/L	1.0	11/29/18 17:15	
EPA 8260	Vinyl chloride	67.8	ug/L	1.0	11/29/18 17:15	
EPA 8260	cis-1,2-Dichloroethene	9.5	ug/L	1.0	11/29/18 17:15	
EPA 8260	trans-1,2-Dichloroethene	10.4	ug/L	3.6	11/29/18 17:15	
EPA 300.0	Sulfate	1140	mg/L	60.0	11/30/18 12:18	
EPA 310.2	Alkalinity, Total as CaCO3	592	mg/L	117	11/30/18 18:23	
40180125003	**MW-15**					
EPA 8015B Modified	Ethene	0.57J	ug/L	5.0	11/29/18 10:37	
EPA 6010	Manganese, Dissolved	4.9J	ug/L	5.0	12/04/18 20:27	
EPA 8260	1,1,1-Trichloroethane	31.6	ug/L	1.0	11/29/18 17:37	
EPA 8260	1,1-Dichloroethane	27.2	ug/L	1.0	11/29/18 17:37	
EPA 8260	Trichloroethene	2.9	ug/L	1.0	11/29/18 17:37	
EPA 8260	Vinyl chloride	0.39J	ug/L	1.0	11/29/18 17:37	
EPA 8260	cis-1,2-Dichloroethene	1.5	ug/L	1.0	11/29/18 17:37	
EPA 300.0	Sulfate	173	mg/L	60.0	11/30/18 12:32	
EPA 310.2	Alkalinity, Total as CaCO3	729	mg/L	47.0	11/30/18 18:23	
40180125004	**MW-20**					
EPA 6010	Iron, Dissolved	127	ug/L	118	12/04/18 20:29	
EPA 6010	Manganese, Dissolved	422	ug/L	5.0	12/04/18 20:29	
EPA 300.0	Sulfate	53.5	mg/L	3.0	11/28/18 21:17	
EPA 310.2	Alkalinity, Total as CaCO3	553	mg/L	47.0	11/30/18 18:26	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: MW-07R **Lab ID: 40180125001** Collected: 11/27/18 12:24 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/29/18 10:24	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/29/18 10:24	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**1380**	ug/L	118	35.4	1		12/04/18 20:18	7439-89-6	
Manganese, Dissolved	**638**	ug/L	5.0	1.1	1		12/04/18 20:18	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/29/18 16:53	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/29/18 16:53	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 16:53	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/29/18 16:53	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/29/18 16:53	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 16:53	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/29/18 16:53	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/29/18 16:53	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/29/18 16:53	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/29/18 16:53	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/29/18 16:53	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/29/18 16:53	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/29/18 16:53	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 16:53	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 16:53	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 16:53	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/29/18 16:53	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/29/18 16:53	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/29/18 16:53	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/29/18 16:53	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/29/18 16:53	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/29/18 16:53	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/29/18 16:53	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/29/18 16:53	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 16:53	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/29/18 16:53	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/29/18 16:53	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/29/18 16:53	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/29/18 16:53	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/29/18 16:53	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 16:53	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/29/18 16:53	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/29/18 16:53	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/29/18 16:53	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/29/18 16:53	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/29/18 16:53	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/29/18 16:53	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/29/18 16:53	108-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: MW-07R **Lab ID: 40180125001** Collected: 11/27/18 12:24 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/29/18 16:53	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 16:53	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/29/18 16:53	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/29/18 16:53	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/29/18 16:53	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 16:53	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/29/18 16:53	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/29/18 16:53	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/29/18 16:53	108-88-3	
Trichloroethene	**0.30J**	ug/L	1.0	0.26	1		11/29/18 16:53	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/29/18 16:53	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/29/18 16:53	75-01-4	
cis-1,2-Dichloroethene	**0.28J**	ug/L	1.0	0.27	1		11/29/18 16:53	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/29/18 16:53	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/29/18 16:53	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 16:53	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/29/18 16:53	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/29/18 16:53	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/29/18 16:53	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/29/18 16:53	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/29/18 16:53	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/29/18 16:53	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/29/18 16:53	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/29/18 16:53	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/29/18 16:53	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		11/29/18 16:53	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/28/18 20:37	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**44.7**	mg/L	3.0	1.0	1		11/28/18 20:37	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**698**	mg/L	47.0	14.1	2		11/30/18 18:22		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**7.9**	mg/L	2.5	0.76	3		12/05/18 17:21	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: OP-9 **Lab ID: 40180125002** Collected: 11/27/18 14:46 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**17.2**	ug/L	5.6	0.58	1		11/29/18 10:31	74-84-0	
Ethene	**4.3J**	ug/L	5.0	0.52	1		11/29/18 10:31	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**16900**	ug/L	118	35.4	1		12/04/18 20:25	7439-89-6	
Manganese, Dissolved	**4140**	ug/L	5.0	1.1	1		12/04/18 20:25	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/29/18 17:15	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/29/18 17:15	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 17:15	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/29/18 17:15	79-00-5	
1,1-Dichloroethane	**2.3**	ug/L	1.0	0.27	1		11/29/18 17:15	75-34-3	
1,1-Dichloroethene	**0.40J**	ug/L	1.0	0.24	1		11/29/18 17:15	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/29/18 17:15	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/29/18 17:15	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/29/18 17:15	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/29/18 17:15	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/29/18 17:15	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/29/18 17:15	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/29/18 17:15	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 17:15	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 17:15	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 17:15	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/29/18 17:15	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/29/18 17:15	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/29/18 17:15	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/29/18 17:15	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/29/18 17:15	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/29/18 17:15	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/29/18 17:15	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/29/18 17:15	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 17:15	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/29/18 17:15	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/29/18 17:15	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/29/18 17:15	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/29/18 17:15	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/29/18 17:15	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 17:15	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/29/18 17:15	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/29/18 17:15	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/29/18 17:15	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/29/18 17:15	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/29/18 17:15	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/29/18 17:15	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/29/18 17:15	108-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: OP-9 **Lab ID: 40180125002** Collected: 11/27/18 14:46 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/29/18 17:15	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 17:15	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/29/18 17:15	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/29/18 17:15	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/29/18 17:15	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 17:15	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/29/18 17:15	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/29/18 17:15	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/29/18 17:15	108-88-3	
Trichloroethene	**0.38J**	ug/L	1.0	0.26	1		11/29/18 17:15	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/29/18 17:15	75-69-4	
Vinyl chloride	**67.8**	ug/L	1.0	0.17	1		11/29/18 17:15	75-01-4	
cis-1,2-Dichloroethene	**9.5**	ug/L	1.0	0.27	1		11/29/18 17:15	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/29/18 17:15	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/29/18 17:15	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 17:15	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/29/18 17:15	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/29/18 17:15	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/29/18 17:15	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/29/18 17:15	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/29/18 17:15	98-06-6	
trans-1,2-Dichloroethene	**10.4**	ug/L	3.6	1.1	1		11/29/18 17:15	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/29/18 17:15	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/29/18 17:15	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		11/29/18 17:15	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/29/18 17:15	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/28/18 20:51	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1140**	mg/L	60.0	20.0	20		11/30/18 12:18	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**592**	mg/L	117	35.2	5		11/30/18 18:23		

Sample: MW-15 **Lab ID: 40180125003** Collected: 11/27/18 15:36 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/29/18 10:37	74-84-0	
Ethene	**0.57J**	ug/L	5.0	0.52	1		11/29/18 10:37	74-85-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: MW-15 **Lab ID: 40180125003** Collected: 11/27/18 15:36 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**<35.4**	ug/L	118	35.4	1		12/04/18 20:27	7439-89-6	
Manganese, Dissolved	**4.9J**	ug/L	5.0	1.1	1		12/04/18 20:27	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/29/18 17:37	630-20-6	
1,1,1-Trichloroethane	**31.6**	ug/L	1.0	0.24	1		11/29/18 17:37	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 17:37	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/29/18 17:37	79-00-5	
1,1-Dichloroethane	**27.2**	ug/L	1.0	0.27	1		11/29/18 17:37	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 17:37	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/29/18 17:37	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/29/18 17:37	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/29/18 17:37	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/29/18 17:37	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/29/18 17:37	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/29/18 17:37	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/29/18 17:37	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 17:37	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 17:37	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 17:37	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/29/18 17:37	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/29/18 17:37	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/29/18 17:37	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/29/18 17:37	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/29/18 17:37	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/29/18 17:37	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/29/18 17:37	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/29/18 17:37	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 17:37	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/29/18 17:37	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/29/18 17:37	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/29/18 17:37	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/29/18 17:37	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/29/18 17:37	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 17:37	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/29/18 17:37	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/29/18 17:37	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/29/18 17:37	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/29/18 17:37	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/29/18 17:37	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/29/18 17:37	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/29/18 17:37	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/29/18 17:37	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 17:37	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/29/18 17:37	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/29/18 17:37	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: MW-15 **Lab ID: 40180125003** Collected: 11/27/18 15:36 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/29/18 17:37	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 17:37	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/29/18 17:37	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/29/18 17:37	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/29/18 17:37	108-88-3	
Trichloroethene	**2.9**	ug/L	1.0	0.26	1		11/29/18 17:37	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/29/18 17:37	75-69-4	
Vinyl chloride	**0.39J**	ug/L	1.0	0.17	1		11/29/18 17:37	75-01-4	
cis-1,2-Dichloroethene	**1.5**	ug/L	1.0	0.27	1		11/29/18 17:37	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/29/18 17:37	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/29/18 17:37	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 17:37	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/29/18 17:37	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/29/18 17:37	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/29/18 17:37	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/29/18 17:37	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/29/18 17:37	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/29/18 17:37	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/29/18 17:37	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/29/18 17:37	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		11/29/18 17:37	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		11/29/18 17:37	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/28/18 21:04	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**173**	mg/L	60.0	20.0	20		11/30/18 12:32	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**729**	mg/L	47.0	14.1	2		11/30/18 18:23		

Sample: MW-20 **Lab ID: 40180125004** Collected: 11/27/18 11:19 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/29/18 10:44	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/29/18 10:44	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**127**	ug/L	118	35.4	1		12/04/18 20:29	7439-89-6	
Manganese, Dissolved	**422**	ug/L	5.0	1.1	1		12/04/18 20:29	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: MW-20 **Lab ID: 40180125004** Collected: 11/27/18 11:19 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/29/18 18:00	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/29/18 18:00	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 18:00	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/29/18 18:00	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/29/18 18:00	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 18:00	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/29/18 18:00	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/29/18 18:00	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/29/18 18:00	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/29/18 18:00	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/29/18 18:00	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/29/18 18:00	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/29/18 18:00	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 18:00	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 18:00	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 18:00	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/29/18 18:00	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/29/18 18:00	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/29/18 18:00	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/29/18 18:00	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/29/18 18:00	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/29/18 18:00	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/29/18 18:00	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/29/18 18:00	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 18:00	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/29/18 18:00	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/29/18 18:00	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/29/18 18:00	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/29/18 18:00	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/29/18 18:00	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 18:00	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/29/18 18:00	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/29/18 18:00	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/29/18 18:00	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/29/18 18:00	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/29/18 18:00	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/29/18 18:00	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/29/18 18:00	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/29/18 18:00	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 18:00	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/29/18 18:00	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/29/18 18:00	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/29/18 18:00	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 18:00	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/29/18 18:00	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/29/18 18:00	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: MW-20 **Lab ID: 40180125004** Collected: 11/27/18 11:19 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/29/18 18:00	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/29/18 18:00	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/29/18 18:00	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/29/18 18:00	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/29/18 18:00	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/29/18 18:00	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/29/18 18:00	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 18:00	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/29/18 18:00	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/29/18 18:00	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/29/18 18:00	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/29/18 18:00	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/29/18 18:00	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/29/18 18:00	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/29/18 18:00	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/29/18 18:00	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/29/18 18:00	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		11/29/18 18:00	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/28/18 21:17	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**53.5**	mg/L	3.0	1.0	1		11/28/18 21:17	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**553**	mg/L	47.0	14.1	2		11/30/18 18:26		

Sample: TRIP **Lab ID: 40180125005** Collected: 11/27/18 16:00 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/29/18 11:10	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/29/18 11:10	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 11:10	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/29/18 11:10	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/29/18 11:10	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 11:10	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/29/18 11:10	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/29/18 11:10	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/29/18 11:10	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/29/18 11:10	120-82-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: TRIP **Lab ID: 40180125005** Collected: 11/27/18 16:00 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/29/18 11:10	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/29/18 11:10	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/29/18 11:10	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 11:10	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 11:10	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/29/18 11:10	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/29/18 11:10	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/29/18 11:10	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/29/18 11:10	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/29/18 11:10	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/29/18 11:10	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/29/18 11:10	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/29/18 11:10	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/29/18 11:10	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/29/18 11:10	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/29/18 11:10	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/29/18 11:10	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/29/18 11:10	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/29/18 11:10	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/29/18 11:10	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 11:10	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/29/18 11:10	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/29/18 11:10	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/29/18 11:10	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/29/18 11:10	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/29/18 11:10	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/29/18 11:10	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/29/18 11:10	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/29/18 11:10	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 11:10	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/29/18 11:10	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/29/18 11:10	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/29/18 11:10	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/29/18 11:10	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/29/18 11:10	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/29/18 11:10	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/29/18 11:10	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/29/18 11:10	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/29/18 11:10	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/29/18 11:10	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/29/18 11:10	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/29/18 11:10	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/29/18 11:10	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/29/18 11:10	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/29/18 11:10	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/29/18 11:10	95-47-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Sample: TRIP **Lab ID: 40180125005** Collected: 11/27/18 16:00 Received: 11/28/18 10:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/29/18 11:10	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/29/18 11:10	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/29/18 11:10	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/29/18 11:10	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/29/18 11:10	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/29/18 11:10	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		11/29/18 11:10	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/29/18 11:10	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

QC Batch: 307859 Analysis Method: EPA 8015B Modified
QC Batch Method: EPA 8015B Modified Analysis Description: Methane, Ethane, Ethene GCV
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004

METHOD BLANK: 1798973 Matrix: Water
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	<0.58	5.6	11/29/18 09:06	
Ethene	ug/L	<0.52	5.0	11/29/18 09:06	

LABORATORY CONTROL SAMPLE & LCSD: 1798974 1798975

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	53.6	56.9	56.8	106	106	80-120	0	20	
Ethene	ug/L	50	52.9	52.8	106	106	81-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799143 1799144

Parameter	Units	40180125003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<0.58	53.6	53.6	55.3	57.9	103	108	80-120	5	20	
Ethene	ug/L	0.57J	50	50	52.4	54.8	104	108	81-122	4	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

QC Batch: 308112 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004

METHOD BLANK: 1800464 Matrix: Water
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	<35.4	118	12/04/18 20:13	
Manganese, Dissolved	ug/L	<1.1	5.0	12/04/18 20:13	

LABORATORY CONTROL SAMPLE: 1800465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	5000	5090	102	80-120	
Manganese, Dissolved	ug/L	500	501	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800466 1800467

Parameter	Units	40180125001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	1380	5000	5000	6500	6440	102	101	75-125	1	20	
Manganese, Dissolved	ug/L	638	500	500	1110	1120	94	97	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

QC Batch: 307821 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004, 40180125005

METHOD BLANK: 1798787 Matrix: Water
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004, 40180125005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	11/29/18 07:50	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	11/29/18 07:50	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	11/29/18 07:50	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	11/29/18 07:50	
1,1-Dichloroethane	ug/L	<0.27	1.0	11/29/18 07:50	
1,1-Dichloroethene	ug/L	<0.24	1.0	11/29/18 07:50	
1,1-Dichloropropene	ug/L	<0.54	1.8	11/29/18 07:50	
1,2,3-Trichlorobenzene	ug/L	<0.63	5.0	11/29/18 07:50	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	11/29/18 07:50	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	11/29/18 07:50	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	11/29/18 07:50	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	11/29/18 07:50	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	11/29/18 07:50	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	11/29/18 07:50	
1,2-Dichloroethane	ug/L	<0.28	1.0	11/29/18 07:50	
1,2-Dichloropropane	ug/L	<0.28	1.0	11/29/18 07:50	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	11/29/18 07:50	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	11/29/18 07:50	
1,3-Dichloropropane	ug/L	<0.83	2.8	11/29/18 07:50	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	11/29/18 07:50	
2,2-Dichloropropane	ug/L	<2.3	7.6	11/29/18 07:50	
2-Chlorotoluene	ug/L	<0.93	5.0	11/29/18 07:50	
4-Chlorotoluene	ug/L	<0.76	2.5	11/29/18 07:50	
Benzene	ug/L	<0.25	1.0	11/29/18 07:50	
Bromobenzene	ug/L	<0.24	1.0	11/29/18 07:50	
Bromochloromethane	ug/L	<0.36	5.0	11/29/18 07:50	
Bromodichloromethane	ug/L	<0.36	1.2	11/29/18 07:50	
Bromoform	ug/L	<4.0	13.2	11/29/18 07:50	
Bromomethane	ug/L	<0.97	5.0	11/29/18 07:50	
Carbon tetrachloride	ug/L	<0.17	1.0	11/29/18 07:50	
Chlorobenzene	ug/L	<0.71	2.4	11/29/18 07:50	
Chloroethane	ug/L	<1.3	5.0	11/29/18 07:50	
Chloroform	ug/L	<1.3	5.0	11/29/18 07:50	
Chloromethane	ug/L	<2.2	7.3	11/29/18 07:50	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	11/29/18 07:50	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	11/29/18 07:50	
Dibromochloromethane	ug/L	<2.6	8.7	11/29/18 07:50	
Dibromomethane	ug/L	<0.94	3.1	11/29/18 07:50	
Dichlorodifluoromethane	ug/L	<0.50	5.0	11/29/18 07:50	
Diisopropyl ether	ug/L	<1.9	6.3	11/29/18 07:50	
Ethylbenzene	ug/L	<0.22	1.0	11/29/18 07:50	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

METHOD BLANK: 1798787 Matrix: Water
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004, 40180125005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<1.2	5.0	11/29/18 07:50	
Isopropylbenzene (Cumene)	ug/L	<0.39	5.0	11/29/18 07:50	
m&p-Xylene	ug/L	<0.47	2.0	11/29/18 07:50	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	11/29/18 07:50	
Methylene Chloride	ug/L	<0.58	5.0	11/29/18 07:50	
n-Butylbenzene	ug/L	<0.71	2.4	11/29/18 07:50	
n-Propylbenzene	ug/L	<0.81	5.0	11/29/18 07:50	
Naphthalene	ug/L	<1.2	5.0	11/29/18 07:50	
o-Xylene	ug/L	<0.26	1.0	11/29/18 07:50	
p-Isopropyltoluene	ug/L	<0.80	2.7	11/29/18 07:50	
sec-Butylbenzene	ug/L	<0.85	5.0	11/29/18 07:50	
Styrene	ug/L	<0.47	1.6	11/29/18 07:50	
tert-Butylbenzene	ug/L	<0.30	1.0	11/29/18 07:50	
Tetrachloroethene	ug/L	<0.33	1.1	11/29/18 07:50	
Toluene	ug/L	<0.17	5.0	11/29/18 07:50	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	11/29/18 07:50	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	11/29/18 07:50	
Trichloroethene	ug/L	<0.26	1.0	11/29/18 07:50	
Trichlorofluoromethane	ug/L	<0.21	1.0	11/29/18 07:50	
Vinyl chloride	ug/L	<0.17	1.0	11/29/18 07:50	
4-Bromofluorobenzene (S)	%	100	70-130	11/29/18 07:50	
Dibromofluoromethane (S)	%	96	70-130	11/29/18 07:50	
Toluene-d8 (S)	%	102	70-130	11/29/18 07:50	

