June 22, 2017

Larry Alden
New York State Department of Environmental Conservation
47-40 21st Street
Long Island City, New York 11101

RE: Fourth and Fifth Quarterly Groundwater Monitoring Events Report
Former Strauss Auto
535 4th Avenue
Brooklyn, New York
BCP Site No. C224189
Langan Project No.: 170264501

Dear Mr. Alden:

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) prepared this letter report to summarize the fourth and fifth quarterly groundwater monitoring events at the Former Strauss Auto site located at 535 4th Avenue, Brooklyn, New York (the "site"). Groundwater monitoring was conducted in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved October 6, 2016 Site Management Plan (SMP). The results of the previous three quarters of groundwater monitoring were summarized in the NYSDEC-approved November 28, 2016 Final Engineering Report (FER).

Background

The site is a rectangular-shaped parcel located in the Park Slope neighborhood of Brooklyn, New York (Brooklyn Borough Tax Map Block 1041, Lot 1) and occupies an area of about 18,200 square feet (±0.418 acres). The site is bound by 15th Street to the north, multiple-story residential buildings to the east, 14th Street to the south, and 4th Avenue to the west. A Site Location Map is presented as Figure 1.

Historical uses of the site include a church from at least 1888 to 1906 and an automobile repair facility from at least 1965 to 2012. The automobile repair facility was a Resource Conservation and Recoveries Act (RCRA) generator of tetrachloroethylene (PCE), and the site contained several underground storage tanks as well as various sumps, pits and hydraulic lifts. A Borownfield Cleanup Agreement was executed on June 10, 2014 and the site was remediated in accordance with a NYSDEC-approved Remedial Action Work Plan (RAWP). Documentation

of the remediation, which included in-situ groundwater treatment to address residual chlorinated volatile organic compound (CVOC) impacts, is included in the FER. An NYSDEC-approved Environmental Easement referencing the SMP is also currently in place. The Certificate of Completion was issued for this site on December 9, 2016. The fourth and fifth quarterly groundwater monitoring events discussed herein are required to document the effectiveness of the remedy as specified by the SMP.

Groundwater Treatment

In-situ enhanced bioremediation (ISEB) in conjunction with in-situ chemical reduction (ISCR) was chosen as the remedy to treat residual CVOC-impacted groundwater. ISCR using enhanced zero valent iron (EZVI) was the primary remedy. To ensure effectiveness of the remedy, the application of the bioaugmentation culture SDC-9™ was used to enhance the performance of the EZVI.

A mixture of emulsified vegetable oil (EVO), EZVI, and SDC-9™ was selected based on the site's geological and hydrogeological conditions, the appropriate treatment longevity, and feasibility. Three targeted areas, varied by injection depths and substrate concentrations, were treated. The injection volumes were determined by the number of injection points and the injection interval. The EZVI and SDC-9™ mixture was injected into the subsurface using a Geoprobe® direct-push drill rig. About 9,615 gallons of the EZVI/SDC-9™ mixture were injected into the subsurface between July 16 and August 5, 2015. Injection point locations, target treatment areas, and volumes are presented in the FER and summarized in Figure 2.

Technology Description

EZVI is a robust technology that can achieve fast reduction and maintain longevity of reactivity. Two reduction pathways, biotic as reductive dechlorination and abiotic as β-elimination can be enhanced by EZVI.

The chlorinated solvent biodegradation pathway is reductive dechlorination, which involves the microbial degradation of PCE to its daughter products Trichloroethylene (TCE), cis-1,2-dichloroethylene, and then to vinyl chloride. The end products of reductive dechlorination are the innocuous compounds, ethene and ethane. The common limiting factors for reductive dechlorination are the availability of organic substrates (electron donors) and the microbial strain *Dehalococcoides* (DHC), which are the only microbial strains capable of complete dechlorination).

β-elimination is the abiotic pathway, through which CVOCs are degraded to acetylene, instead of ethene or ethane. Therefore, daughter products, which can be more toxic than the parent

compounds, such as vinyl chloride, would not be generated. In general, the abiotic degradation is mainly enhanced by ZVI, and is faster and more effective than reductive dechlorination.

CVOCs are electron acceptors and their degradation requires electron donors. Either the biotic or abiotic pathway requires transferring electrons from electron donors to CVOCs. Naturally occurring electron acceptors can compete with COVC for available electrons. Therefore, the geochemical conditions indicate whether CVOC degradation can be interfered with by the competing electron acceptors. The most common electron acceptors in the groundwater include oxygen, nitrate, iron (III), and sulfate. In general, β-elimination is mainly affected by the levels of dissolved oxygen and nitrate, but is not impacted by the levels of iron (III) and sulfate. In contrast, reductive dechlorination is interfered with by all of the aforementioned electron acceptors. Effective reductive dechlorination generally occurs when all natural electron acceptors are either at naturally low levels or eliminated. Therefore, the demands for electron donors (carbon substrate and ZVI) are mainly from the need to eliminate the competing electron acceptors.

The geochemical conditions are important to understand and predict the effectiveness of CVOC degradation. Within the presence of electron donors, the naturally occurring electron acceptors are reduced from oxygen to carbon dioxide, from nitrate to nitrite, iron (III) to iron (II), and sulfate to sulfide. Therefore, low levels of acceptors (oxygen, nitrate, iron(III) and sulfate) and higher levels of reduced products (nitrite, iron(II), and sulfide) are good indicators for favorable conditions and/or progresses of CVOC degradation.

Groundwater Sampling

Five performance monitoring wells (MW12 through MW16) were installed to monitor groundwater conditions following injections. A Monitoring Well Location Map is included as Figure 3. Details of the well installation and development are included in the FER. Two off-site wells (MW05 and MW07) installed during the remedial investigation (RI) were also used to evaluate up-gradient groundwater conditions and monitor the performance of the in-situ groundwater remedy.

Groundwater monitoring to assess CVOC concentrations in groundwater will continue, as determined by the NYSDEC in consultation with New York State Department of Health (NYSDOH), until residual groundwater concentrations are below the TOGS AWQS or are asymptotic at an acceptable level over an extended period. As stated in the June 3, 2015 NYSDEC-approved In-situ CVOC Groundwater Treatment Plan, it is anticipated the following remedial objectives can be attained within two years following the injection event:

- Reduction of 90% of contaminant concentrations in monitoring wells

- Reduction of 90% contaminant mass in the groundwater plume on site

The preceding three post-injection groundwater monitoring events were conducted in November 2015 (quarterly monitoring event Q1), February 2016 (Q2), and May 2016 (Q3) and were summarized in the FER. This groundwater monitoring report presents the findings from the fourth and fifth post-injection groundwater monitoring events (Q4 and Q5).

Fourth Quarterly Groundwater Monitoring Event

Groundwater monitoring wells MW07 and MW12 through MW16 were gauged and sampled on September 8 and 9, 2016. Due to inaccessibility, MW05 was not sampled during this event. Prior to sampling, Langan visually inspected the groundwater monitoring wells to confirm there was no evidence of tampering or damage, recorded an initial headspace volatile organic compound (VOC) reading (recorded in parts per million [ppm]), and measured the depth to groundwater at each monitoring well using a Solinst oil/water interface probe. Prior to collecting groundwater samples, each monitoring well was purged using a down-hole monsoon pump and dedicated, disposable polyethylene tubing. During purging, the turbidity, pH, temperature, conductivity, redox potential, and dissolved oxygen of the groundwater were monitored using a Horiba U-52 water quality meter with a flow-through cell. The groundwater was purged until the water quality parameters were stable and the turbidity was below 50 nephelometric turbidity units (NTU) (MW13 and MW16), or until either the well was dry (MW07, MW12, and MW14) or an hour had lapsed (MW15). Measurements were recorded on Langan field sampling forms, which are included in Attachment A. A table summarizing the initial headspace reading, the initial groundwater elevation measurement, and the purged volume at each well is summarized below.