LABORATORY CONTROL SAMPLE: 1798788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.2	94	70-133	
1,1,2,2-Tetrachloroethane	ug/L	50	50.3	101	67-130	
1,1,2-Trichloroethane	ug/L	50	54.4	109	70-130	
1,1-Dichloroethane	ug/L	50	50.2	100	70-134	
1,1-Dichloroethene	ug/L	50	47.5	95	75-132	
1,2,4-Trichlorobenzene	ug/L	50	53.3	107	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	45.3	91	60-126	
1,2-Dibromoethane (EDB)	ug/L	50	52.1	104	70-130	
1,2-Dichlorobenzene	ug/L	50	51.1	102	70-130	
1,2-Dichloroethane	ug/L	50	50.7	101	73-134	
1,2-Dichloropropane	ug/L	50	55.6	111	79-128	
1,3-Dichlorobenzene	ug/L	50	51.0	102	70-130	
1,4-Dichlorobenzene	ug/L	50	50.8	102	70-130	
Benzene	ug/L	50	50.7	101	69-137	
Bromodichloromethane	ug/L	50	52.0	104	70-130	
Bromoform	ug/L	50	57.2	114	64-133	
Bromomethane	ug/L	50	31.5	63	29-123	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

LABORATORY CONTROL SAMPLE: 1798788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	48.0	96	73-142	
Chlorobenzene	ug/L	50	52.5	105	70-130	
Chloroethane	ug/L	50	48.5	97	59-133	
Chloroform	ug/L	50	49.6	99	80-129	
Chloromethane	ug/L	50	38.3	77	27-125	
cis-1,2-Dichloroethene	ug/L	50	47.6	95	70-134	
cis-1,3-Dichloropropene	ug/L	50	49.9	100	70-130	
Dibromochloromethane	ug/L	50	51.0	102	70-130	
Dichlorodifluoromethane	ug/L	50	44.8	90	12-127	
Ethylbenzene	ug/L	50	55.2	110	86-127	
Isopropylbenzene (Cumene)	ug/L	50	53.7	107	70-130	
m&p-Xylene	ug/L	100	108	108	70-131	
Methyl-tert-butyl ether	ug/L	50	40.4	81	65-136	
Methylene Chloride	ug/L	50	45.7	91	72-133	
o-Xylene	ug/L	50	53.0	106	70-130	
Styrene	ug/L	50	53.0	106	70-130	
Tetrachloroethene	ug/L	50	56.8	114	70-130	
Toluene	ug/L	50	53.8	108	84-124	
trans-1,2-Dichloroethene	ug/L	50	47.9	96	70-133	
trans-1,3-Dichloropropene	ug/L	50	48.4	97	67-130	
Trichloroethene	ug/L	50	54.3	109	70-130	
Trichlorofluoromethane	ug/L	50	53.1	106	69-147	
Vinyl chloride	ug/L	50	46.5	93	48-134	
4-Bromofluorobenzene (S)	%			104	70-130	
Dibromofluoromethane (S)	%			96	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799025 1799026

Parameter	Units	40180129002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	44.7	45.4	89	91	70-136	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	48.2	49.0	96	98	67-133	2	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	52.4	53.2	105	106	70-130	1	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	47.8	48.6	96	97	70-139	2	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	45.5	46.3	91	93	72-137	2	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	49.9	51.6	100	103	68-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	41.6	43.5	83	87	60-130	4	21	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	49.7	50.8	99	102	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	48.6	49.4	97	99	70-130	2	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	49.0	49.3	98	99	71-137	1	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	53.4	54.3	107	109	78-130	2	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	48.4	49.4	97	99	70-130	2	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	48.6	49.8	97	100	70-130	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799025 1799026

Parameter	Units	40180129002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<0.25	50	50	48.5	48.9	97	98	66-143	1	20	
Bromodichloromethane	ug/L	<0.36	50	50	50.1	50.7	100	101	70-130	1	20	
Bromoform	ug/L	<4.0	50	50	55.0	55.2	110	110	64-134	0	20	
Bromomethane	ug/L	<0.97	50	50	27.2	27.8	54	55	29-136	2	25	
Carbon tetrachloride	ug/L	<0.17	50	50	45.4	46.3	91	93	73-142	2	20	
Chlorobenzene	ug/L	<0.71	50	50	50.2	50.8	100	102	70-130	1	20	
Chloroethane	ug/L	<1.3	50	50	45.2	46.6	90	93	58-138	3	20	
Chloroform	ug/L	<1.3	50	50	48.0	48.5	95	96	80-131	1	20	
Chloromethane	ug/L	4.6J	50	50	34.9	34.0	61	59	24-125	3	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	45.3	46.1	91	92	68-137	2	22	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	47.5	48.3	95	97	70-130	2	20	
Dibromochloromethane	ug/L	<2.6	50	50	49.3	49.3	99	99	70-131	0	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	32.8	32.9	66	66	10-127	0	20	
Ethylbenzene	ug/L	<0.22	50	50	52.5	53.1	105	106	81-136	1	20	
Isopropylbenzene (Cumene)	ug/L	<0.39	50	50	50.9	51.7	102	103	70-132	2	20	
m&p-Xylene	ug/L	<0.47	100	100	102	104	102	104	70-135	2	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	38.8	38.9	78	78	58-142	0	23	
Methylene Chloride	ug/L	<0.58	50	50	43.1	44.0	86	88	69-137	2	20	
o-Xylene	ug/L	<0.26	50	50	50.4	51.0	101	102	70-132	1	20	
Styrene	ug/L	<0.47	50	50	50.2	50.9	100	102	70-130	1	20	
Tetrachloroethene	ug/L	<0.33	50	50	54.2	55.2	108	110	70-132	2	20	
Toluene	ug/L	<0.17	50	50	51.4	52.4	103	105	81-130	2	20	
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	45.4	46.3	91	93	70-136	2	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	46.6	46.8	93	94	67-130	0	20	
Trichloroethene	ug/L	<0.26	50	50	52.4	52.7	105	105	70-131	1	20	
Trichlorofluoromethane	ug/L	<0.21	50	50	49.8	50.3	100	101	66-150	1	20	
Vinyl chloride	ug/L	<0.17	50	50	41.2	41.9	82	84	46-134	2	20	
4-Bromofluorobenzene (S)	%						103	103	70-130			
Dibromofluoromethane (S)	%						97	96	70-130			
Toluene-d8 (S)	%						102	101	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

QC Batch: 307788 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004

METHOD BLANK: 1798609 Matrix: Water
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	<0.075	0.22	11/28/18 18:10	
Sulfate	mg/L	<1.0	3.0	11/28/18 18:10	

LABORATORY CONTROL SAMPLE: 1798610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	1.5	1.6	106	90-110	
Sulfate	mg/L	20	21.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1798611 1798612

Parameter	Units	40180121004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	8.5J	150	150	165	164	105	104	90-110	1	15	
Sulfate	mg/L	764	2000	2000	2920	2930	108	108	90-110	0	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

QC Batch: 307996 Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004

METHOD BLANK: 1799650 Matrix: Water
Associated Lab Samples: 40180125001, 40180125002, 40180125003, 40180125004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.0	23.5	11/30/18 18:11	

LABORATORY CONTROL SAMPLE: 1799651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	106	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799652 1799653

Parameter	Units	40180043005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	669	500	500	1060	1110	78	88	90-110	4	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799672 1799673

Parameter	Units	40180194008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	465	500	500	900	900	87	87	90-110	0	20	M0

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

QC Batch: 308377 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 40180125001

METHOD BLANK: 1801429 Matrix: Water
Associated Lab Samples: 40180125001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.25	0.84	12/05/18 08:59	

LABORATORY CONTROL SAMPLE: 1801430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.5	2.3	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801431 1801432

Parameter	Units	40179703024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.4	2	2	5.5	5.6	101	105	80-120	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801433 1801434

Parameter	Units	10456257001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	6.6	6	6	12.8	12.9	104	105	80-120	0	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180125

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40180125001	**MW-07R**	EPA 8015B Modified	307859		
40180125002	**OP-9**	EPA 8015B Modified	307859		
40180125003	**MW-15**	EPA 8015B Modified	307859		
40180125004	**MW-20**	EPA 8015B Modified	307859		
40180125001	**MW-07R**	EPA 6010	308112		
40180125002	**OP-9**	EPA 6010	308112		
40180125003	**MW-15**	EPA 6010	308112		
40180125004	**MW-20**	EPA 6010	308112		
40180125001	**MW-07R**	EPA 8260	307821		
40180125002	**OP-9**	EPA 8260	307821		
40180125003	**MW-15**	EPA 8260	307821		
40180125004	**MW-20**	EPA 8260	307821		
40180125005	**TRIP**	EPA 8260	307821		
40180125001	**MW-07R**	EPA 300.0	307788		
40180125002	**OP-9**	EPA 300.0	307788		
40180125003	**MW-15**	EPA 300.0	307788		
40180125004	**MW-20**	EPA 300.0	307788		
40180125001	**MW-07R**	EPA 300.0	307788		
40180125002	**OP-9**	EPA 300.0	307788		
40180125003	**MW-15**	EPA 300.0	307788		
40180125004	**MW-20**	EPA 300.0	307788		
40180125001	**MW-07R**	EPA 310.2	307996		
40180125002	**OP-9**	EPA 310.2	307996		
40180125003	**MW-15**	EPA 310.2	307996		
40180125004	**MW-20**	EPA 310.2	307996		
40180125001	**MW-07R**	SM 5310C	308377		

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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of 1

40180125

Page 27 of 29

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	GZA, GeoEnvironmental
Branch/Location:	Waukesha
Project Contact:	Kevin Hedinger
Phone:	262-754-2578
Project Number:	20.0155935.00
Project Name:	Trent Tube
Project State:	WI
Sampled By (Print):	Alex Amundson
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	SAME
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	VOCs	Dissolved Mn, Fe	Ethene + Ethane	Nitrate + Sulfate	TOC	Alkalinity
	Analyses Requested				Y/N	Pick Letter	N	Y	N	N	N	N
							B	D	B	BA	A	A
001	MW-07R	11/27/18	12:24	GW			X	X	X	X	X	X
002	DP-9	11/27/18	2:46	GW			X	X	X	X		X
003	MW-15	11/27/18	3:36	GW			X	X	X	X		X
004	MW-20	11/27/18	11:19	GW			X	X	X	X		X
005	Trip	11/27/18	4:00	—			X		X			

CLIENT COMMENTS | LAB COMMENTS (Lab Use Only) | Profile #

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/27/18 16:49		
FedEx	11/28/18 1020	Pace	11/28/18 1020

PACE Project No. 40180125
Receipt Temp = ROI °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: G2A, Geo Environmental Project # 40180125

All containers needing preservation have been checked and noted below: ☒Yes ☐No ☐N/A

Lab Lot# of pH paper: 10US2681 Lab Std #ID of preservation (if pH adjusted):

Initial when completed: JK Date/ Time:

Pace Lab #	Glass							Plastic							Vials						Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN							
001			1								1		1					6														2.5 / 5 / 10
002											1		1					6														2.5 / 5 / 10
003											1		1					6														2.5 / 5 / 10
004											1		1					6														2.5 / 5 / 10
005																		2														2.5 / 5 / 10
006																																2.5 / 5 / 10
007																																2.5 / 5 / 10
008																																2.5 / 5 / 10
009																																2.5 / 5 / 10
010																																2.5 / 5 / 10
011																																2.5 / 5 / 10
012																																2.5 / 5 / 10
013																																2.5 / 5 / 10
014																																2.5 / 5 / 10
015																																2.5 / 5 / 10
016																																2.5 / 5 / 10
017																																2.5 / 5 / 10
018																																2.5 / 5 / 10
019																																2.5 / 5 / 10
020																																2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : ☐Yes ☒No ☐N/A ***If yes look in headspace column**

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical™ 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #: WO#: 40180125

40180125

Client Name: GZA, GeoEnvironmental

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other:

Tracking #: 7840 3702 5724

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - NA **Type of Ice:** Wet Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 11-28-18
Initials: JK

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☒Yes ☐No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☒Yes ☐No ☐N/A	11.
Sample Labels match COC:	☐Yes ☒No ☐N/A	12. Client used actual grab times, times are in order 11-28-18 JK
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☒Yes ☐No ☐N/A	13.
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 410		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 11/28/18

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

December 06, 2018

Kevin Hedinger
GZA
20900 Swenson Drive
Suite 150
Waukesha, WI 53186

RE: Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Dear Kevin Hedinger:
Enclosed are the analytical results for sample(s) received by the laboratory on November 29, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christopher Hyska

Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40180194001	**MW-17R**	Water	11/28/18 11:40	11/29/18 10:00
40180194002	**MW-12**	Water	11/28/18 16:15	11/29/18 10:00
40180194003	**MW-11**	Water	11/28/18 14:40	11/29/18 10:00
40180194004	**MW-2**	Water	11/28/18 12:55	11/29/18 10:00
40180194005	**MW-37R**	Water	11/28/18 10:20	11/29/18 10:00
40180194006	**OP-3**	Water	11/28/18 15:23	11/29/18 10:00
40180194007	**OP-2**	Water	11/28/18 13:45	11/29/18 10:00
40180194008	**MW-16**	Water	11/28/18 10:32	11/29/18 10:00
40180194009	**MW-04**	Water	11/28/18 12:12	11/29/18 10:00