Well Number	Headspace Reading (ppm)	Initial Depth to Water (feet [NAVD88[1]])	Volume Purged (gallons)
MW07	0.0	24.41	1.00
MW12	0.0	23.05	0.75
MW13	0.5	17.45	1.75
MW14	0.0	20.52	0.50
MW15	0.0	22.59	2.00
MW16	0.0	18.83	10.5

[1] NAVD88 = North American Vertical Datum

After purging was complete and the groundwater level had returned to its pre-purge level at wells MW07, MW12, and MW14, a groundwater sample was collected using either a dedicated disposable polyethylene bailer (MW07, MW12, MW13, and MW14) or the pump and dedicated tubing (MW15 and MW16). Groundwater samples were collected into laboratory-prepared containers, tightly sealed, uniquely labeled, stored on ice for transport under standard chain-of-custody procedures and analyzed by York Analytical Laboratories (York) in Stratford,

Connecticut. Two trip blanks (one per sampling day), one field blank, one duplicate sample, and a matrix spike/matrix spike duplicate set were included for quality assurance/quality control (QA/QC) purposes. The trip blanks were analyzed for VOCs. The field blank and the groundwater samples (including the duplicate sample) were analyzed for VOCs, ethane, ethylene, methane, total and dissolved iron, total organic carbon (TOC), sulfate, chloride, alkalinity, salinity, and nitrate. Groundwater samples were also collected for analysis of biological parameters including dehalococcoides (DHC) organism/gene by Microbial Insights, an environmental biotechnology testing lab in Knoxville, Tennessee.

Fifth Quarterly Groundwater Monitoring Event

Langan gauged and sampled groundwater monitoring wells MW05, MW07, and MW12 through MW16 on December 20 and 21, 2016. Prior to sampling, Langan visually inspected the groundwater monitoring wells to confirm there was no evidence of tampering or damage, recorded an initial headspace VOC reading, and measured the depth to groundwater at each well using a Solinst oil/water interface probe. Prior to collecting groundwater samples, all wells except MW14 were purged using a down-hole monsoon pump and dedicated, disposable polyethylene tubing. During purging, the turbidity, pH, temperature, conductivity, redox potential, and dissolved oxygen of the groundwater were monitored using a Horiba U-52 water quality meter with a flow-through cell. The groundwater was purged until the water quality parameters were stable and the turbidity was below 50 NTUs (MW16), or until the well was dry (MW05, MW07, MW12, MW13, and MW15). Monitoring well MW14 was purged using a bailer due to historically low recharge at this location. Measurements were recorded on Langan field sampling forms, which are included in Attachment A. A table summarizing the initial headspace reading, the initial groundwater elevation measurement, and the purged volume at each well is summarized below.

Well Number	Headspace Reading (ppm)	Initial Water Elevation (feet)	Volume Purged (gallons)
MW05	1.2	27.36	3.75
MW07	0.4	24.53	1.00
MW12	4.2	23.45	1.25
MW13	17.3	17.47	1.00
MW14	0.5	19.07	NA
MW15	0.0	22.79	1.00
MW16	1.2	19.31	9.00

After purging was complete and the groundwater level had returned to its pre-purge level at wells MW05, MW07, MW12, MW13, and MW15, a groundwater sample was collected using either a dedicated disposable polyethylene bailer (MW07, MW12, MW13, MW14, and MW15) or the pump and dedicated tubing (MW05 and MW16). Groundwater samples were collected into laboratory-prepared containers, tightly sealed, uniquely labeled, stored on ice for transport

under standard chain-of-custody procedures and analyzed by York. Two trip blanks (one per each sampling day), one field blank, one duplicate sample, and a matrix spike/matrix spike duplicate set were included for QA/QC purposes. The trip blanks were analyzed for VOCs. The field blank and the groundwater samples (including the duplicate sample) were analyzed for VOCs, ethane, ethylene, methane, total and dissolved iron, TOC, sulfate, chloride, alkalinity, salinity, and nitrite. Groundwater samples were also collected for analysis of biological parameters including DHC organism/gene by Microbial Insights.