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SAMPLE ANALYTE COUNT

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40180194001	**MW-17R**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180194002	**MW-12**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180194003	**MW-11**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40180194004	**MW-2**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40180194005	**MW-37R**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180194006	**OP-3**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 310.2	DAW	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40180194007	**OP-2**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180194008	**MW-16**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40180194009	**MW-04**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40180194001	**MW-17R**					
EPA 8015B Modified	Ethene	0.95J	ug/L	5.0	11/30/18 10:27	
EPA 8260	1,1-Dichloroethane	2.2	ug/L	1.0	11/30/18 22:47	
EPA 8260	1,1-Dichloroethene	0.97J	ug/L	1.0	11/30/18 22:47	
EPA 8260	Benzene	0.57J	ug/L	1.0	11/30/18 22:47	
EPA 8260	Tetrachloroethene	2.0	ug/L	1.1	11/30/18 22:47	
EPA 8260	Toluene	0.53J	ug/L	5.0	11/30/18 22:47	
EPA 8260	Trichloroethene	583	ug/L	10.0	12/03/18 09:21	
EPA 8260	Vinyl chloride	17.5	ug/L	1.0	11/30/18 22:47	
EPA 8260	cis-1,2-Dichloroethene	215	ug/L	1.0	11/30/18 22:47	
EPA 8260	trans-1,2-Dichloroethene	17.9	ug/L	3.6	11/30/18 22:47	
EPA 300.0	Nitrate as N	0.31	mg/L	0.22	11/29/18 15:15	M0
EPA 300.0	Sulfate	217	mg/L	30.0	11/30/18 13:51	
EPA 310.2	Alkalinity, Total as CaCO3	61.1	mg/L	23.5	11/30/18 18:27	
40180194002	**MW-12**					
EPA 8015B Modified	Ethane	16.2	ug/L	5.6	11/30/18 10:34	
EPA 6010	Iron, Dissolved	17600	ug/L	118	12/04/18 20:34	
EPA 6010	Manganese, Dissolved	175	ug/L	5.0	12/04/18 20:34	
EPA 310.2	Alkalinity, Total as CaCO3	590	mg/L	117	11/30/18 18:27	
40180194003	**MW-11**					
EPA 6010	Manganese, Dissolved	9.3	ug/L	5.0	12/04/18 20:42	
EPA 300.0	Nitrate as N	2.4	mg/L	0.22	11/29/18 16:40	
EPA 300.0	Sulfate	30.7	mg/L	3.0	11/29/18 16:40	
EPA 310.2	Alkalinity, Total as CaCO3	333	mg/L	23.5	11/30/18 18:28	
SM 5310C	Total Organic Carbon	1.6	mg/L	0.84	12/05/18 17:42	
40180194004	**MW-2**					
EPA 6010	Manganese, Dissolved	1.9J	ug/L	5.0	12/04/18 20:44	
EPA 8260	1,1,1-Trichloroethane	15.0	ug/L	1.0	11/30/18 13:20	
EPA 8260	1,1,2-Trichloroethane	0.93J	ug/L	5.0	11/30/18 13:20	
EPA 8260	1,1-Dichloroethane	2.3	ug/L	1.0	11/30/18 13:20	
EPA 8260	Tetrachloroethene	5.7	ug/L	1.1	11/30/18 13:20	
EPA 8260	Trichloroethene	13800	ug/L	100	11/30/18 19:48	
EPA 8260	cis-1,2-Dichloroethene	4.7	ug/L	1.0	11/30/18 13:20	
EPA 300.0	Nitrate as N	0.24	mg/L	0.22	11/29/18 16:53	
EPA 300.0	Sulfate	97.1	mg/L	15.0	11/30/18 14:28	
EPA 310.2	Alkalinity, Total as CaCO3	276	mg/L	23.5	11/30/18 18:29	
SM 5310C	Total Organic Carbon	1.9	mg/L	0.84	12/05/18 18:03	
40180194005	**MW-37R**					
EPA 8260	Trichloroethene	3.3	ug/L	1.0	11/30/18 20:10	
EPA 300.0	Sulfate	34.8	mg/L	3.0	11/29/18 17:05	
EPA 310.2	Alkalinity, Total as CaCO3	231	mg/L	23.5	11/30/18 18:29	
40180194006	**OP-3**					
EPA 8015B Modified	Ethane	15.5	ug/L	5.6	11/30/18 11:02	
EPA 8015B Modified	Ethene	13.7	ug/L	5.0	11/30/18 11:02	
EPA 6010	Iron, Dissolved	548	ug/L	118	12/04/18 20:49	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40180194006	**OP-3**					
EPA 6010	Manganese, Dissolved	518	ug/L	5.0	12/04/18 20:49	
EPA 8260	1,1,1-Trichloroethane	52.3	ug/L	1.0	11/30/18 20:33	
EPA 8260	1,1-Dichloroethane	120	ug/L	1.0	11/30/18 20:33	
EPA 8260	1,1-Dichloroethene	57.4	ug/L	1.0	11/30/18 20:33	
EPA 8260	1,2-Dichloroethane	0.74J	ug/L	1.0	11/30/18 20:33	
EPA 8260	Chloroethane	7.5	ug/L	5.0	11/30/18 20:33	
EPA 8260	Tetrachloroethene	1.2	ug/L	1.1	11/30/18 20:33	
EPA 8260	Toluene	0.86J	ug/L	5.0	11/30/18 20:33	
EPA 8260	Trichloroethene	4600	ug/L	100	12/03/18 09:44	
EPA 8260	Vinyl chloride	410	ug/L	100	12/03/18 09:44	
EPA 8260	cis-1,2-Dichloroethene	2970	ug/L	100	12/03/18 09:44	
EPA 8260	o-Xylene	0.33J	ug/L	1.0	11/30/18 20:33	
EPA 8260	trans-1,2-Dichloroethene	11.0	ug/L	3.6	11/30/18 20:33	
EPA 300.0	Sulfate	111	mg/L	15.0	11/30/18 14:40	
EPA 310.2	Alkalinity, Total as CaCO3	356	mg/L	23.5	11/30/18 18:30	
SM 5310C	Total Organic Carbon	3.6	mg/L	2.5	12/05/18 18:24	
40180194007	**OP-2**					
EPA 6010	Iron, Dissolved	459	ug/L	118	12/04/18 20:51	
EPA 6010	Manganese, Dissolved	435	ug/L	5.0	12/04/18 20:51	
EPA 8260	1,1,1-Trichloroethane	197	ug/L	2.0	12/03/18 10:06	
EPA 8260	1,1-Dichloroethane	29.4	ug/L	2.0	12/03/18 10:06	
EPA 8260	1,1-Dichloroethene	0.96J	ug/L	2.0	12/03/18 10:06	
EPA 8260	Trichloroethene	124	ug/L	2.0	12/03/18 10:06	
EPA 8260	Vinyl chloride	2.5	ug/L	2.0	12/03/18 10:06	
EPA 8260	cis-1,2-Dichloroethene	29.2	ug/L	2.0	12/03/18 10:06	
EPA 300.0	Nitrate as N	3.5	mg/L	1.1	11/30/18 15:29	H5
EPA 300.0	Sulfate	73.5	mg/L	15.0	11/30/18 15:29	
EPA 310.2	Alkalinity, Total as CaCO3	493	mg/L	47.0	11/30/18 18:31	
40180194008	**MW-16**					
EPA 6010	Iron, Dissolved	396	ug/L	118	12/04/18 20:54	
EPA 6010	Manganese, Dissolved	42.8	ug/L	5.0	12/04/18 20:54	
EPA 8260	1,1,1-Trichloroethane	1130	ug/L	20.0	12/03/18 10:29	
EPA 8260	1,1-Dichloroethane	133	ug/L	1.0	11/30/18 21:18	
EPA 8260	1,1-Dichloroethene	21.7	ug/L	1.0	11/30/18 21:18	
EPA 8260	Tetrachloroethene	0.79J	ug/L	1.1	11/30/18 21:18	
EPA 8260	Trichloroethene	135	ug/L	1.0	11/30/18 21:18	
EPA 8260	Vinyl chloride	3.7	ug/L	1.0	11/30/18 21:18	
EPA 8260	cis-1,2-Dichloroethene	1200	ug/L	20.0	12/03/18 10:29	
EPA 8260	trans-1,2-Dichloroethene	4.5	ug/L	3.6	11/30/18 21:18	
EPA 300.0	Sulfate	59.5	mg/L	15.0	11/30/18 15:41	
EPA 310.2	Alkalinity, Total as CaCO3	465	mg/L	117	11/30/18 18:31	M0
SM 5310C	Total Organic Carbon	3.1	mg/L	1.7	12/05/18 18:45	
40180194009	**MW-04**					
EPA 6010	Manganese, Dissolved	18.8	ug/L	5.0	12/04/18 20:56	
EPA 8260	1,1,1-Trichloroethane	4.1	ug/L	2.5	12/03/18 10:51	
EPA 8260	1,1-Dichloroethane	2.9	ug/L	2.5	12/03/18 10:51	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40180194009	**MW-04**					
EPA 8260	Tetrachloroethene	2.5J	ug/L	2.7	12/03/18 10:51	
EPA 8260	Trichloroethene	202	ug/L	2.5	12/03/18 10:51	
EPA 8260	cis-1,2-Dichloroethene	18.6	ug/L	2.5	12/03/18 10:51	
EPA 300.0	Sulfate	48.5	mg/L	3.0	11/29/18 17:54	
EPA 310.2	Alkalinity, Total as CaCO3	279	mg/L	23.5	12/06/18 12:01	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-17R **Lab ID: 40180194001** Collected: 11/28/18 11:40 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/30/18 10:27	74-84-0	
Ethene	**0.95J**	ug/L	5.0	0.52	1		11/30/18 10:27	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**<35.4**	ug/L	118	35.4	1		12/04/18 20:32	7439-89-6	
Manganese, Dissolved	**<1.1**	ug/L	5.0	1.1	1		12/04/18 20:32	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/30/18 22:47	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/30/18 22:47	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 22:47	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/30/18 22:47	79-00-5	
1,1-Dichloroethane	**2.2**	ug/L	1.0	0.27	1		11/30/18 22:47	75-34-3	
1,1-Dichloroethene	**0.97J**	ug/L	1.0	0.24	1		11/30/18 22:47	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/30/18 22:47	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/30/18 22:47	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/30/18 22:47	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/30/18 22:47	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/30/18 22:47	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/30/18 22:47	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/30/18 22:47	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 22:47	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 22:47	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 22:47	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/30/18 22:47	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/30/18 22:47	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/30/18 22:47	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/30/18 22:47	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/30/18 22:47	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/30/18 22:47	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/30/18 22:47	106-43-4	
Benzene	**0.57J**	ug/L	1.0	0.25	1		11/30/18 22:47	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 22:47	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/30/18 22:47	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/30/18 22:47	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/30/18 22:47	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/30/18 22:47	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 22:47	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 22:47	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/30/18 22:47	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/30/18 22:47	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/30/18 22:47	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/30/18 22:47	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/30/18 22:47	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/30/18 22:47	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/30/18 22:47	108-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-17R **Lab ID: 40180194001** Collected: 11/28/18 11:40 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/30/18 22:47	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 22:47	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/30/18 22:47	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/30/18 22:47	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/30/18 22:47	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 22:47	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/30/18 22:47	100-42-5	
Tetrachloroethene	**2.0**	ug/L	1.1	0.33	1		11/30/18 22:47	127-18-4	
Toluene	**0.53J**	ug/L	5.0	0.17	1		11/30/18 22:47	108-88-3	
Trichloroethene	**583**	ug/L	10.0	2.6	10		12/03/18 09:21	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/30/18 22:47	75-69-4	
Vinyl chloride	**17.5**	ug/L	1.0	0.17	1		11/30/18 22:47	75-01-4	
cis-1,2-Dichloroethene	**215**	ug/L	1.0	0.27	1		11/30/18 22:47	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/30/18 22:47	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/30/18 22:47	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 22:47	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/30/18 22:47	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/30/18 22:47	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/30/18 22:47	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/30/18 22:47	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/30/18 22:47	98-06-6	
trans-1,2-Dichloroethene	**17.9**	ug/L	3.6	1.1	1		11/30/18 22:47	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/30/18 22:47	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/30/18 22:47	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		11/30/18 22:47	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		11/30/18 22:47	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.31**	mg/L	0.22	0.075	1		11/29/18 15:15	14797-55-8	M0
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**217**	mg/L	30.0	10.0	10		11/30/18 13:51	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**61.1**	mg/L	23.5	7.0	1		11/30/18 18:27		

Sample: MW-12 **Lab ID: 40180194002** Collected: 11/28/18 16:15 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**16.2**	ug/L	5.6	0.58	1		11/30/18 10:34	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/30/18 10:34	74-85-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-12 **Lab ID: 40180194002** Collected: 11/28/18 16:15 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**17600**	ug/L	118	35.4	1		12/04/18 20:34	7439-89-6	
Manganese, Dissolved	**175**	ug/L	5.0	1.1	1		12/04/18 20:34	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		12/03/18 08:59	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		12/03/18 08:59	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		12/03/18 08:59	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		12/03/18 08:59	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		12/03/18 08:59	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		12/03/18 08:59	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		12/03/18 08:59	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		12/03/18 08:59	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		12/03/18 08:59	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		12/03/18 08:59	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		12/03/18 08:59	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		12/03/18 08:59	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		12/03/18 08:59	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/03/18 08:59	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		12/03/18 08:59	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		12/03/18 08:59	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		12/03/18 08:59	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		12/03/18 08:59	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		12/03/18 08:59	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		12/03/18 08:59	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		12/03/18 08:59	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		12/03/18 08:59	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		12/03/18 08:59	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		12/03/18 08:59	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		12/03/18 08:59	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		12/03/18 08:59	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		12/03/18 08:59	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		12/03/18 08:59	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		12/03/18 08:59	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		12/03/18 08:59	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/03/18 08:59	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		12/03/18 08:59	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		12/03/18 08:59	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		12/03/18 08:59	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		12/03/18 08:59	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		12/03/18 08:59	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		12/03/18 08:59	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		12/03/18 08:59	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		12/03/18 08:59	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		12/03/18 08:59	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		12/03/18 08:59	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		12/03/18 08:59	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-12 **Lab ID: 40180194002** Collected: 11/28/18 16:15 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		12/03/18 08:59	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		12/03/18 08:59	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		12/03/18 08:59	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		12/03/18 08:59	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		12/03/18 08:59	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		12/03/18 08:59	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		12/03/18 08:59	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		12/03/18 08:59	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		12/03/18 08:59	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		12/03/18 08:59	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		12/03/18 08:59	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		12/03/18 08:59	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		12/03/18 08:59	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		12/03/18 08:59	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		12/03/18 08:59	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		12/03/18 08:59	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		12/03/18 08:59	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		12/03/18 08:59	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		12/03/18 08:59	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		12/03/18 08:59	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		12/03/18 08:59	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		12/03/18 08:59	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		11/29/18 16:28	14797-55-8	D3
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**<5.0**	mg/L	15.0	5.0	5		11/29/18 16:28	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**590**	mg/L	117	35.2	5		11/30/18 18:27		

Sample: MW-11 **Lab ID: 40180194003** Collected: 11/28/18 14:40 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/30/18 10:41	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/30/18 10:41	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**<35.4**	ug/L	118	35.4	1		12/04/18 20:42	7439-89-6	
Manganese, Dissolved	**9.3**	ug/L	5.0	1.1	1		12/04/18 20:42	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-11 **Lab ID: 40180194003** Collected: 11/28/18 14:40 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/30/18 12:57	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/30/18 12:57	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 12:57	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/30/18 12:57	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/30/18 12:57	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 12:57	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/30/18 12:57	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/30/18 12:57	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/30/18 12:57	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/30/18 12:57	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/30/18 12:57	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/30/18 12:57	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/30/18 12:57	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 12:57	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 12:57	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 12:57	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/30/18 12:57	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/30/18 12:57	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/30/18 12:57	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/30/18 12:57	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/30/18 12:57	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/30/18 12:57	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/30/18 12:57	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/30/18 12:57	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 12:57	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/30/18 12:57	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/30/18 12:57	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/30/18 12:57	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/30/18 12:57	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 12:57	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 12:57	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/30/18 12:57	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/30/18 12:57	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/30/18 12:57	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/30/18 12:57	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/30/18 12:57	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/30/18 12:57	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/30/18 12:57	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/30/18 12:57	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 12:57	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/30/18 12:57	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/30/18 12:57	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/30/18 12:57	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 12:57	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/30/18 12:57	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 12:57	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-11 **Lab ID: 40180194003** Collected: 11/28/18 14:40 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/30/18 12:57	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/30/18 12:57	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/30/18 12:57	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 12:57	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/30/18 12:57	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/30/18 12:57	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/30/18 12:57	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 12:57	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/30/18 12:57	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/30/18 12:57	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/30/18 12:57	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/30/18 12:57	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/30/18 12:57	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/30/18 12:57	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/30/18 12:57	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/30/18 12:57	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		11/30/18 12:57	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/30/18 12:57	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**2.4**	mg/L	0.22	0.075	1		11/29/18 16:40	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**30.7**	mg/L	3.0	1.0	1		11/29/18 16:40	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**333**	mg/L	23.5	7.0	1		11/30/18 18:28		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.6**	mg/L	0.84	0.25	1		12/05/18 17:42	7440-44-0	

Sample: MW-2 **Lab ID: 40180194004** Collected: 11/28/18 12:55 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/30/18 10:48	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/30/18 10:48	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**<35.4**	ug/L	118	35.4	1		12/04/18 20:44	7439-89-6	
Manganese, Dissolved	**1.9J**	ug/L	5.0	1.1	1		12/04/18 20:44	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-2 **Lab ID: 40180194004** Collected: 11/28/18 12:55 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/30/18 13:20	630-20-6	
1,1,1-Trichloroethane	**15.0**	ug/L	1.0	0.24	1		11/30/18 13:20	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 13:20	79-34-5	
1,1,2-Trichloroethane	**0.93J**	ug/L	5.0	0.55	1		11/30/18 13:20	79-00-5	
1,1-Dichloroethane	**2.3**	ug/L	1.0	0.27	1		11/30/18 13:20	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 13:20	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/30/18 13:20	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/30/18 13:20	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/30/18 13:20	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/30/18 13:20	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/30/18 13:20	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/30/18 13:20	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/30/18 13:20	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 13:20	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 13:20	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 13:20	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/30/18 13:20	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/30/18 13:20	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/30/18 13:20	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/30/18 13:20	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/30/18 13:20	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/30/18 13:20	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/30/18 13:20	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/30/18 13:20	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 13:20	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/30/18 13:20	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/30/18 13:20	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/30/18 13:20	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/30/18 13:20	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 13:20	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 13:20	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/30/18 13:20	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/30/18 13:20	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/30/18 13:20	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/30/18 13:20	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/30/18 13:20	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/30/18 13:20	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/30/18 13:20	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/30/18 13:20	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 13:20	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/30/18 13:20	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/30/18 13:20	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/30/18 13:20	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 13:20	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/30/18 13:20	100-42-5	
Tetrachloroethene	**5.7**	ug/L	1.1	0.33	1		11/30/18 13:20	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-2 **Lab ID: 40180194004** Collected: 11/28/18 12:55 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/30/18 13:20	108-88-3	
Trichloroethene	**13800**	ug/L	100	25.5	100		11/30/18 19:48	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/30/18 13:20	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 13:20	75-01-4	
cis-1,2-Dichloroethene	**4.7**	ug/L	1.0	0.27	1		11/30/18 13:20	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/30/18 13:20	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/30/18 13:20	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 13:20	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/30/18 13:20	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/30/18 13:20	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/30/18 13:20	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/30/18 13:20	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/30/18 13:20	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/30/18 13:20	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/30/18 13:20	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		11/30/18 13:20	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		11/30/18 13:20	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		11/30/18 13:20	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.24**	mg/L	0.22	0.075	1		11/29/18 16:53	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**97.1**	mg/L	15.0	5.0	5		11/30/18 14:28	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**276**	mg/L	23.5	7.0	1		11/30/18 18:29		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.9**	mg/L	0.84	0.25	1		12/05/18 18:03	7440-44-0	

Sample: MW-37R **Lab ID: 40180194005** Collected: 11/28/18 10:20 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/30/18 10:55	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/30/18 10:55	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**<35.4**	ug/L	118	35.4	1		12/04/18 20:46	7439-89-6	
Manganese, Dissolved	**<1.1**	ug/L	5.0	1.1	1		12/04/18 20:46	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-37R **Lab ID: 40180194005** Collected: 11/28/18 10:20 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/30/18 20:10	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/30/18 20:10	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 20:10	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/30/18 20:10	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/30/18 20:10	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 20:10	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/30/18 20:10	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/30/18 20:10	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/30/18 20:10	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/30/18 20:10	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/30/18 20:10	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/30/18 20:10	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/30/18 20:10	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 20:10	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 20:10	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 20:10	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/30/18 20:10	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/30/18 20:10	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/30/18 20:10	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/30/18 20:10	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/30/18 20:10	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/30/18 20:10	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/30/18 20:10	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/30/18 20:10	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 20:10	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/30/18 20:10	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/30/18 20:10	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/30/18 20:10	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/30/18 20:10	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 20:10	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 20:10	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/30/18 20:10	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/30/18 20:10	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/30/18 20:10	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/30/18 20:10	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/30/18 20:10	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/30/18 20:10	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/30/18 20:10	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/30/18 20:10	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 20:10	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/30/18 20:10	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/30/18 20:10	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/30/18 20:10	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 20:10	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/30/18 20:10	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/30/18 20:10	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-37R **Lab ID: 40180194005** Collected: 11/28/18 10:20 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/30/18 20:10	108-88-3	
Trichloroethene	**3.3**	ug/L	1.0	0.26	1		11/30/18 20:10	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/30/18 20:10	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 20:10	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/30/18 20:10	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/30/18 20:10	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/30/18 20:10	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 20:10	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/30/18 20:10	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/30/18 20:10	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/30/18 20:10	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/30/18 20:10	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/30/18 20:10	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/30/18 20:10	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/30/18 20:10	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/30/18 20:10	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		11/30/18 20:10	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		11/30/18 20:10	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/29/18 17:05	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**34.8**	mg/L	3.0	1.0	1		11/29/18 17:05	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**231**	mg/L	23.5	7.0	1		11/30/18 18:29		