Quality Assurance/Quality Control

The duplicate sample results are presented in Tables 1 and 2 alongside the parent samples. Analytical results for the field blanks and trip blank samples are summarized in Table 3.

The field blank samples were collected to determine the effectiveness of the laboratory decontamination procedures for laboratory-supplied bottleware and to identify the presence of any ambient contamination at the field site. The field blanks were collected by pouring deionized water provided by the laboratory directly into sample bottleware.

Coded field duplicates were collected to evaluate the precision of the analytical methods and uniformity of the sample matrix. The duplicates were collected from the same material as the primary sample by splitting the volume of sample collected in the field into two sample containers. The samples are termed "coded" because they were labeled in such a manner that the laboratory would not be able to determine the parent sample associated with the duplicate samples. This coding serves to eliminate possible bias that could arise during lab analysis. The field duplicates were analyzed for the same parameters as their parent samples.

The trip blank samples were collected to assess the potential for contamination of the sample containers and samples during the trip from the laboratory, to the field, and back to the laboratory for analysis. Trip blanks contain about 40 milliliters of acidic water (doped with hydrochloric acid) in vials sealed by the laboratory when the empty sample containers are shipped to the field, and are unsealed and analyzed by the laboratory when a sample shipment is received from the field.

The field duplicate results closely matched the results from their parent samples, thereby demonstrating the accuracy of the analytical methods, with the exception of TOC, which did not meet the precision criteria in the fourth quarterly monitoring event, and methane, which did not meet the precision criteria in the fourth and fifth quarterly monitoring events. The field and trip blank results indicated no substantial cross-contamination issues arising from ambient conditions during sampling and during sample transport, respectively. Matrix spike/matrix spike duplicate recoveries were evaluated as part of the third-party data validation.

Validation Overview

Third-party data validation was performed in accordance with United States Environmental Protection Agency (USEPA) Region II Standard Operating Procedure (SOP) #HW-34, "Trace Volatile Data Validation" (February 19, 2013, Revision 3). Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. The data was found to be valid and usable for its intended application. Data Usability reports are included in Attachment B.

Groundwater Monitoring Analytical Results

VOCs

Laboratory analytical data was compared to the NYSDEC Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards (AWQS) for Class GA water. Analytical detections for pre- and post-remediation are presented in Tables 1 and 2. The laboratory analytical reports from the fourth and fifth quarterly monitoring events are included as Attachment C. A summary of VOC compounds exceeding the AWQS criteria and the detected concentrations (shown in parentheses) is presented below:

Fourth Quarterly Groundwater Sampling Event

- MW07
  - PCE (40 micrograms per liter [µg/l])
- MW12
  - acetone (410 µg/l)
  - methyl ethyl ketone (91 µg/l)
  - vinyl chloride (2.4 µg/l)
- MW13
  - acetone (430 µg/l)
  - cis-1,2-dichloroethylene (11 µg/l)
- MW14
  - cis-1,2-dichloroethylene (82 µg/l)
  - PCE (51 µg/l)
  - TCE (14 µg/l)
- MW15
  - PCE (12 µg/l)
- MW16/MW16 Duplicate
  - cis-1,2-dichloroethylene (19 µg/l)
  - PCE (83/86 µg/l)

Fifth Quarterly Groundwater Sampling Event

- MW05
  - PCE (27 µg/l)
- MW07
  - PCE (30 µg/l)
- MW12
  - acetone (260 µg/l)
- MW13
  - cis-1,2-dichloroethylene (15 µg/l)
  - PCE (7.2 µg/l)
  - vinyl chloride (7.2 µg/l)
- MW14
  - cis-1,2-dichloroethylene (74 µg/l)
  - PCE (38 µg/l)
  - TCE (13 µg/l)
- MW15
  - PCE (31 µg/l)
- MW16/MW16 Duplicate
  - cis-1,2-dichloroethylene (27/24 µg/l)
  - PCE (39/48 µg/l)

CVOCs detected above the AWQS in samples collected during one or more of the quarterly monitoring events include cis-1,2-dichloroethylene, PCE, TCE, and vinyl chloride. CVOC results from the fourth and fifth quarterly monitoring events are summarized in Figure 3.

PCE, the target parent compound, was detected above its AWQS in samples collected during one or more quarterly monitoring events at each of the seven wells. The first quarterly monitoring event occurred six months following the in-situ injection in August 2015. Figure 4 summarizes PCE concentrations detected in groundwater prior to remediation and during each performance monitoring event. In relation to pre-remediation concentrations, concentrations of PCE decreased by up to three orders of magnitude at the source area (MW-12) and the transitional area (MW-13, MW-15), while PCE concentrations did not change significantly at the plume perimeter area (MW-05, MW-07, MW-14, MW-16). By the fifth quarterly sampling event, PCE was reduced to below the AWQS within the former source area, as shown by the concentration in MW-12. The PCE concentration in the transitional area was also reduced to below the AWQS in the fourth quarterly event, but increased to just above the AWQS in the fifth quarterly event. PCE reduction was detected at MW-16, a plume perimeter well, during each of the five monitoring events. Notable PCE reduction was not detected at other wells at the plume perimeter (MW-14 and MW-15) and off-site wells (MW-5 and MW-7).

TCE was most likely produced through biodegradation of PCE at this site. TCE was detected above its AWQS value in samples collected during one or more quarterly monitoring events at wells MW12, MW13, and MW14. By the fifth quarterly sampling event, TCE was only detected above the AWQS in one well (13 μg/L in MW13).

The CVOC cis-1,2-dichloroethylene (cis-1,2-DCE), a daughter product of biodegradation of PCE and TCE, was detected above the AWQS value in samples collected during one or more quarterly monitoring events at wells MW12, MW13, MW14, and MW16. As biodegradation of PCE and TCE occurs, the concentration of cis-1,2-DCE is expected to increase. When the parent compounds (PCE and TCE) are eliminated, the concentration of cis-1,2-DCE is expected to decrease. If PCE is degraded via an abiotic pathway, the daughter product cis-1,2-DCE will not be produced. During the five monitoring events, the concentration of cis-1,2-DCE in MW-12 (source area), MW-13 (transitional area), and MW-16 (plume perimeter) demonstrated the typical trend influenced by biodegradation. The cis-1,2-DCE concentration increased to a greater degree at MW-13 than in MW-12. By the fifth quarterly sampling event, cis-1,2-DCE was detected above its AWQS at wells MW-13, MW-14, and MW-16.

Vinyl chloride is the last CVOC produced via PCE biodegradation. Vinyl chloride was detected above the AWQS in samples collected during one or more quarterly monitoring events at wells MW12 and MW13. Similar to the trend of cis-1,2-DCE concentrations as PCE and TCE biodegrade, the vinyl chloride concentration is expected to increase and then decrease as cis-

1,2-DCE is reduced via biodegradation. The impact of biodegradation was more significant in MW-13 than MW-12. By the fifth quarterly sampling event, vinyl chloride was only detected above the AWQS in MW-13 at 7.2 µg/l.

Compared with the pre-remediation concentration, total CVOCs generally decreased significantly at the source area (99.5% reduction) and transitional area (90% reduction). Continuous reductions of CVOCs occurred after the in-situ injection. Between the first and fifth monitoring events, the total concentration of CVOCs decreased at MW12, MW13, MW-14, and MW16 (from 202.25 to 33.71 µg/l, 308.6 to 33.07 µg/l, 128.47 to 125.41 µg/l and 113.5 to 71.26 µg/l, respectively) and increased at MW15 (5.7 to 31.44 µg/l). The concentration of total CVOCs detected at off-site well MW05 prior to the injections ranged from 38.76 to 46.8 µg/l. In relation to these concentrations, the concentration of CVOCs at MW05 in the fifth quarterly monitoring event decreased to 28.56 µg/l. CVOCs were detected in off-site well MW07 at a concentration of 11.51 µg/l prior to the injections. CVOCs were detected in samples collected at this well during the fourth and fifth quarterly monitoring events at 40.64 and 30.71 µg/l, respectively.