Sample: OP-3 **Lab ID: 40180194006** Collected: 11/28/18 15:23 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**15.5**	ug/L	5.6	0.58	1		11/30/18 11:02	74-84-0	
Ethene	**13.7**	ug/L	5.0	0.52	1		11/30/18 11:02	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**548**	ug/L	118	35.4	1		12/04/18 20:49	7439-89-6	
Manganese, Dissolved	**518**	ug/L	5.0	1.1	1		12/04/18 20:49	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/30/18 20:33	630-20-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: OP-3 **Lab ID: 40180194006** Collected: 11/28/18 15:23 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1-Trichloroethane	**52.3**	ug/L	1.0	0.24	1		11/30/18 20:33	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 20:33	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/30/18 20:33	79-00-5	
1,1-Dichloroethane	**120**	ug/L	1.0	0.27	1		11/30/18 20:33	75-34-3	
1,1-Dichloroethene	**57.4**	ug/L	1.0	0.24	1		11/30/18 20:33	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/30/18 20:33	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/30/18 20:33	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/30/18 20:33	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/30/18 20:33	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/30/18 20:33	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/30/18 20:33	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/30/18 20:33	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 20:33	95-50-1	
1,2-Dichloroethane	**0.74J**	ug/L	1.0	0.28	1		11/30/18 20:33	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 20:33	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/30/18 20:33	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/30/18 20:33	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/30/18 20:33	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/30/18 20:33	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/30/18 20:33	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/30/18 20:33	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/30/18 20:33	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/30/18 20:33	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 20:33	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/30/18 20:33	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/30/18 20:33	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/30/18 20:33	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/30/18 20:33	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 20:33	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 20:33	108-90-7	
Chloroethane	**7.5**	ug/L	5.0	1.3	1		11/30/18 20:33	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/30/18 20:33	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/30/18 20:33	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/30/18 20:33	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/30/18 20:33	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/30/18 20:33	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/30/18 20:33	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/30/18 20:33	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 20:33	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/30/18 20:33	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/30/18 20:33	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/30/18 20:33	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 20:33	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/30/18 20:33	100-42-5	
Tetrachloroethene	**1.2**	ug/L	1.1	0.33	1		11/30/18 20:33	127-18-4	
Toluene	**0.86J**	ug/L	5.0	0.17	1		11/30/18 20:33	108-88-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: OP-3 **Lab ID: 40180194006** Collected: 11/28/18 15:23 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Trichloroethene	**4600**	ug/L	100	25.5	100		12/03/18 09:44	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/30/18 20:33	75-69-4	
Vinyl chloride	**410**	ug/L	100	17.5	100		12/03/18 09:44	75-01-4	
cis-1,2-Dichloroethene	**2970**	ug/L	100	27.1	100		12/03/18 09:44	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/30/18 20:33	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/30/18 20:33	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 20:33	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/30/18 20:33	103-65-1	
o-Xylene	**0.33J**	ug/L	1.0	0.26	1		11/30/18 20:33	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/30/18 20:33	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/30/18 20:33	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/30/18 20:33	98-06-6	
trans-1,2-Dichloroethene	**11.0**	ug/L	3.6	1.1	1		11/30/18 20:33	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/30/18 20:33	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/30/18 20:33	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		11/30/18 20:33	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		11/30/18 20:33	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/29/18 17:17	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**111**	mg/L	15.0	5.0	5		11/30/18 14:40	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**356**	mg/L	23.5	7.0	1		11/30/18 18:30		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.6**	mg/L	2.5	0.76	3		12/05/18 18:24	7440-44-0	

Sample: OP-2 **Lab ID: 40180194007** Collected: 11/28/18 13:45 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/30/18 11:09	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/30/18 11:09	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**459**	ug/L	118	35.4	1		12/04/18 20:51	7439-89-6	
Manganese, Dissolved	**435**	ug/L	5.0	1.1	1		12/04/18 20:51	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: OP-2 **Lab ID: 40180194007** Collected: 11/28/18 13:45 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.54**	ug/L	2.0	0.54	2		12/03/18 10:06	630-20-6	
1,1,1-Trichloroethane	**197**	ug/L	2.0	0.49	2		12/03/18 10:06	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.55**	ug/L	2.0	0.55	2		12/03/18 10:06	79-34-5	
1,1,2-Trichloroethane	**<1.1**	ug/L	10.0	1.1	2		12/03/18 10:06	79-00-5	
1,1-Dichloroethane	**29.4**	ug/L	2.0	0.55	2		12/03/18 10:06	75-34-3	
1,1-Dichloroethene	**0.96J**	ug/L	2.0	0.49	2		12/03/18 10:06	75-35-4	
1,1-Dichloropropene	**<1.1**	ug/L	3.6	1.1	2		12/03/18 10:06	563-58-6	
1,2,3-Trichlorobenzene	**<1.3**	ug/L	10.0	1.3	2		12/03/18 10:06	87-61-6	
1,2,3-Trichloropropane	**<1.2**	ug/L	10.0	1.2	2		12/03/18 10:06	96-18-4	
1,2,4-Trichlorobenzene	**<1.9**	ug/L	10.0	1.9	2		12/03/18 10:06	120-82-1	
1,2,4-Trimethylbenzene	**<1.7**	ug/L	5.6	1.7	2		12/03/18 10:06	95-63-6	
1,2-Dibromo-3-chloropropane	**<3.5**	ug/L	11.8	3.5	2		12/03/18 10:06	96-12-8	
1,2-Dibromoethane (EDB)	**<1.7**	ug/L	5.5	1.7	2		12/03/18 10:06	106-93-4	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	2		12/03/18 10:06	95-50-1	
1,2-Dichloroethane	**<0.56**	ug/L	2.0	0.56	2		12/03/18 10:06	107-06-2	
1,2-Dichloropropane	**<0.57**	ug/L	2.0	0.57	2		12/03/18 10:06	78-87-5	
1,3,5-Trimethylbenzene	**<1.7**	ug/L	5.8	1.7	2		12/03/18 10:06	108-67-8	
1,3-Dichlorobenzene	**<1.3**	ug/L	4.2	1.3	2		12/03/18 10:06	541-73-1	
1,3-Dichloropropane	**<1.7**	ug/L	5.5	1.7	2		12/03/18 10:06	142-28-9	
1,4-Dichlorobenzene	**<1.9**	ug/L	6.3	1.9	2		12/03/18 10:06	106-46-7	
2,2-Dichloropropane	**<4.5**	ug/L	15.1	4.5	2		12/03/18 10:06	594-20-7	
2-Chlorotoluene	**<1.9**	ug/L	10.0	1.9	2		12/03/18 10:06	95-49-8	
4-Chlorotoluene	**<1.5**	ug/L	5.0	1.5	2		12/03/18 10:06	106-43-4	
Benzene	**<0.49**	ug/L	2.0	0.49	2		12/03/18 10:06	71-43-2	
Bromobenzene	**<0.48**	ug/L	2.0	0.48	2		12/03/18 10:06	108-86-1	
Bromochloromethane	**<0.72**	ug/L	10.0	0.72	2		12/03/18 10:06	74-97-5	
Bromodichloromethane	**<0.73**	ug/L	2.4	0.73	2		12/03/18 10:06	75-27-4	
Bromoform	**<7.9**	ug/L	26.5	7.9	2		12/03/18 10:06	75-25-2	
Bromomethane	**<1.9**	ug/L	10.0	1.9	2		12/03/18 10:06	74-83-9	
Carbon tetrachloride	**<0.33**	ug/L	2.0	0.33	2		12/03/18 10:06	56-23-5	
Chlorobenzene	**<1.4**	ug/L	4.7	1.4	2		12/03/18 10:06	108-90-7	
Chloroethane	**<2.7**	ug/L	10.0	2.7	2		12/03/18 10:06	75-00-3	
Chloroform	**<2.5**	ug/L	10.0	2.5	2		12/03/18 10:06	67-66-3	
Chloromethane	**<4.4**	ug/L	14.6	4.4	2		12/03/18 10:06	74-87-3	
Dibromochloromethane	**<5.2**	ug/L	17.3	5.2	2		12/03/18 10:06	124-48-1	
Dibromomethane	**<1.9**	ug/L	6.2	1.9	2		12/03/18 10:06	74-95-3	
Dichlorodifluoromethane	**<1.0**	ug/L	10.0	1.0	2		12/03/18 10:06	75-71-8	
Diisopropyl ether	**<3.8**	ug/L	12.6	3.8	2		12/03/18 10:06	108-20-3	
Ethylbenzene	**<0.44**	ug/L	2.0	0.44	2		12/03/18 10:06	100-41-4	
Hexachloro-1,3-butadiene	**<2.4**	ug/L	10.0	2.4	2		12/03/18 10:06	87-68-3	
Isopropylbenzene (Cumene)	**<0.79**	ug/L	10.0	0.79	2		12/03/18 10:06	98-82-8	
Methyl-tert-butyl ether	**<2.5**	ug/L	8.3	2.5	2		12/03/18 10:06	1634-04-4	
Methylene Chloride	**<1.2**	ug/L	10.0	1.2	2		12/03/18 10:06	75-09-2	
Naphthalene	**<2.4**	ug/L	10.0	2.4	2		12/03/18 10:06	91-20-3	
Styrene	**<0.93**	ug/L	3.1	0.93	2		12/03/18 10:06	100-42-5	
Tetrachloroethene	**<0.65**	ug/L	2.2	0.65	2		12/03/18 10:06	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: OP-2 **Lab ID: 40180194007** Collected: 11/28/18 13:45 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Toluene	**<0.34**	ug/L	10.0	0.34	2		12/03/18 10:06	108-88-3	
Trichloroethene	**124**	ug/L	2.0	0.51	2		12/03/18 10:06	79-01-6	
Trichlorofluoromethane	**<0.43**	ug/L	2.0	0.43	2		12/03/18 10:06	75-69-4	
Vinyl chloride	**2.5**	ug/L	2.0	0.35	2		12/03/18 10:06	75-01-4	
cis-1,2-Dichloroethene	**29.2**	ug/L	2.0	0.54	2		12/03/18 10:06	156-59-2	
cis-1,3-Dichloropropene	**<7.3**	ug/L	24.2	7.3	2		12/03/18 10:06	10061-01-5	
m&p-Xylene	**<0.93**	ug/L	4.0	0.93	2		12/03/18 10:06	179601-23-1	
n-Butylbenzene	**<1.4**	ug/L	4.7	1.4	2		12/03/18 10:06	104-51-8	
n-Propylbenzene	**<1.6**	ug/L	10.0	1.6	2		12/03/18 10:06	103-65-1	
o-Xylene	**<0.52**	ug/L	2.0	0.52	2		12/03/18 10:06	95-47-6	
p-Isopropyltoluene	**<1.6**	ug/L	5.3	1.6	2		12/03/18 10:06	99-87-6	
sec-Butylbenzene	**<1.7**	ug/L	10.0	1.7	2		12/03/18 10:06	135-98-8	
tert-Butylbenzene	**<0.61**	ug/L	2.0	0.61	2		12/03/18 10:06	98-06-6	
trans-1,2-Dichloroethene	**<2.2**	ug/L	7.3	2.2	2		12/03/18 10:06	156-60-5	
trans-1,3-Dichloropropene	**<8.7**	ug/L	29.1	8.7	2		12/03/18 10:06	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		2		12/03/18 10:06	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		2		12/03/18 10:06	1868-53-7	
Toluene-d8 (S)	104	%	70-130		2		12/03/18 10:06	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**3.5**	mg/L	1.1	0.38	5		11/30/18 15:29	14797-55-8	H5
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**73.5**	mg/L	15.0	5.0	5		11/30/18 15:29	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**493**	mg/L	47.0	14.1	2		11/30/18 18:31		

Sample: MW-16 **Lab ID: 40180194008** Collected: 11/28/18 10:32 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/30/18 11:16	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/30/18 11:16	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**396**	ug/L	118	35.4	1		12/04/18 20:54	7439-89-6	
Manganese, Dissolved	**42.8**	ug/L	5.0	1.1	1		12/04/18 20:54	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/30/18 21:18	630-20-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-16 **Lab ID: 40180194008** Collected: 11/28/18 10:32 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1-Trichloroethane	**1130**	ug/L	20.0	4.9	20		12/03/18 10:29	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 21:18	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/30/18 21:18	79-00-5	
1,1-Dichloroethane	**133**	ug/L	1.0	0.27	1		11/30/18 21:18	75-34-3	
1,1-Dichloroethene	**21.7**	ug/L	1.0	0.24	1		11/30/18 21:18	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/30/18 21:18	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/30/18 21:18	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/30/18 21:18	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/30/18 21:18	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/30/18 21:18	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/30/18 21:18	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/30/18 21:18	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 21:18	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 21:18	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/30/18 21:18	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/30/18 21:18	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/30/18 21:18	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/30/18 21:18	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/30/18 21:18	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/30/18 21:18	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/30/18 21:18	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/30/18 21:18	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/30/18 21:18	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/30/18 21:18	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/30/18 21:18	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/30/18 21:18	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/30/18 21:18	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/30/18 21:18	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/30/18 21:18	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 21:18	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/30/18 21:18	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/30/18 21:18	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/30/18 21:18	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/30/18 21:18	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/30/18 21:18	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/30/18 21:18	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/30/18 21:18	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/30/18 21:18	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 21:18	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/30/18 21:18	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/30/18 21:18	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/30/18 21:18	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/30/18 21:18	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/30/18 21:18	100-42-5	
Tetrachloroethene	**0.79J**	ug/L	1.1	0.33	1		11/30/18 21:18	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/30/18 21:18	108-88-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-16 **Lab ID: 40180194008** Collected: 11/28/18 10:32 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Trichloroethene	**135**	ug/L	1.0	0.26	1		11/30/18 21:18	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/30/18 21:18	75-69-4	
Vinyl chloride	**3.7**	ug/L	1.0	0.17	1		11/30/18 21:18	75-01-4	
cis-1,2-Dichloroethene	**1200**	ug/L	20.0	5.4	20		12/03/18 10:29	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/30/18 21:18	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/30/18 21:18	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/30/18 21:18	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/30/18 21:18	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/30/18 21:18	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/30/18 21:18	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/30/18 21:18	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/30/18 21:18	98-06-6	
trans-1,2-Dichloroethene	**4.5**	ug/L	3.6	1.1	1		11/30/18 21:18	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/30/18 21:18	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/30/18 21:18	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/30/18 21:18	1868-53-7	
Toluene-d8 (S)	105	%	70-130		1		11/30/18 21:18	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/29/18 17:41	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**59.5**	mg/L	15.0	5.0	5		11/30/18 15:41	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**465**	mg/L	117	35.2	5		11/30/18 18:31		M0
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.1**	mg/L	1.7	0.50	2		12/05/18 18:45	7440-44-0	

Sample: MW-04 **Lab ID: 40180194009** Collected: 11/28/18 12:12 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		11/30/18 11:23	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		11/30/18 11:23	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**<35.4**	ug/L	118	35.4	1		12/04/18 20:56	7439-89-6	
Manganese, Dissolved	**18.8**	ug/L	5.0	1.1	1		12/04/18 20:56	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-04 **Lab ID: 40180194009** Collected: 11/28/18 12:12 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.67**	ug/L	2.5	0.67	2.5		12/03/18 10:51	630-20-6	
1,1,1-Trichloroethane	**4.1**	ug/L	2.5	0.61	2.5		12/03/18 10:51	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.69**	ug/L	2.5	0.69	2.5		12/03/18 10:51	79-34-5	
1,1,2-Trichloroethane	**<1.4**	ug/L	12.5	1.4	2.5		12/03/18 10:51	79-00-5	
1,1-Dichloroethane	**2.9**	ug/L	2.5	0.68	2.5		12/03/18 10:51	75-34-3	
1,1-Dichloroethene	**<0.61**	ug/L	2.5	0.61	2.5		12/03/18 10:51	75-35-4	
1,1-Dichloropropene	**<1.4**	ug/L	4.5	1.4	2.5		12/03/18 10:51	563-58-6	
1,2,3-Trichlorobenzene	**<1.6**	ug/L	12.5	1.6	2.5		12/03/18 10:51	87-61-6	
1,2,3-Trichloropropane	**<1.5**	ug/L	12.5	1.5	2.5		12/03/18 10:51	96-18-4	
1,2,4-Trichlorobenzene	**<2.4**	ug/L	12.5	2.4	2.5		12/03/18 10:51	120-82-1	
1,2,4-Trimethylbenzene	**<2.1**	ug/L	7.0	2.1	2.5		12/03/18 10:51	95-63-6	
1,2-Dibromo-3-chloropropane	**<4.4**	ug/L	14.7	4.4	2.5		12/03/18 10:51	96-12-8	
1,2-Dibromoethane (EDB)	**<2.1**	ug/L	6.9	2.1	2.5		12/03/18 10:51	106-93-4	
1,2-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	2.5		12/03/18 10:51	95-50-1	
1,2-Dichloroethane	**<0.70**	ug/L	2.5	0.70	2.5		12/03/18 10:51	107-06-2	
1,2-Dichloropropane	**<0.71**	ug/L	2.5	0.71	2.5		12/03/18 10:51	78-87-5	
1,3,5-Trimethylbenzene	**<2.2**	ug/L	7.3	2.2	2.5		12/03/18 10:51	108-67-8	
1,3-Dichlorobenzene	**<1.6**	ug/L	5.2	1.6	2.5		12/03/18 10:51	541-73-1	
1,3-Dichloropropane	**<2.1**	ug/L	6.9	2.1	2.5		12/03/18 10:51	142-28-9	
1,4-Dichlorobenzene	**<2.4**	ug/L	7.9	2.4	2.5		12/03/18 10:51	106-46-7	
2,2-Dichloropropane	**<5.7**	ug/L	18.9	5.7	2.5		12/03/18 10:51	594-20-7	
2-Chlorotoluene	**<2.3**	ug/L	12.5	2.3	2.5		12/03/18 10:51	95-49-8	
4-Chlorotoluene	**<1.9**	ug/L	6.3	1.9	2.5		12/03/18 10:51	106-43-4	
Benzene	**<0.62**	ug/L	2.5	0.62	2.5		12/03/18 10:51	71-43-2	
Bromobenzene	**<0.60**	ug/L	2.5	0.60	2.5		12/03/18 10:51	108-86-1	
Bromochloromethane	**<0.91**	ug/L	12.5	0.91	2.5		12/03/18 10:51	74-97-5	
Bromodichloromethane	**<0.91**	ug/L	3.0	0.91	2.5		12/03/18 10:51	75-27-4	
Bromoform	**<9.9**	ug/L	33.1	9.9	2.5		12/03/18 10:51	75-25-2	
Bromomethane	**<2.4**	ug/L	12.5	2.4	2.5		12/03/18 10:51	74-83-9	
Carbon tetrachloride	**<0.41**	ug/L	2.5	0.41	2.5		12/03/18 10:51	56-23-5	
Chlorobenzene	**<1.8**	ug/L	5.9	1.8	2.5		12/03/18 10:51	108-90-7	
Chloroethane	**<3.4**	ug/L	12.5	3.4	2.5		12/03/18 10:51	75-00-3	
Chloroform	**<3.2**	ug/L	12.5	3.2	2.5		12/03/18 10:51	67-66-3	
Chloromethane	**<5.5**	ug/L	18.2	5.5	2.5		12/03/18 10:51	74-87-3	
Dibromochloromethane	**<6.5**	ug/L	21.7	6.5	2.5		12/03/18 10:51	124-48-1	
Dibromomethane	**<2.3**	ug/L	7.8	2.3	2.5		12/03/18 10:51	74-95-3	
Dichlorodifluoromethane	**<1.2**	ug/L	12.5	1.2	2.5		12/03/18 10:51	75-71-8	
Diisopropyl ether	**<4.7**	ug/L	15.7	4.7	2.5		12/03/18 10:51	108-20-3	
Ethylbenzene	**<0.55**	ug/L	2.5	0.55	2.5		12/03/18 10:51	100-41-4	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	12.5	3.0	2.5		12/03/18 10:51	87-68-3	
Isopropylbenzene (Cumene)	**<0.98**	ug/L	12.5	0.98	2.5		12/03/18 10:51	98-82-8	
Methyl-tert-butyl ether	**<3.1**	ug/L	10.4	3.1	2.5		12/03/18 10:51	1634-04-4	
Methylene Chloride	**<1.5**	ug/L	12.5	1.5	2.5		12/03/18 10:51	75-09-2	
Naphthalene	**<2.9**	ug/L	12.5	2.9	2.5		12/03/18 10:51	91-20-3	
Styrene	**<1.2**	ug/L	3.9	1.2	2.5		12/03/18 10:51	100-42-5	
Tetrachloroethene	**2.5J**	ug/L	2.7	0.82	2.5		12/03/18 10:51	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Sample: MW-04 **Lab ID: 40180194009** Collected: 11/28/18 12:12 Received: 11/29/18 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Toluene	**<0.43**	ug/L	12.5	0.43	2.5		12/03/18 10:51	108-88-3	
Trichloroethene	**202**	ug/L	2.5	0.64	2.5		12/03/18 10:51	79-01-6	
Trichlorofluoromethane	**<0.54**	ug/L	2.5	0.54	2.5		12/03/18 10:51	75-69-4	
Vinyl chloride	**<0.44**	ug/L	2.5	0.44	2.5		12/03/18 10:51	75-01-4	
cis-1,2-Dichloroethene	**18.6**	ug/L	2.5	0.68	2.5		12/03/18 10:51	156-59-2	
cis-1,3-Dichloropropene	**<9.1**	ug/L	30.2	9.1	2.5		12/03/18 10:51	10061-01-5	
m&p-Xylene	**<1.2**	ug/L	5.0	1.2	2.5		12/03/18 10:51	179601-23-1	
n-Butylbenzene	**<1.8**	ug/L	5.9	1.8	2.5		12/03/18 10:51	104-51-8	
n-Propylbenzene	**<2.0**	ug/L	12.5	2.0	2.5		12/03/18 10:51	103-65-1	
o-Xylene	**<0.65**	ug/L	2.5	0.65	2.5		12/03/18 10:51	95-47-6	
p-Isopropyltoluene	**<2.0**	ug/L	6.7	2.0	2.5		12/03/18 10:51	99-87-6	
sec-Butylbenzene	**<2.1**	ug/L	12.5	2.1	2.5		12/03/18 10:51	135-98-8	
tert-Butylbenzene	**<0.76**	ug/L	2.5	0.76	2.5		12/03/18 10:51	98-06-6	
trans-1,2-Dichloroethene	**<2.7**	ug/L	9.1	2.7	2.5		12/03/18 10:51	156-60-5	
trans-1,3-Dichloropropene	**<10.9**	ug/L	36.4	10.9	2.5		12/03/18 10:51	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		2.5		12/03/18 10:51	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		2.5		12/03/18 10:51	1868-53-7	
Toluene-d8 (S)	104	%	70-130		2.5		12/03/18 10:51	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/29/18 17:54	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**48.5**	mg/L	3.0	1.0	1		11/29/18 17:54	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**279**	mg/L	23.5	7.0	1		12/06/18 12:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

QC Batch: 307977 Analysis Method: EPA 8015B Modified
QC Batch Method: EPA 8015B Modified Analysis Description: Methane, Ethane, Ethene GCV
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

METHOD BLANK: 1799575 Matrix: Water
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	<0.58	5.6	11/30/18 09:53	
Ethene	ug/L	<0.52	5.0	11/30/18 09:53	

LABORATORY CONTROL SAMPLE & LCSD: 1799576 1799577

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	53.6	54.8	56.7	102	106	80-120	3	20	
Ethene	ug/L	50	50.9	52.7	102	105	81-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799817 1799818

Parameter	Units	40180194005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<0.58	53.6	53.6	55.4	56.1	103	105	80-120	1	20	
Ethene	ug/L	<0.52	50	50	51.9	52.6	104	105	81-122	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

QC Batch: 308112 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

METHOD BLANK: 1800464 Matrix: Water
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	<35.4	118	12/04/18 20:13	
Manganese, Dissolved	ug/L	<1.1	5.0	12/04/18 20:13	

LABORATORY CONTROL SAMPLE: 1800465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	5000	5090	102	80-120	
Manganese, Dissolved	ug/L	500	501	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800466 1800467

Parameter	Units	40180125001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	1380	5000	5000	6500	6440	102	101	75-125	1	20	
Manganese, Dissolved	ug/L	638	500	500	1110	1120	94	97	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

QC Batch: 307923 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

METHOD BLANK: 1799227 Matrix: Water
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	11/30/18 08:05	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	11/30/18 08:05	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	11/30/18 08:05	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	11/30/18 08:05	
1,1-Dichloroethane	ug/L	<0.27	1.0	11/30/18 08:05	
1,1-Dichloroethene	ug/L	<0.24	1.0	11/30/18 08:05	
1,1-Dichloropropene	ug/L	<0.54	1.8	11/30/18 08:05	
1,2,3-Trichlorobenzene	ug/L	<0.63	5.0	11/30/18 08:05	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	11/30/18 08:05	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	11/30/18 08:05	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	11/30/18 08:05	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	11/30/18 08:05	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	11/30/18 08:05	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	11/30/18 08:05	
1,2-Dichloroethane	ug/L	<0.28	1.0	11/30/18 08:05	
1,2-Dichloropropane	ug/L	<0.28	1.0	11/30/18 08:05	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	11/30/18 08:05	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	11/30/18 08:05	
1,3-Dichloropropane	ug/L	<0.83	2.8	11/30/18 08:05	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	11/30/18 08:05	
2,2-Dichloropropane	ug/L	<2.3	7.6	11/30/18 08:05	
2-Chlorotoluene	ug/L	<0.93	5.0	11/30/18 08:05	
4-Chlorotoluene	ug/L	<0.76	2.5	11/30/18 08:05	
Benzene	ug/L	<0.25	1.0	11/30/18 08:05	
Bromobenzene	ug/L	<0.24	1.0	11/30/18 08:05	
Bromochloromethane	ug/L	<0.36	5.0	11/30/18 08:05	
Bromodichloromethane	ug/L	<0.36	1.2	11/30/18 08:05	
Bromoform	ug/L	<4.0	13.2	11/30/18 08:05	
Bromomethane	ug/L	<0.97	5.0	11/30/18 08:05	
Carbon tetrachloride	ug/L	<0.17	1.0	11/30/18 08:05	
Chlorobenzene	ug/L	<0.71	2.4	11/30/18 08:05	
Chloroethane	ug/L	<1.3	5.0	11/30/18 08:05	
Chloroform	ug/L	<1.3	5.0	11/30/18 08:05	
Chloromethane	ug/L	<2.2	7.3	11/30/18 08:05	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	11/30/18 08:05	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	11/30/18 08:05	
Dibromochloromethane	ug/L	<2.6	8.7	11/30/18 08:05	
Dibromomethane	ug/L	<0.94	3.1	11/30/18 08:05	
Dichlorodifluoromethane	ug/L	<0.50	5.0	11/30/18 08:05	
Diisopropyl ether	ug/L	<1.9	6.3	11/30/18 08:05	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

METHOD BLANK: 1799227 Matrix: Water
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.22	1.0	11/30/18 08:05	
Hexachloro-1,3-butadiene	ug/L	<1.2	5.0	11/30/18 08:05	
Isopropylbenzene (Cumene)	ug/L	<0.39	5.0	11/30/18 08:05	
m&p-Xylene	ug/L	<0.47	2.0	11/30/18 08:05	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	11/30/18 08:05	
Methylene Chloride	ug/L	<0.58	5.0	11/30/18 08:05	
n-Butylbenzene	ug/L	<0.71	2.4	11/30/18 08:05	
n-Propylbenzene	ug/L	<0.81	5.0	11/30/18 08:05	
Naphthalene	ug/L	<1.2	5.0	11/30/18 08:05	
o-Xylene	ug/L	<0.26	1.0	11/30/18 08:05	
p-Isopropyltoluene	ug/L	<0.80	2.7	11/30/18 08:05	
sec-Butylbenzene	ug/L	<0.85	5.0	11/30/18 08:05	
Styrene	ug/L	<0.47	1.6	11/30/18 08:05	
tert-Butylbenzene	ug/L	<0.30	1.0	11/30/18 08:05	
Tetrachloroethene	ug/L	<0.33	1.1	11/30/18 08:05	
Toluene	ug/L	<0.17	5.0	11/30/18 08:05	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	11/30/18 08:05	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	11/30/18 08:05	
Trichloroethene	ug/L	<0.26	1.0	11/30/18 08:05	
Trichlorofluoromethane	ug/L	<0.21	1.0	11/30/18 08:05	
Vinyl chloride	ug/L	<0.17	1.0	11/30/18 08:05	
4-Bromofluorobenzene (S)	%	100	70-130	11/30/18 08:05	
Dibromofluoromethane (S)	%	98	70-130	11/30/18 08:05	
Toluene-d8 (S)	%	103	70-130	11/30/18 08:05	

LABORATORY CONTROL SAMPLE: 1799228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	46.0	92	70-133	
1,1,2,2-Tetrachloroethane	ug/L	50	50.7	101	67-130	
1,1,2-Trichloroethane	ug/L	50	53.9	108	70-130	
1,1-Dichloroethane	ug/L	50	49.1	98	70-134	
1,1-Dichloroethene	ug/L	50	46.1	92	75-132	
1,2,4-Trichlorobenzene	ug/L	50	49.1	98	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	45.0	90	60-126	
1,2-Dibromoethane (EDB)	ug/L	50	50.2	100	70-130	
1,2-Dichlorobenzene	ug/L	50	48.5	97	70-130	
1,2-Dichloroethane	ug/L	50	51.5	103	73-134	
1,2-Dichloropropane	ug/L	50	53.3	107	79-128	
1,3-Dichlorobenzene	ug/L	50	48.0	96	70-130	
1,4-Dichlorobenzene	ug/L	50	48.5	97	70-130	
Benzene	ug/L	50	50.4	101	69-137	
Bromodichloromethane	ug/L	50	50.4	101	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

LABORATORY CONTROL SAMPLE: 1799228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	50	55.4	111	64-133	
Bromomethane	ug/L	50	25.5	51	29-123	
Carbon tetrachloride	ug/L	50	47.0	94	73-142	
Chlorobenzene	ug/L	50	50.1	100	70-130	
Chloroethane	ug/L	50	46.1	92	59-133	
Chloroform	ug/L	50	49.3	99	80-129	
Chloromethane	ug/L	50	36.7	73	27-125	
cis-1,2-Dichloroethene	ug/L	50	45.8	92	70-134	
cis-1,3-Dichloropropene	ug/L	50	47.9	96	70-130	
Dibromochloromethane	ug/L	50	49.5	99	70-130	
Dichlorodifluoromethane	ug/L	50	43.0	86	12-127	
Ethylbenzene	ug/L	50	52.6	105	86-127	
Isopropylbenzene (Cumene)	ug/L	50	50.5	101	70-130	
m&p-Xylene	ug/L	100	102	102	70-131	
Methyl-tert-butyl ether	ug/L	50	39.6	79	65-136	
Methylene Chloride	ug/L	50	43.8	88	72-133	
o-Xylene	ug/L	50	49.7	99	70-130	
Styrene	ug/L	50	49.6	99	70-130	
Tetrachloroethene	ug/L	50	53.4	107	70-130	
Toluene	ug/L	50	51.5	103	84-124	
trans-1,2-Dichloroethene	ug/L	50	46.3	93	70-133	
trans-1,3-Dichloropropene	ug/L	50	46.9	94	67-130	
Trichloroethene	ug/L	50	52.0	104	70-130	
Trichlorofluoromethane	ug/L	50	51.4	103	69-147	
Vinyl chloride	ug/L	50	44.4	89	48-134	
4-Bromofluorobenzene (S)	%			104	70-130	
Dibromofluoromethane (S)	%			99	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799625 1799626

Parameter	Units	40180177001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	46.6	48.1	93	96	70-136	3	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	52.1	52.5	104	105	67-133	1	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	54.4	55.7	109	111	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	49.6	51.2	99	102	70-139	3	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	46.2	48.3	92	97	72-137	4	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	50.7	52.1	101	104	68-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	46.2	48.1	92	96	60-130	4	21	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	51.5	52.7	103	105	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	48.8	50.5	98	101	70-130	3	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	51.3	52.8	103	106	71-137	3	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	53.8	55.6	108	111	78-130	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799625 1799626

Parameter	Units	40180177001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<0.63	50	50	48.6	50.4	97	101	70-130	3	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	49.0	50.5	98	101	70-130	3	20	
Benzene	ug/L	<0.25	50	50	50.7	52.1	101	104	66-143	3	20	
Bromodichloromethane	ug/L	<0.36	50	50	51.2	52.4	102	105	70-130	2	20	
Bromoform	ug/L	<4.0	50	50	55.6	58.0	111	116	64-134	4	20	
Bromomethane	ug/L	<0.97	50	50	28.2	30.3	56	60	29-136	7	25	
Carbon tetrachloride	ug/L	<0.17	50	50	47.8	49.2	96	98	73-142	3	20	
Chlorobenzene	ug/L	<0.71	50	50	50.5	51.8	101	104	70-130	2	20	
Chloroethane	ug/L	<1.3	50	50	46.3	50.0	93	100	58-138	8	20	
Chloroform	ug/L	<1.3	50	50	49.4	51.2	99	102	80-131	4	20	
Chloromethane	ug/L	<2.2	50	50	37.2	38.7	74	77	24-125	4	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	46.2	47.6	92	95	68-137	3	22	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	49.0	50.4	98	101	70-130	3	20	
Dibromochloromethane	ug/L	<2.6	50	50	50.2	51.2	100	102	70-131	2	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	42.3	43.7	85	87	10-127	3	20	
Ethylbenzene	ug/L	<0.22	50	50	53.5	55.3	107	111	81-136	3	20	
Isopropylbenzene (Cumene)	ug/L	<0.39	50	50	51.3	52.9	103	106	70-132	3	20	
m&p-Xylene	ug/L	<0.47	100	100	104	107	104	107	70-135	3	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	40.0	41.0	80	82	58-142	2	23	
Methylene Chloride	ug/L	<0.58	50	50	44.3	46.3	89	93	69-137	5	20	
o-Xylene	ug/L	<0.26	50	50	50.7	52.1	101	104	70-132	3	20	
Styrene	ug/L	<0.47	50	50	50.1	51.8	100	104	70-130	3	20	
Tetrachloroethene	ug/L	<0.33	50	50	54.2	55.4	108	111	70-132	2	20	
Toluene	ug/L	<0.17	50	50	52.2	53.7	104	107	81-130	3	20	
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	46.8	47.7	94	95	70-136	2	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	47.8	49.2	96	98	67-130	3	20	
Trichloroethene	ug/L	<0.26	50	50	53.1	54.0	106	108	70-131	2	20	
Trichlorofluoromethane	ug/L	<0.21	50	50	51.5	53.1	103	106	66-150	3	20	
Vinyl chloride	ug/L	<0.17	50	50	44.4	46.5	89	93	46-134	5	20	
4-Bromofluorobenzene (S)	%						104	105	70-130			
Dibromofluoromethane (S)	%						99	100	70-130			
Toluene-d8 (S)	%						103	103	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

QC Batch: 307934 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

METHOD BLANK: 1799258 Matrix: Water
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008, 40180194009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	<0.075	0.22	11/29/18 14:31	
Sulfate	mg/L	<1.0	3.0	11/29/18 14:31	

LABORATORY CONTROL SAMPLE: 1799259

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	1.5	1.6	104	90-110	
Sulfate	mg/L	20	20.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799260 1799261

Parameter	Units	40180194001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.31	1.5	1.5	1.5	1.6	83	83	90-110	0	15	M0
Sulfate	mg/L	217	200	200	409	418	96	101	90-110	2	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

QC Batch: 307996 Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008

METHOD BLANK: 1799650 Matrix: Water
Associated Lab Samples: 40180194001, 40180194002, 40180194003, 40180194004, 40180194005, 40180194006, 40180194007, 40180194008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.0	23.5	11/30/18 18:11	

LABORATORY CONTROL SAMPLE: 1799651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	106	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799652 1799653

Parameter	Units	40180043005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	669	500	500	1060	1110	78	88	90-110	4	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799672 1799673

Parameter	Units	40180194008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	465	500	500	900	900	87	87	90-110	0	20	M0

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

QC Batch: 308516 Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity
Associated Lab Samples: 40180194009

METHOD BLANK: 1802140 Matrix: Water
Associated Lab Samples: 40180194009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.0	23.5	12/06/18 11:59	

LABORATORY CONTROL SAMPLE: 1802141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	97.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802142 1802143

Parameter	Units	40180227001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	207	500	500	641	650	87	89	90-110	1	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802144 1802145

Parameter	Units	40180419009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	153	200	200	341	361	94	104	90-110	6	20	

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QUALITY CONTROL DATA

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

QC Batch: 308377 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 40180194003, 40180194004, 40180194006, 40180194008

METHOD BLANK: 1801429 Matrix: Water
Associated Lab Samples: 40180194003, 40180194004, 40180194006, 40180194008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.25	0.84	12/05/18 08:59	

LABORATORY CONTROL SAMPLE: 1801430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.5	2.3	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801431 1801432

Parameter	Units	40179703024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.4	2	2	5.5	5.6	101	105	80-120	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801433 1801434

Parameter	Units	10456257001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	6.6	6	6	12.8	12.9	104	105	80-120	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40180194001	**MW-17R**	EPA 8015B Modified	307977		
40180194002	**MW-12**	EPA 8015B Modified	307977		
40180194003	**MW-11**	EPA 8015B Modified	307977		
40180194004	**MW-2**	EPA 8015B Modified	307977		
40180194005	**MW-37R**	EPA 8015B Modified	307977		
40180194006	**OP-3**	EPA 8015B Modified	307977		
40180194007	**OP-2**	EPA 8015B Modified	307977		
40180194008	**MW-16**	EPA 8015B Modified	307977		
40180194009	**MW-04**	EPA 8015B Modified	307977		
40180194001	**MW-17R**	EPA 6010	308112		
40180194002	**MW-12**	EPA 6010	308112		
40180194003	**MW-11**	EPA 6010	308112		
40180194004	**MW-2**	EPA 6010	308112		
40180194005	**MW-37R**	EPA 6010	308112		
40180194006	**OP-3**	EPA 6010	308112		
40180194007	**OP-2**	EPA 6010	308112		
40180194008	**MW-16**	EPA 6010	308112		
40180194009	**MW-04**	EPA 6010	308112		
40180194001	**MW-17R**	EPA 8260	307923		
40180194002	**MW-12**	EPA 8260	307923		
40180194003	**MW-11**	EPA 8260	307923		
40180194004	**MW-2**	EPA 8260	307923		
40180194005	**MW-37R**	EPA 8260	307923		
40180194006	**OP-3**	EPA 8260	307923		
40180194007	**OP-2**	EPA 8260	307923		
40180194008	**MW-16**	EPA 8260	307923		
40180194009	**MW-04**	EPA 8260	307923		
40180194001	**MW-17R**	EPA 300.0	307934		
40180194002	**MW-12**	EPA 300.0	307934		
40180194003	**MW-11**	EPA 300.0	307934		
40180194004	**MW-2**	EPA 300.0	307934		
40180194005	**MW-37R**	EPA 300.0	307934		
40180194006	**OP-3**	EPA 300.0	307934		
40180194007	**OP-2**	EPA 300.0	307934		
40180194008	**MW-16**	EPA 300.0	307934		
40180194009	**MW-04**	EPA 300.0	307934		
40180194001	**MW-17R**	EPA 300.0	307934		
40180194002	**MW-12**	EPA 300.0	307934		
40180194003	**MW-11**	EPA 300.0	307934		
40180194004	**MW-2**	EPA 300.0	307934		
40180194005	**MW-37R**	EPA 300.0	307934		
40180194006	**OP-3**	EPA 300.0	307934		
40180194007	**OP-2**	EPA 300.0	307934		
40180194008	**MW-16**	EPA 300.0	307934		
40180194009	**MW-04**	EPA 300.0	307934		
40180194001	**MW-17R**	EPA 310.2	307996		
40180194002	**MW-12**	EPA 310.2	307996		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20-0155935.00 TRENT TUBE
Pace Project No.: 40180194

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40180194003	**MW-11**	EPA 310.2	307996		
40180194004	**MW-2**	EPA 310.2	307996		
40180194005	**MW-37R**	EPA 310.2	307996		
40180194006	**OP-3**	EPA 310.2	307996		
40180194007	**OP-2**	EPA 310.2	307996		
40180194008	**MW-16**	EPA 310.2	307996		
40180194009	**MW-04**	EPA 310.2	308516		
40180194003	**MW-11**	SM 5310C	308377		
40180194004	**MW-2**	SM 5310C	308377		
40180194006	**OP-3**	SM 5310C	308377		
40180194008	**MW-16**	SM 5310C	308377		

40180194

(Please Print Clearly)

Company Name:	GZA GeoEnvironmental
Branch/Location:	Waukesha
Project Contact:	Kevin Hedinger
Phone:	262-754-2578
Project Number:	20-0155935.00
Project Name:	Trent Tube
Project State:	WI
Sampled By (Print):	Sheryl Stephenson
Sampled By (Sign):	Stephenson
PO #:	
Regulatory Program:	

Pace Analytical® www.pacelabs.com

CHAIN OF CUSTODY

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	SAME
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, Sl = Sludge
W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	VOCs	Dissolved Mn, Fe	Ethene, Ethane	Nitrate, Sulfate	TOC	Alkalinity	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
FILTERED? (YES/NO)					N	Y	N	N	N	N			
PRESERVATION (CODE)* Pick Letter					B	D	B	A	A	A			
001	MW-17R	11/28/18	1140		X	X	X	X		X			
002	MW-12	11/28/18	1615		X	X	X	X		X			
003	MW-11		1440		X	X	X	X	X	X			
004	MW-2		1255		X	X	X	X	X	X			
005	MW-37R		1020		X	X	X	X		X			
006	OP-3		1523		X	X	X	X	X	X			
007 ~~008~~	OP-2		1345		X	X	X	X	X	X			
008	MW-16		1032		X	X	X	X	X	X			
009	MW-04	↓	1212		X	X	X	X		X			

SS

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Stephenson	11/28/18 1730		
FedEx	11/29/18 1000	[signature] Pace	11/29/18 1000

PACE Project No. 40180194

Receipt Temp = ROI °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: GZA GeoEnvironmental   Project # 40180194

All containers needing preservation have been checked and noted below: ☒Yes ☐No ☐N/A

Lab Lot# of pH paper: 10US2681   Lab Std #ID of preservation (if pH adjusted):   Initial when completed: JK   Date/ Time:

Pace Lab #	Glass AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	Vials DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars JGFU	WGFU	WPFU	General SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001											1		1					6													X		2.5 / 5 / 10
002											1		1					6													X		2.5 / 5 / 10
003			1								1		1					6													X		2.5 / 5 / 10
004			1								1		1					6													X		2.5 / 5 / 10
005											1		1					6													X		2.5 / 5 / 10
006			1								1		1					6													X		2.5 / 5 / 10
007											1		1					6									1				X		2.5 / 5 / 10
008			1								1		1					6													X		2.5 / 5 / 10
009											1		1					6													X		2.5 / 5 / 10
010													+																				2.5 / 5 / 10
011													JK 11-29-19																				2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:______ Headspace in VOA Vials (>6mm) : ☒Yes ☐No ☐N/A *If yes look in headspace column

Code	Description	Code	Description	Code	Description	Code	Description
AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical™ 1241 Bellevue Street, Green Bay, WI 54302	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: 25Apr2018
	Document No.: **F-GB-C-031-Rev.07**	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: GZA GeoEnvironmental

Project #: **WO#: 40180194**

40180194

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other: _____

Tracking #: 7840 6670 9701

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used SR - NA **Type of Ice:** Wet Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: R01 /Corr:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 11-29-18
Initials: JK

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☒No ☐N/A	2. No pace number, no matrix 11-29-18 JK
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☒Yes ☐No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☒Yes ☐No ☐N/A	11. Client wrote on sample labels in red ink 11-29-18 JK
Sample Labels match COC:	☐Yes ☒No ☐N/A	12. 006 no time on BP3U. 006-009 times are actual grab times in order placed by ID 11-29-18 JK
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☐Yes ☒No ☐N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 11/29/18

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

December 06, 2018

Kevin Hedinger
GZA
20900 Swenson Drive
Suite 150
Waukesha, WI 53186

RE: Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Dear Kevin Hedinger:
Enclosed are the analytical results for sample(s) received by the laboratory on November 30, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christopher Hyska

Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40180283001	**MW-29**	Water	11/29/18 13:40	11/30/18 10:40
40180283002	**MW-19**	Water	11/29/18 10:44	11/30/18 10:40
40180283003	**MW-19 DUP**	Water	11/29/18 10:53	11/30/18 10:40
40180283004	**MW-25**	Water	11/29/18 12:30	11/30/18 10:40
40180283005	**MW-01R**	Water	11/29/18 10:10	11/30/18 10:40
40180283006	**MW-27**	Water	11/29/18 12:00	11/30/18 10:40
40180283007	**TRIP**	Water	11/29/18 16:15	11/30/18 10:40

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SAMPLE ANALYTE COUNT

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40180283001	**MW-29**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	LAP	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180283002	**MW-19**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	LAP	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180283003	**MW-19 DUP**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	LAP	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180283004	**MW-25**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	LAP	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180283005	**MW-01R**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	LAP	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180283006	**MW-27**	EPA 8015B Modified	ALD	2	PASI-G
		EPA 6010	TXW	2	PASI-G
		EPA 8260	LAP	64	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40180283007	**TRIP**	EPA 8260	HNW	64	PASI-G

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40180283001	**MW-29**					
EPA 300.0	Nitrate as N	17.2	mg/L	4.5	12/03/18 13:52	H5
EPA 300.0	Sulfate	530	mg/L	60.0	12/03/18 13:52	M0
EPA 310.2	Alkalinity, Total as CaCO3	221	mg/L	23.5	12/06/18 12:02	
40180283002	**MW-19**					
EPA 8015B Modified	Ethane	3.7J	ug/L	5.6	12/03/18 11:33	
EPA 8015B Modified	Ethene	1.1J	ug/L	5.0	12/03/18 11:33	
EPA 6010	Iron, Dissolved	21400	ug/L	118	12/04/18 21:01	
EPA 6010	Manganese, Dissolved	2300	ug/L	5.0	12/04/18 21:01	
EPA 8260	1,1-Dichloroethane	0.36J	ug/L	1.0	12/04/18 08:17	
EPA 8260	Vinyl chloride	2.1	ug/L	1.0	12/04/18 08:17	
EPA 300.0	Sulfate	12.9J	mg/L	15.0	11/30/18 21:16	D3
EPA 310.2	Alkalinity, Total as CaCO3	728	mg/L	47.0	12/06/18 12:03	
40180283003	**MW-19 DUP**					
EPA 8015B Modified	Ethane	4.3J	ug/L	5.6	12/03/18 11:40	
EPA 8015B Modified	Ethene	1.4J	ug/L	5.0	12/03/18 11:40	
EPA 6010	Iron, Dissolved	20200	ug/L	118	12/04/18 21:03	
EPA 6010	Manganese, Dissolved	2220	ug/L	5.0	12/04/18 21:03	
EPA 8260	1,1-Dichloroethane	0.29J	ug/L	1.0	12/04/18 08:39	
EPA 8260	Vinyl chloride	2.2	ug/L	1.0	12/04/18 08:39	
EPA 300.0	Sulfate	12.8J	mg/L	15.0	11/30/18 21:30	D3
EPA 310.2	Alkalinity, Total as CaCO3	673	mg/L	47.0	12/06/18 12:03	
40180283004	**MW-25**					
EPA 6010	Iron, Dissolved	2210	ug/L	118	12/04/18 21:11	
EPA 6010	Manganese, Dissolved	673	ug/L	5.0	12/04/18 21:11	
EPA 300.0	Sulfate	566	mg/L	60.0	12/03/18 14:33	
EPA 310.2	Alkalinity, Total as CaCO3	460	mg/L	47.0	12/06/18 12:04	
40180283005	**MW-01R**					
EPA 6010	Manganese, Dissolved	50.3	ug/L	5.0	12/04/18 21:13	
EPA 8260	1,1,1-Trichloroethane	1.3	ug/L	1.0	12/04/18 09:46	
EPA 8260	1,1-Dichloroethane	0.40J	ug/L	1.0	12/04/18 09:46	
EPA 8260	Tetrachloroethene	0.37J	ug/L	1.1	12/04/18 09:46	
EPA 8260	Trichloroethene	0.27J	ug/L	1.0	12/04/18 09:46	
EPA 300.0	Nitrate as N	0.68	mg/L	0.22	11/30/18 21:58	
EPA 300.0	Sulfate	200	mg/L	30.0	12/03/18 14:47	
EPA 310.2	Alkalinity, Total as CaCO3	280	mg/L	23.5	12/06/18 12:04	
40180283006	**MW-27**					
EPA 6010	Iron, Dissolved	3370	ug/L	118	12/04/18 21:15	
EPA 6010	Manganese, Dissolved	944	ug/L	5.0	12/04/18 21:15	
EPA 310.2	Alkalinity, Total as CaCO3	497	mg/L	47.0	12/06/18 12:05	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-29 **Lab ID: 40180283001** Collected: 11/29/18 13:40 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		12/03/18 11:26	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		12/03/18 11:26	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**<35.4**	ug/L	118	35.4	1		12/04/18 20:58	7439-89-6	
Manganese, Dissolved	**<1.1**	ug/L	5.0	1.1	1		12/04/18 20:58	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 09:02	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		12/04/18 09:02	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:02	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		12/04/18 09:02	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 09:02	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 09:02	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		12/04/18 09:02	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		12/04/18 09:02	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		12/04/18 09:02	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		12/04/18 09:02	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		12/04/18 09:02	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		12/04/18 09:02	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		12/04/18 09:02	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:02	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:02	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:02	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		12/04/18 09:02	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		12/04/18 09:02	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		12/04/18 09:02	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		12/04/18 09:02	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		12/04/18 09:02	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		12/04/18 09:02	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		12/04/18 09:02	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		12/04/18 09:02	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 09:02	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		12/04/18 09:02	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		12/04/18 09:02	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		12/04/18 09:02	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		12/04/18 09:02	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 09:02	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:02	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		12/04/18 09:02	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		12/04/18 09:02	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		12/04/18 09:02	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		12/04/18 09:02	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		12/04/18 09:02	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		12/04/18 09:02	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		12/04/18 09:02	108-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-29 **Lab ID: 40180283001** Collected: 11/29/18 13:40 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		12/04/18 09:02	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 09:02	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		12/04/18 09:02	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		12/04/18 09:02	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		12/04/18 09:02	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 09:02	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		12/04/18 09:02	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		12/04/18 09:02	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		12/04/18 09:02	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 09:02	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		12/04/18 09:02	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 09:02	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		12/04/18 09:02	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		12/04/18 09:02	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		12/04/18 09:02	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:02	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		12/04/18 09:02	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 09:02	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		12/04/18 09:02	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		12/04/18 09:02	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		12/04/18 09:02	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		12/04/18 09:02	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		12/04/18 09:02	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		12/04/18 09:02	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		12/04/18 09:02	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		12/04/18 09:02	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**17.2**	mg/L	4.5	1.5	20		12/03/18 13:52	14797-55-8	H5
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**530**	mg/L	60.0	20.0	20		12/03/18 13:52	14808-79-8	M0
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**221**	mg/L	23.5	7.0	1		12/06/18 12:02		

Sample: MW-19 **Lab ID: 40180283002** Collected: 11/29/18 10:44 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**3.7J**	ug/L	5.6	0.58	1		12/03/18 11:33	74-84-0	
Ethene	**1.1J**	ug/L	5.0	0.52	1		12/03/18 11:33	74-85-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-19 **Lab ID: 40180283002** Collected: 11/29/18 10:44 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**21400**	ug/L	118	35.4	1		12/04/18 21:01	7439-89-6	
Manganese, Dissolved	**2300**	ug/L	5.0	1.1	1		12/04/18 21:01	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 08:17	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		12/04/18 08:17	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 08:17	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		12/04/18 08:17	79-00-5	
1,1-Dichloroethane	**0.36J**	ug/L	1.0	0.27	1		12/04/18 08:17	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 08:17	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		12/04/18 08:17	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		12/04/18 08:17	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		12/04/18 08:17	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		12/04/18 08:17	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		12/04/18 08:17	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		12/04/18 08:17	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		12/04/18 08:17	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 08:17	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 08:17	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 08:17	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		12/04/18 08:17	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		12/04/18 08:17	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		12/04/18 08:17	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		12/04/18 08:17	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		12/04/18 08:17	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		12/04/18 08:17	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		12/04/18 08:17	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		12/04/18 08:17	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 08:17	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		12/04/18 08:17	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		12/04/18 08:17	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		12/04/18 08:17	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		12/04/18 08:17	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 08:17	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 08:17	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		12/04/18 08:17	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		12/04/18 08:17	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		12/04/18 08:17	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		12/04/18 08:17	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		12/04/18 08:17	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		12/04/18 08:17	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		12/04/18 08:17	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		12/04/18 08:17	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 08:17	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		12/04/18 08:17	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		12/04/18 08:17	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-19 **Lab ID: 40180283002** Collected: 11/29/18 10:44 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		12/04/18 08:17	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 08:17	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		12/04/18 08:17	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		12/04/18 08:17	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		12/04/18 08:17	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 08:17	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		12/04/18 08:17	75-69-4	
Vinyl chloride	**2.1**	ug/L	1.0	0.17	1		12/04/18 08:17	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		12/04/18 08:17	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		12/04/18 08:17	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		12/04/18 08:17	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 08:17	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		12/04/18 08:17	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 08:17	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		12/04/18 08:17	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		12/04/18 08:17	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		12/04/18 08:17	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		12/04/18 08:17	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		12/04/18 08:17	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		12/04/18 08:17	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		12/04/18 08:17	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		12/04/18 08:17	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		11/30/18 21:16	14797-55-8	D3
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**12.9J**	mg/L	15.0	5.0	5		11/30/18 21:16	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**728**	mg/L	47.0	14.1	2		12/06/18 12:03		

Sample: MW-19 DUP **Lab ID: 40180283003** Collected: 11/29/18 10:53 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**4.3J**	ug/L	5.6	0.58	1		12/03/18 11:40	74-84-0	
Ethene	**1.4J**	ug/L	5.0	0.52	1		12/03/18 11:40	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**20200**	ug/L	118	35.4	1		12/04/18 21:03	7439-89-6	
Manganese, Dissolved	**2220**	ug/L	5.0	1.1	1		12/04/18 21:03	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-19 DUP **Lab ID: 40180283003** Collected: 11/29/18 10:53 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 08:39	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		12/04/18 08:39	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 08:39	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		12/04/18 08:39	79-00-5	
1,1-Dichloroethane	**0.29J**	ug/L	1.0	0.27	1		12/04/18 08:39	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 08:39	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		12/04/18 08:39	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		12/04/18 08:39	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		12/04/18 08:39	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		12/04/18 08:39	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		12/04/18 08:39	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		12/04/18 08:39	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		12/04/18 08:39	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 08:39	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 08:39	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 08:39	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		12/04/18 08:39	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		12/04/18 08:39	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		12/04/18 08:39	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		12/04/18 08:39	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		12/04/18 08:39	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		12/04/18 08:39	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		12/04/18 08:39	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		12/04/18 08:39	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 08:39	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		12/04/18 08:39	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		12/04/18 08:39	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		12/04/18 08:39	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		12/04/18 08:39	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 08:39	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 08:39	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		12/04/18 08:39	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		12/04/18 08:39	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		12/04/18 08:39	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		12/04/18 08:39	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		12/04/18 08:39	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		12/04/18 08:39	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		12/04/18 08:39	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		12/04/18 08:39	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 08:39	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		12/04/18 08:39	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		12/04/18 08:39	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		12/04/18 08:39	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 08:39	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		12/04/18 08:39	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		12/04/18 08:39	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-19 DUP **Lab ID: 40180283003** Collected: 11/29/18 10:53 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Toluene	**<0.17**	ug/L	5.0	0.17	1		12/04/18 08:39	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 08:39	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		12/04/18 08:39	75-69-4	
Vinyl chloride	**2.2**	ug/L	1.0	0.17	1		12/04/18 08:39	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		12/04/18 08:39	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		12/04/18 08:39	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		12/04/18 08:39	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 08:39	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		12/04/18 08:39	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 08:39	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		12/04/18 08:39	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		12/04/18 08:39	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		12/04/18 08:39	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		12/04/18 08:39	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		12/04/18 08:39	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		12/04/18 08:39	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		12/04/18 08:39	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		12/04/18 08:39	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		11/30/18 21:30	14797-55-8	D3
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**12.8J**	mg/L	15.0	5.0	5		11/30/18 21:30	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**673**	mg/L	47.0	14.1	2		12/06/18 12:03		

Sample: MW-25 **Lab ID: 40180283004** Collected: 11/29/18 12:30 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		12/03/18 11:47	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		12/03/18 11:47	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**2210**	ug/L	118	35.4	1		12/04/18 21:11	7439-89-6	
Manganese, Dissolved	**673**	ug/L	5.0	1.1	1		12/04/18 21:11	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 09:24	630-20-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-25 **Lab ID: 40180283004** Collected: 11/29/18 12:30 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		12/04/18 09:24	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:24	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		12/04/18 09:24	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 09:24	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 09:24	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		12/04/18 09:24	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		12/04/18 09:24	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		12/04/18 09:24	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		12/04/18 09:24	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		12/04/18 09:24	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		12/04/18 09:24	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		12/04/18 09:24	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:24	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:24	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:24	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		12/04/18 09:24	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		12/04/18 09:24	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		12/04/18 09:24	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		12/04/18 09:24	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		12/04/18 09:24	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		12/04/18 09:24	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		12/04/18 09:24	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		12/04/18 09:24	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 09:24	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		12/04/18 09:24	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		12/04/18 09:24	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		12/04/18 09:24	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		12/04/18 09:24	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 09:24	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:24	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		12/04/18 09:24	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		12/04/18 09:24	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		12/04/18 09:24	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		12/04/18 09:24	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		12/04/18 09:24	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		12/04/18 09:24	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		12/04/18 09:24	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		12/04/18 09:24	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 09:24	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		12/04/18 09:24	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		12/04/18 09:24	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		12/04/18 09:24	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 09:24	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		12/04/18 09:24	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		12/04/18 09:24	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		12/04/18 09:24	108-88-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-25 **Lab ID: 40180283004** Collected: 11/29/18 12:30 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 09:24	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		12/04/18 09:24	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 09:24	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		12/04/18 09:24	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		12/04/18 09:24	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		12/04/18 09:24	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:24	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		12/04/18 09:24	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 09:24	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		12/04/18 09:24	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		12/04/18 09:24	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		12/04/18 09:24	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		12/04/18 09:24	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		12/04/18 09:24	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		12/04/18 09:24	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		12/04/18 09:24	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		12/04/18 09:24	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.075**	mg/L	0.22	0.075	1		11/30/18 21:44	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**566**	mg/L	60.0	20.0	20		12/03/18 14:33	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**460**	mg/L	47.0	14.1	2		12/06/18 12:04		

Sample: MW-01R **Lab ID: 40180283005** Collected: 11/29/18 10:10 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		12/03/18 11:55	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		12/03/18 11:55	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**<35.4**	ug/L	118	35.4	1		12/04/18 21:13	7439-89-6	
Manganese, Dissolved	**50.3**	ug/L	5.0	1.1	1		12/04/18 21:13	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 09:46	630-20-6	
1,1,1-Trichloroethane	**1.3**	ug/L	1.0	0.24	1		12/04/18 09:46	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-01R **Lab ID: 40180283005** Collected: 11/29/18 10:10 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:46	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		12/04/18 09:46	79-00-5	
1,1-Dichloroethane	**0.40J**	ug/L	1.0	0.27	1		12/04/18 09:46	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 09:46	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		12/04/18 09:46	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		12/04/18 09:46	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		12/04/18 09:46	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		12/04/18 09:46	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		12/04/18 09:46	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		12/04/18 09:46	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		12/04/18 09:46	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:46	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:46	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 09:46	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		12/04/18 09:46	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		12/04/18 09:46	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		12/04/18 09:46	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		12/04/18 09:46	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		12/04/18 09:46	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		12/04/18 09:46	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		12/04/18 09:46	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		12/04/18 09:46	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 09:46	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		12/04/18 09:46	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		12/04/18 09:46	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		12/04/18 09:46	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		12/04/18 09:46	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 09:46	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:46	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		12/04/18 09:46	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		12/04/18 09:46	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		12/04/18 09:46	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		12/04/18 09:46	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		12/04/18 09:46	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		12/04/18 09:46	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		12/04/18 09:46	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		12/04/18 09:46	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 09:46	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		12/04/18 09:46	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		12/04/18 09:46	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		12/04/18 09:46	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 09:46	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		12/04/18 09:46	100-42-5	
Tetrachloroethene	**0.37J**	ug/L	1.1	0.33	1		12/04/18 09:46	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		12/04/18 09:46	108-88-3	
Trichloroethene	**0.27J**	ug/L	1.0	0.26	1		12/04/18 09:46	79-01-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-01R **Lab ID: 40180283005** Collected: 11/29/18 10:10 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		12/04/18 09:46	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 09:46	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		12/04/18 09:46	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		12/04/18 09:46	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		12/04/18 09:46	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 09:46	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		12/04/18 09:46	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 09:46	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		12/04/18 09:46	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		12/04/18 09:46	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		12/04/18 09:46	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		12/04/18 09:46	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		12/04/18 09:46	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		12/04/18 09:46	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		12/04/18 09:46	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		12/04/18 09:46	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.68**	mg/L	0.22	0.075	1		11/30/18 21:58	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**200**	mg/L	30.0	10.0	10		12/03/18 14:47	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**280**	mg/L	23.5	7.0	1		12/06/18 12:04		

Sample: MW-27 **Lab ID: 40180283006** Collected: 11/29/18 12:00 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Methane, Ethane, Ethene GCV	Analytical Method: EPA 8015B Modified								
Ethane	**<0.58**	ug/L	5.6	0.58	1		12/03/18 12:57	74-84-0	
Ethene	**<0.52**	ug/L	5.0	0.52	1		12/03/18 12:57	74-85-1	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Iron, Dissolved	**3370**	ug/L	118	35.4	1		12/04/18 21:15	7439-89-6	
Manganese, Dissolved	**944**	ug/L	5.0	1.1	1		12/04/18 21:15	7439-96-5	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 10:09	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		12/04/18 10:09	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 10:09	79-34-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-27 **Lab ID: 40180283006** Collected: 11/29/18 12:00 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		12/04/18 10:09	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 10:09	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 10:09	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		12/04/18 10:09	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		12/04/18 10:09	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		12/04/18 10:09	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		12/04/18 10:09	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		12/04/18 10:09	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		12/04/18 10:09	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		12/04/18 10:09	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 10:09	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 10:09	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 10:09	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		12/04/18 10:09	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		12/04/18 10:09	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		12/04/18 10:09	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		12/04/18 10:09	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		12/04/18 10:09	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		12/04/18 10:09	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		12/04/18 10:09	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		12/04/18 10:09	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 10:09	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		12/04/18 10:09	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		12/04/18 10:09	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		12/04/18 10:09	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		12/04/18 10:09	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 10:09	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 10:09	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		12/04/18 10:09	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		12/04/18 10:09	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		12/04/18 10:09	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		12/04/18 10:09	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		12/04/18 10:09	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		12/04/18 10:09	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		12/04/18 10:09	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		12/04/18 10:09	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 10:09	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		12/04/18 10:09	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		12/04/18 10:09	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		12/04/18 10:09	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 10:09	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		12/04/18 10:09	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		12/04/18 10:09	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		12/04/18 10:09	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 10:09	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		12/04/18 10:09	75-69-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: MW-27 **Lab ID: 40180283006** Collected: 11/29/18 12:00 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 10:09	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		12/04/18 10:09	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		12/04/18 10:09	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		12/04/18 10:09	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 10:09	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		12/04/18 10:09	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 10:09	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		12/04/18 10:09	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		12/04/18 10:09	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		12/04/18 10:09	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		12/04/18 10:09	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		12/04/18 10:09	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		12/04/18 10:09	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		12/04/18 10:09	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		12/04/18 10:09	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**<0.38**	mg/L	1.1	0.38	5		11/30/18 22:12	14797-55-8	D3
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**<5.0**	mg/L	15.0	5.0	5		11/30/18 22:12	14808-79-8	D3
310.2 Alkalinity	Analytical Method: EPA 310.2								
Alkalinity, Total as CaCO3	**497**	mg/L	47.0	14.1	2		12/06/18 12:05		

Sample: TRIP **Lab ID: 40180283007** Collected: 11/29/18 16:15 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 16:16	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		12/04/18 16:16	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 16:16	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		12/04/18 16:16	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		12/04/18 16:16	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 16:16	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		12/04/18 16:16	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		12/04/18 16:16	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		12/04/18 16:16	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		12/04/18 16:16	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		12/04/18 16:16	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		12/04/18 16:16	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		12/04/18 16:16	106-93-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: TRIP **Lab ID: 40180283007** Collected: 11/29/18 16:15 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 16:16	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 16:16	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		12/04/18 16:16	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		12/04/18 16:16	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		12/04/18 16:16	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		12/04/18 16:16	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		12/04/18 16:16	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		12/04/18 16:16	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		12/04/18 16:16	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		12/04/18 16:16	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		12/04/18 16:16	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		12/04/18 16:16	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		12/04/18 16:16	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		12/04/18 16:16	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		12/04/18 16:16	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		12/04/18 16:16	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 16:16	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 16:16	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		12/04/18 16:16	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		12/04/18 16:16	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		12/04/18 16:16	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		12/04/18 16:16	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		12/04/18 16:16	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		12/04/18 16:16	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		12/04/18 16:16	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		12/04/18 16:16	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 16:16	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		12/04/18 16:16	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		12/04/18 16:16	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		12/04/18 16:16	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		12/04/18 16:16	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		12/04/18 16:16	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		12/04/18 16:16	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		12/04/18 16:16	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 16:16	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		12/04/18 16:16	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		12/04/18 16:16	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		12/04/18 16:16	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		12/04/18 16:16	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		12/04/18 16:16	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		12/04/18 16:16	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		12/04/18 16:16	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		12/04/18 16:16	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		12/04/18 16:16	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		12/04/18 16:16	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		12/04/18 16:16	98-06-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Sample: TRIP **Lab ID: 40180283007** Collected: 11/29/18 16:15 Received: 11/30/18 10:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		12/04/18 16:16	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		12/04/18 16:16	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		12/04/18 16:16	460-00-4	
Dibromofluoromethane (S)	96	%	70-130		1		12/04/18 16:16	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		12/04/18 16:16	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

QC Batch: 308134 Analysis Method: EPA 8015B Modified
QC Batch Method: EPA 8015B Modified Analysis Description: Methane, Ethane, Ethene GCV
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

METHOD BLANK: 1800540 Matrix: Water
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	<0.58	5.6	12/03/18 09:14	
Ethene	ug/L	<0.52	5.0	12/03/18 09:14	

LABORATORY CONTROL SAMPLE & LCSD: 1800541 1800542

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	53.6	53.3	54.7	99	102	80-120	3	20	
Ethene	ug/L	50	49.5	50.8	99	102	81-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800754 1800755

Parameter	Units	40180283001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<0.58	53.6	53.6	52.2	52.0	97	97	80-120	0	20	
Ethene	ug/L	<0.52	50	50	48.7	48.5	97	97	81-122	0	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

QC Batch: 308112 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

METHOD BLANK: 1800464 Matrix: Water
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	<35.4	118	12/04/18 20:13	
Manganese, Dissolved	ug/L	<1.1	5.0	12/04/18 20:13	

LABORATORY CONTROL SAMPLE: 1800465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	5000	5090	102	80-120	
Manganese, Dissolved	ug/L	500	501	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800466 1800467

Parameter	Units	40180125001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	1380	5000	5000	6500	6440	102	101	75-125	1	20	
Manganese, Dissolved	ug/L	638	500	500	1110	1120	94	97	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

QC Batch: 308123 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

METHOD BLANK: 1800494 Matrix: Water
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	12/04/18 06:25	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	12/04/18 06:25	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	12/04/18 06:25	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	12/04/18 06:25	
1,1-Dichloroethane	ug/L	<0.27	1.0	12/04/18 06:25	
1,1-Dichloroethene	ug/L	<0.24	1.0	12/04/18 06:25	
1,1-Dichloropropene	ug/L	<0.54	1.8	12/04/18 06:25	
1,2,3-Trichlorobenzene	ug/L	<0.63	5.0	12/04/18 06:25	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	12/04/18 06:25	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	12/04/18 06:25	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	12/04/18 06:25	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	12/04/18 06:25	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	12/04/18 06:25	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	12/04/18 06:25	
1,2-Dichloroethane	ug/L	<0.28	1.0	12/04/18 06:25	
1,2-Dichloropropane	ug/L	<0.28	1.0	12/04/18 06:25	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	12/04/18 06:25	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	12/04/18 06:25	
1,3-Dichloropropane	ug/L	<0.83	2.8	12/04/18 06:25	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	12/04/18 06:25	
2,2-Dichloropropane	ug/L	<2.3	7.6	12/04/18 06:25	
2-Chlorotoluene	ug/L	<0.93	5.0	12/04/18 06:25	
4-Chlorotoluene	ug/L	<0.76	2.5	12/04/18 06:25	
Benzene	ug/L	<0.25	1.0	12/04/18 06:25	
Bromobenzene	ug/L	<0.24	1.0	12/04/18 06:25	
Bromochloromethane	ug/L	<0.36	5.0	12/04/18 06:25	
Bromodichloromethane	ug/L	<0.36	1.2	12/04/18 06:25	
Bromoform	ug/L	<4.0	13.2	12/04/18 06:25	
Bromomethane	ug/L	<0.97	5.0	12/04/18 06:25	
Carbon tetrachloride	ug/L	<0.17	1.0	12/04/18 06:25	
Chlorobenzene	ug/L	<0.71	2.4	12/04/18 06:25	
Chloroethane	ug/L	<1.3	5.0	12/04/18 06:25	
Chloroform	ug/L	<1.3	5.0	12/04/18 06:25	
Chloromethane	ug/L	<2.2	7.3	12/04/18 06:25	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	12/04/18 06:25	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	12/04/18 06:25	
Dibromochloromethane	ug/L	<2.6	8.7	12/04/18 06:25	
Dibromomethane	ug/L	<0.94	3.1	12/04/18 06:25	
Dichlorodifluoromethane	ug/L	<0.50	5.0	12/04/18 06:25	
Diisopropyl ether	ug/L	<1.9	6.3	12/04/18 06:25	
Ethylbenzene	ug/L	<0.22	1.0	12/04/18 06:25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

METHOD BLANK: 1800494 Matrix: Water
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<1.2	5.0	12/04/18 06:25	
Isopropylbenzene (Cumene)	ug/L	<0.39	5.0	12/04/18 06:25	
m&p-Xylene	ug/L	<0.47	2.0	12/04/18 06:25	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	12/04/18 06:25	
Methylene Chloride	ug/L	<0.58	5.0	12/04/18 06:25	
n-Butylbenzene	ug/L	<0.71	2.4	12/04/18 06:25	
n-Propylbenzene	ug/L	<0.81	5.0	12/04/18 06:25	
Naphthalene	ug/L	<1.2	5.0	12/04/18 06:25	
o-Xylene	ug/L	<0.26	1.0	12/04/18 06:25	
p-Isopropyltoluene	ug/L	<0.80	2.7	12/04/18 06:25	
sec-Butylbenzene	ug/L	<0.85	5.0	12/04/18 06:25	
Styrene	ug/L	<0.47	1.6	12/04/18 06:25	
tert-Butylbenzene	ug/L	<0.30	1.0	12/04/18 06:25	
Tetrachloroethene	ug/L	<0.33	1.1	12/04/18 06:25	
Toluene	ug/L	<0.17	5.0	12/04/18 06:25	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	12/04/18 06:25	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	12/04/18 06:25	
Trichloroethene	ug/L	<0.26	1.0	12/04/18 06:25	
Trichlorofluoromethane	ug/L	<0.21	1.0	12/04/18 06:25	
Vinyl chloride	ug/L	<0.17	1.0	12/04/18 06:25	
4-Bromofluorobenzene (S)	%	93	70-130	12/04/18 06:25	
Dibromofluoromethane (S)	%	100	70-130	12/04/18 06:25	
Toluene-d8 (S)	%	97	70-130	12/04/18 06:25	

LABORATORY CONTROL SAMPLE: 1800495

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	55.2	110	70-133	
1,1,2,2-Tetrachloroethane	ug/L	50	44.9	90	67-130	
1,1,2-Trichloroethane	ug/L	50	48.0	96	70-130	
1,1-Dichloroethane	ug/L	50	56.1	112	70-134	
1,1-Dichloroethene	ug/L	50	59.2	118	75-132	
1,2,4-Trichlorobenzene	ug/L	50	54.6	109	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	43.9	88	60-126	
1,2-Dibromoethane (EDB)	ug/L	50	48.7	97	70-130	
1,2-Dichlorobenzene	ug/L	50	53.9	108	70-130	
1,2-Dichloroethane	ug/L	50	50.1	100	73-134	
1,2-Dichloropropane	ug/L	50	54.0	108	79-128	
1,3-Dichlorobenzene	ug/L	50	54.6	109	70-130	
1,4-Dichlorobenzene	ug/L	50	53.7	107	70-130	
Benzene	ug/L	50	55.0	110	69-137	
Bromodichloromethane	ug/L	50	51.5	103	70-130	
Bromoform	ug/L	50	43.2	86	64-133	
Bromomethane	ug/L	50	43.7	87	29-123	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

LABORATORY CONTROL SAMPLE: 1800495

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	57.3	115	73-142	
Chlorobenzene	ug/L	50	53.6	107	70-130	
Chloroethane	ug/L	50	58.2	116	59-133	
Chloroform	ug/L	50	56.4	113	80-129	
Chloromethane	ug/L	50	54.1	108	27-125	
cis-1,2-Dichloroethene	ug/L	50	54.1	108	70-134	
cis-1,3-Dichloropropene	ug/L	50	52.0	104	70-130	
Dibromochloromethane	ug/L	50	52.6	105	70-130	
Dichlorodifluoromethane	ug/L	50	53.8	108	12-127	
Ethylbenzene	ug/L	50	58.4	117	86-127	
Isopropylbenzene (Cumene)	ug/L	50	60.5	121	70-130	
m&p-Xylene	ug/L	100	116	116	70-131	
Methyl-tert-butyl ether	ug/L	50	42.8	86	65-136	
Methylene Chloride	ug/L	50	53.3	107	72-133	
o-Xylene	ug/L	50	56.5	113	70-130	
Styrene	ug/L	50	57.3	115	70-130	
Tetrachloroethene	ug/L	50	54.7	109	70-130	
Toluene	ug/L	50	55.8	112	84-124	
trans-1,2-Dichloroethene	ug/L	50	56.9	114	70-133	
trans-1,3-Dichloropropene	ug/L	50	45.2	90	67-130	
Trichloroethene	ug/L	50	55.8	112	70-130	
Trichlorofluoromethane	ug/L	50	64.9	130	69-147	
Vinyl chloride	ug/L	50	56.5	113	48-134	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			106	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800891 1800892

Parameter	Units	40180283001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	53.2	53.8	106	108	70-136	1	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	49.0	44.3	98	89	67-133	10	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	49.4	48.7	99	97	70-130	1	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	54.6	55.6	109	111	70-139	2	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	59.0	58.4	118	117	72-137	1	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	56.7	56.5	113	113	68-130	0	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	47.9	44.2	96	88	60-130	8	21	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	50.2	49.3	100	99	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	55.6	55.1	111	110	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	49.8	49.9	100	100	71-137	0	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	53.3	53.9	107	108	78-130	1	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	56.7	55.3	113	111	70-130	2	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	55.0	54.8	110	110	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800891 1800892

Parameter	Units	40180283001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<0.25	50	50	53.5	53.4	107	107	66-143	0	20	
Bromodichloromethane	ug/L	<0.36	50	50	51.2	50.5	102	101	70-130	1	20	
Bromoform	ug/L	<4.0	50	50	45.2	44.5	90	89	64-134	2	20	
Bromomethane	ug/L	<0.97	50	50	46.4	50.8	93	102	29-136	9	25	
Carbon tetrachloride	ug/L	<0.17	50	50	54.0	57.1	108	114	73-142	6	20	
Chlorobenzene	ug/L	<0.71	50	50	53.9	54.0	108	108	70-130	0	20	
Chloroethane	ug/L	<1.3	50	50	55.7	55.6	111	111	58-138	0	20	
Chloroform	ug/L	<1.3	50	50	56.5	53.2	113	106	80-131	6	20	
Chloromethane	ug/L	<2.2	50	50	51.5	53.3	103	107	24-125	3	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	52.3	52.0	105	104	68-137	1	22	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	52.1	51.5	104	103	70-130	1	20	
Dibromochloromethane	ug/L	<2.6	50	50	53.3	52.8	107	106	70-131	1	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	49.8	50.6	100	101	10-127	1	20	
Ethylbenzene	ug/L	<0.22	50	50	56.9	57.0	114	114	81-136	0	20	
Isopropylbenzene (Cumene)	ug/L	<0.39	50	50	59.3	59.2	119	118	70-132	0	20	
m&p-Xylene	ug/L	<0.47	100	100	113	114	113	114	70-135	0	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	44.6	43.6	89	87	58-142	2	23	
Methylene Chloride	ug/L	<0.58	50	50	52.0	53.3	104	107	69-137	3	20	
o-Xylene	ug/L	<0.26	50	50	56.5	56.7	113	113	70-132	0	20	
Styrene	ug/L	<0.47	50	50	57.2	56.9	114	114	70-130	0	20	
Tetrachloroethene	ug/L	<0.33	50	50	55.2	53.3	110	107	70-132	3	20	
Toluene	ug/L	<0.17	50	50	55.9	55.3	112	111	81-130	1	20	
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	53.8	55.0	108	110	70-136	2	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	46.6	47.2	93	94	67-130	1	20	
Trichloroethene	ug/L	<0.26	50	50	55.3	56.5	111	113	70-131	2	20	
Trichlorofluoromethane	ug/L	<0.21	50	50	61.9	63.4	124	127	66-150	2	20	
Vinyl chloride	ug/L	<0.17	50	50	54.5	55.3	109	111	46-134	2	20	
4-Bromofluorobenzene (S)	%						99	99	70-130			
Dibromofluoromethane (S)	%						98	99	70-130			
Toluene-d8 (S)	%						100	101	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

QC Batch: 308154 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40180283007

METHOD BLANK: 1800599 Matrix: Water
Associated Lab Samples: 40180283007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	12/04/18 14:29	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	12/04/18 14:29	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	12/04/18 14:29	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	12/04/18 14:29	
1,1-Dichloroethane	ug/L	<0.27	1.0	12/04/18 14:29	
1,1-Dichloroethene	ug/L	<0.24	1.0	12/04/18 14:29	
1,1-Dichloropropene	ug/L	<0.54	1.8	12/04/18 14:29	
1,2,3-Trichlorobenzene	ug/L	<0.63	5.0	12/04/18 14:29	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	12/04/18 14:29	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	12/04/18 14:29	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	12/04/18 14:29	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	12/04/18 14:29	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	12/04/18 14:29	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	12/04/18 14:29	
1,2-Dichloroethane	ug/L	<0.28	1.0	12/04/18 14:29	
1,2-Dichloropropane	ug/L	<0.28	1.0	12/04/18 14:29	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	12/04/18 14:29	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	12/04/18 14:29	
1,3-Dichloropropane	ug/L	<0.83	2.8	12/04/18 14:29	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	12/04/18 14:29	
2,2-Dichloropropane	ug/L	<2.3	7.6	12/04/18 14:29	
2-Chlorotoluene	ug/L	<0.93	5.0	12/04/18 14:29	
4-Chlorotoluene	ug/L	<0.76	2.5	12/04/18 14:29	
Benzene	ug/L	<0.25	1.0	12/04/18 14:29	
Bromobenzene	ug/L	<0.24	1.0	12/04/18 14:29	
Bromochloromethane	ug/L	<0.36	5.0	12/04/18 14:29	
Bromodichloromethane	ug/L	<0.36	1.2	12/04/18 14:29	
Bromoform	ug/L	<4.0	13.2	12/04/18 14:29	
Bromomethane	ug/L	<0.97	5.0	12/04/18 14:29	
Carbon tetrachloride	ug/L	<0.17	1.0	12/04/18 14:29	
Chlorobenzene	ug/L	<0.71	2.4	12/04/18 14:29	
Chloroethane	ug/L	<1.3	5.0	12/04/18 14:29	
Chloroform	ug/L	<1.3	5.0	12/04/18 14:29	
Chloromethane	ug/L	<2.2	7.3	12/04/18 14:29	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	12/04/18 14:29	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	12/04/18 14:29	
Dibromochloromethane	ug/L	<2.6	8.7	12/04/18 14:29	
Dibromomethane	ug/L	<0.94	3.1	12/04/18 14:29	
Dichlorodifluoromethane	ug/L	<0.50	5.0	12/04/18 14:29	
Diisopropyl ether	ug/L	<1.9	6.3	12/04/18 14:29	
Ethylbenzene	ug/L	<0.22	1.0	12/04/18 14:29	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

METHOD BLANK: 1800599 Matrix: Water
Associated Lab Samples: 40180283007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<1.2	5.0	12/04/18 14:29	
Isopropylbenzene (Cumene)	ug/L	<0.39	5.0	12/04/18 14:29	
m&p-Xylene	ug/L	<0.47	2.0	12/04/18 14:29	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	12/04/18 14:29	
Methylene Chloride	ug/L	<0.58	5.0	12/04/18 14:29	
n-Butylbenzene	ug/L	<0.71	2.4	12/04/18 14:29	
n-Propylbenzene	ug/L	<0.81	5.0	12/04/18 14:29	
Naphthalene	ug/L	<1.2	5.0	12/04/18 14:29	
o-Xylene	ug/L	<0.26	1.0	12/04/18 14:29	
p-Isopropyltoluene	ug/L	<0.80	2.7	12/04/18 14:29	
sec-Butylbenzene	ug/L	<0.85	5.0	12/04/18 14:29	
Styrene	ug/L	<0.47	1.6	12/04/18 14:29	
tert-Butylbenzene	ug/L	<0.30	1.0	12/04/18 14:29	
Tetrachloroethene	ug/L	<0.33	1.1	12/04/18 14:29	
Toluene	ug/L	<0.17	5.0	12/04/18 14:29	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	12/04/18 14:29	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	12/04/18 14:29	
Trichloroethene	ug/L	<0.26	1.0	12/04/18 14:29	
Trichlorofluoromethane	ug/L	<0.21	1.0	12/04/18 14:29	
Vinyl chloride	ug/L	<0.17	1.0	12/04/18 14:29	
4-Bromofluorobenzene (S)	%	99	70-130	12/04/18 14:29	
Dibromofluoromethane (S)	%	97	70-130	12/04/18 14:29	
Toluene-d8 (S)	%	99	70-130	12/04/18 14:29	

LABORATORY CONTROL SAMPLE: 1800600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.7	99	70-133	
1,1,2,2-Tetrachloroethane	ug/L	50	49.1	98	67-130	
1,1,2-Trichloroethane	ug/L	50	50.2	100	70-130	
1,1-Dichloroethane	ug/L	50	51.5	103	70-134	
1,1-Dichloroethene	ug/L	50	49.4	99	75-132	
1,2,4-Trichlorobenzene	ug/L	50	51.1	102	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	46.9	94	60-126	
1,2-Dibromoethane (EDB)	ug/L	50	50.7	101	70-130	
1,2-Dichlorobenzene	ug/L	50	50.6	101	70-130	
1,2-Dichloroethane	ug/L	50	50.4	101	73-134	
1,2-Dichloropropane	ug/L	50	48.9	98	79-128	
1,3-Dichlorobenzene	ug/L	50	51.6	103	70-130	
1,4-Dichlorobenzene	ug/L	50	52.6	105	70-130	
Benzene	ug/L	50	50.9	102	69-137	
Bromodichloromethane	ug/L	50	49.8	100	70-130	
Bromoform	ug/L	50	47.2	94	64-133	
Bromomethane	ug/L	50	31.8	64	29-123	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

LABORATORY CONTROL SAMPLE: 1800600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	49.8	100	73-142	
Chlorobenzene	ug/L	50	52.3	105	70-130	
Chloroethane	ug/L	50	48.2	96	59-133	
Chloroform	ug/L	50	48.0	96	80-129	
Chloromethane	ug/L	50	34.4	69	27-125	
cis-1,2-Dichloroethene	ug/L	50	51.0	102	70-134	
cis-1,3-Dichloropropene	ug/L	50	49.2	98	70-130	
Dibromochloromethane	ug/L	50	48.0	96	70-130	
Dichlorodifluoromethane	ug/L	50	30.8	62	12-127	
Ethylbenzene	ug/L	50	53.2	106	86-127	
Isopropylbenzene (Cumene)	ug/L	50	53.5	107	70-130	
m&p-Xylene	ug/L	100	107	107	70-131	
Methyl-tert-butyl ether	ug/L	50	49.2	98	65-136	
Methylene Chloride	ug/L	50	50.3	101	72-133	
o-Xylene	ug/L	50	53.2	106	70-130	
Styrene	ug/L	50	53.6	107	70-130	
Tetrachloroethene	ug/L	50	51.4	103	70-130	
Toluene	ug/L	50	52.0	104	84-124	
trans-1,2-Dichloroethene	ug/L	50	51.5	103	70-133	
trans-1,3-Dichloropropene	ug/L	50	49.4	99	67-130	
Trichloroethene	ug/L	50	52.3	105	70-130	
Trichlorofluoromethane	ug/L	50	51.0	102	69-147	
Vinyl chloride	ug/L	50	42.5	85	48-134	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800912 1800913

Parameter	Units	40180318015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	50.3	50.1	101	100	70-136	0	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	50.6	50.2	101	100	67-133	1	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	50.2	51.1	100	102	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	51.1	51.3	102	103	70-139	0	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	48.2	49.4	96	99	72-137	2	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	51.5	52.3	103	105	68-130	2	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	49.3	48.3	99	97	60-130	2	21	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	50.8	51.8	102	104	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	51.8	51.3	104	103	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	51.2	51.8	102	104	71-137	1	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	49.1	49.2	98	98	78-130	0	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	52.0	51.8	104	104	70-130	0	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	52.5	52.1	105	104	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800912 1800913

Parameter	Units	40180318015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<0.25	50	50	51.1	51.0	102	102	66-143	0	20	
Bromodichloromethane	ug/L	<0.36	50	50	50.7	51.0	101	102	70-130	1	20	
Bromoform	ug/L	<4.0	50	50	50.0	50.1	100	100	64-134	0	20	
Bromomethane	ug/L	<0.97	50	50	30.4	31.5	61	63	29-136	4	25	
Carbon tetrachloride	ug/L	<0.17	50	50	50.9	51.4	102	103	73-142	1	20	
Chlorobenzene	ug/L	<0.71	50	50	52.9	52.5	106	105	70-130	1	20	
Chloroethane	ug/L	<1.3	50	50	47.7	46.9	95	94	58-138	2	20	
Chloroform	ug/L	<1.3	50	50	48.3	48.2	97	96	80-131	0	20	
Chloromethane	ug/L	3.7J	50	50	37.5	38.7	68	70	24-125	3	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	51.4	51.3	103	103	68-137	0	22	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	50.7	51.3	101	103	70-130	1	20	
Dibromochloromethane	ug/L	<2.6	50	50	50.7	51.2	101	102	70-131	1	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	32.6	32.0	65	64	10-127	2	20	
Ethylbenzene	ug/L	<0.22	50	50	53.3	53.4	107	107	81-136	0	20	
Isopropylbenzene (Cumene)	ug/L	<0.39	50	50	53.8	54.0	108	108	70-132	0	20	
m&p-Xylene	ug/L	<0.47	100	100	108	107	108	107	70-135	1	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	49.5	49.9	99	100	58-142	1	23	
Methylene Chloride	ug/L	<0.58	50	50	48.1	48.8	96	98	69-137	1	20	
o-Xylene	ug/L	<0.26	50	50	53.1	53.9	106	108	70-132	1	20	
Styrene	ug/L	<0.47	50	50	54.0	54.1	108	108	70-130	0	20	
Tetrachloroethene	ug/L	<0.33	50	50	50.7	51.0	101	102	70-132	0	20	
Toluene	ug/L	<0.17	50	50	53.1	53.4	106	107	81-130	1	20	
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	50.4	49.9	101	100	70-136	1	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	50.6	50.4	101	101	67-130	0	20	
Trichloroethene	ug/L	<0.26	50	50	51.9	52.1	104	104	70-131	0	20	
Trichlorofluoromethane	ug/L	<0.21	50	50	52.0	52.0	104	104	66-150	0	20	
Vinyl chloride	ug/L	<0.17	50	50	43.3	42.3	87	85	46-134	2	20	
4-Bromofluorobenzene (S)	%						99	100	70-130			
Dibromofluoromethane (S)	%						99	98	70-130			
Toluene-d8 (S)	%						101	101	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

QC Batch: 308055 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

METHOD BLANK: 1799981 Matrix: Water
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	<0.075	0.22	11/30/18 19:25	
Sulfate	mg/L	<1.0	3.0	11/30/18 19:25	

LABORATORY CONTROL SAMPLE: 1799982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	1.5	1.5	103	90-110	
Sulfate	mg/L	20	20.7	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1799983 1799984

Parameter	Units	40180283001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	17.2	30	30	49.7	49.3	108	107	90-110	1	15	
Sulfate	mg/L	530	400	400	989	987	115	114	90-110	0	15	M0

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

QC Batch: 308516 Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

METHOD BLANK: 1802140 Matrix: Water
Associated Lab Samples: 40180283001, 40180283002, 40180283003, 40180283004, 40180283005, 40180283006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.0	23.5	12/06/18 11:59	

LABORATORY CONTROL SAMPLE: 1802141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	97.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802142 1802143

Parameter	Units	40180227001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	207	500	500	641	650	87	89	90-110	1	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802144 1802145

Parameter	Units	40180419009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	153	200	200	341	361	94	104	90-110	6	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20.0155935.00 TRENT TUBE
Pace Project No.: 40180283

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40180283001	**MW-29**	EPA 8015B Modified	308134		
40180283002	**MW-19**	EPA 8015B Modified	308134		
40180283003	**MW-19 DUP**	EPA 8015B Modified	308134		
40180283004	**MW-25**	EPA 8015B Modified	308134		
40180283005	**MW-01R**	EPA 8015B Modified	308134		
40180283006	**MW-27**	EPA 8015B Modified	308134		
40180283001	**MW-29**	EPA 6010	308112		
40180283002	**MW-19**	EPA 6010	308112		
40180283003	**MW-19 DUP**	EPA 6010	308112		
40180283004	**MW-25**	EPA 6010	308112		
40180283005	**MW-01R**	EPA 6010	308112		
40180283006	**MW-27**	EPA 6010	308112		
40180283001	**MW-29**	EPA 8260	308123		
40180283002	**MW-19**	EPA 8260	308123		
40180283003	**MW-19 DUP**	EPA 8260	308123		
40180283004	**MW-25**	EPA 8260	308123		
40180283005	**MW-01R**	EPA 8260	308123		
40180283006	**MW-27**	EPA 8260	308123		
40180283007	**TRIP**	EPA 8260	308154		
40180283001	**MW-29**	EPA 300.0	308055		
40180283002	**MW-19**	EPA 300.0	308055		
40180283003	**MW-19 DUP**	EPA 300.0	308055		
40180283004	**MW-25**	EPA 300.0	308055		
40180283005	**MW-01R**	EPA 300.0	308055		
40180283006	**MW-27**	EPA 300.0	308055		
40180283001	**MW-29**	EPA 300.0	308055		
40180283002	**MW-19**	EPA 300.0	308055		
40180283003	**MW-19 DUP**	EPA 300.0	308055		
40180283004	**MW-25**	EPA 300.0	308055		
40180283005	**MW-01R**	EPA 300.0	308055		
40180283006	**MW-27**	EPA 300.0	308055		
40180283001	**MW-29**	EPA 310.2	308516		
40180283002	**MW-19**	EPA 310.2	308516		
40180283003	**MW-19 DUP**	EPA 310.2	308516		
40180283004	**MW-25**	EPA 310.2	308516		
40180283005	**MW-01R**	EPA 310.2	308516		
40180283006	**MW-27**	EPA 310.2	308516		

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	GZA GeoEnvironmental
Branch/Location:	Waukesha
Project Contact:	Kevin Hedinger
Phone:	262-754-2578
Project Number:	20.0155935.00
Project Name:	Trent Tube
Project State:	WI
Sampled By (Print):	Sheryl Stephenson
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	40180283
Mail To Contact:	
Mail To Company:	
Mail To Address:	SAME
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: VOCs	Dissolved Mn, Fe	Ethane, Ethene	Nitrate + Sulfate	TOC	Alkalinity	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	Y	N	N	N	N					
					B	D	B	A	A	A					
001	MW-29	11/29/18	1340		X	X	X	X		X					
002	MW-19		1044		X	X	X	X		X					
003	MW-19 DUP		1053		X	X	X	X		X					
004	MW-25		1230		X	X	X	X		X					
005	MW-01R		1010		X	X	X	X		X					
006	MW-27		1200		X	X	X	X		X					
007	Trip		1615		X										

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) Date Needed:	Relinquished By:	Date/Time:	Received By:	Date/Time:	PACE Project No.
		1700 11/29/18			40180283
Transmit Prelim Rush Results by (complete what you want):	Relinquished By: FedEx	Date/Time: 11-30-18 1040	Received By: Pace	Date/Time: 11-30-18 1040	Receipt Temp = 1.0 I °C
Email #1:	Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt pH OK / Adjusted
Email #2:	Relinquished By:	Date/Time:	Received By:	Date/Time:	Cooler Custody Seal Present / Not Present
Telephone:	Relinquished By:	Date/Time:	Received By:	Date/Time:	Intact / Not Intact
Fax:					

Samples on HOLD are subject to special pricing and release of liability

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: G2A Project # 40180283

All containers needing preservation have been checked and noted below: ☒Yes ☐No ☐N/A

Lab Lot# of pH paper: 10052681 Lab Std #ID of preservation (if pH adjusted):

Initial when completed: JK Date/ Time:

Pace Lab #	Glass							Plastic							Vials						Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN							
001											1		1					6													X		2.5 / 5 / 10
002											1		1					6													X		2.5 / 5 / 10
003											1		1					6													X		2.5 / 5 / 10
004											1		1					6													X		2.5 / 5 / 10
005											1		1					6													X		2.5 / 5 / 10
006											1		1					6													X		2.5 / 5 / 10
007																		2															2.5 / 5 / 10
008																																	2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011																																	2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : ☐Yes ☒No ☐N/A ***If yes look in headspace column**

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical™ 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #: **WO#: 40180283**

Client Name: G2A GeoEnvironmental

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other: _____

Tracking #: 8119 7578 3155

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used SR - NA **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr: _____

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 11-30-18
Initials: JK

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☒No ☐N/A	2. No page number, No matrix 11-30-18 JK
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☒Yes ☐No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8. TOC listed on COC but not analysis selected for Samples 11-30-18 JK
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☒Yes ☐No ☐N/A	11.
Sample Labels match COC:	☐Yes ☒No ☐N/A	12. 002,003,004 used actual grab times, samples grouped by sample IDs 11-30-18 JK
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☒Yes ☐No ☐N/A	13.
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 410		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 11/30/18