The only other VOC that exceeded the AWQS was acetone, a degradation by-product of naturally-occurring organic or injected organic substrate (EVO). The detection of acetone is strong evidence for organic substrate distribution and biodegradation occurrence. Acetone is readily consumed by the microbes and will not accumulate in the subsurface. Acetone contributed to the total VOC concentrations in MW12, MW-13, and MW16 during the first three monitoring events. Because acetone concentrations decreased significantly by the fifth monitoring event, the total VOC concentration also decreased significantly at MW12, MW13, and MW16 (from 21,443.5 to 512.23 µg/l, 549.06 to 483.62 µg/l, and 118.4 to 108.13 µg/l, respectively). The total VOC concentration did not change substantially at MW14 and MW15 (from 130.4 to 152.45 µg/l, and 5.99 to 16.48 µg/l, respectively).

Summary of Contaminant Concentration Trends

The contaminant concentration trends of monitoring wells in each area vary based upon the well locations.

- Source Area: Well MW08, which was an abandoned well located near the source area, exhibited PCE concentrations of more than 2,000 µg/L prior to the injection. At MW12 (the nearest replacement well), PCE was reduced to below the detection limit within six months after the injection while the daughter products (cis-1,2-dichloroethylene and vinyl chloride) were initially observed but have been reduced to concentrations below the AWQS. Acetone, another compound detected above the AWQS, is a fermentation/biodegradation product of the EVO and will be rapidly consumed by the indigenous subsurface microbes. Elevated acetone concentrations were detected in

November 2015 during the first performance monitoring event and have consistently decreased during the following four monitoring events.

- Transitional Area: Well MW03, which was abandoned during building construction, exhibited a PCE concentration of 270 µg/L and a total CVOC concentration of 290 µg/L prior to injection. At MW13, the parent compounds PCE and TCE degraded to concentrations below the AWQS by the third quarterly monitoring event, although PCE was detected just above the AWQS in the fifth quarterly monitoring event. The PCE and TCE daughter products cis-1,2-dichloroethylene and vinyl chloride were generated at levels higher than those of the parent compounds. Acetone concentrations peaked during the second monitoring event in February 2016 and decreased during the following three events.
- Plume Perimeter Area: Well MW02, which was abandoned during the construction, exhibited a PCE concentration of 160 µg/L before the injection. Replacement wells MW14 and MW16 showed moderate reductions of PCE (to 38 and 39 µg/L, respectively, or roughly 75%) by the fifth quarterly monitoring event. The concentration of cis-1,2-dichloroethylene in MW14 and MW16 increased in the fourth and fifth quarterly monitoring event compared to the first quarterly monitoring event. A detectable concentration of acetone was detected in MW16 only in the second and third quarterly monitoring events.
- Off-site Area: An overall decrease of PCE, VOCs, and CVOC concentrations was detected at MW05 and an overall increase was detected at MW07. Acetone was detected in a sample collected from MW05 before the injection and detected in the samples collected from MW07 during the fourth quarterly monitoring event. Both concentrations were below the AWQS.

Geochemical Conditions

Geochemical parameters, including pH, oxidation-reduction potential (ORP), and dissolved oxygen (DO), were field documented at each monitoring well during purging (Attachment A). Additional geochemical parameters were analyzed by the laboratory. The analytical laboratory reports from the fourth and fifth quarterly monitoring events are included in Attachment C and the analytical results are summarized in Table 3. The results and conclusions of the geochemical analyses are summarized as follows:

- DO and ORP indicate that the subsurface conditions were changed from aerobic-oxidative to anaerobic-reductive conditions at the source area and the transitional areas. The plume perimeter transitioned to a more anaerobic-reductive condition during the second and third events. No change was observed in the off-site area.
- Dissolved methane increases when elevated organic carbon (either from injection or naturally occurring) is present. Methane was not detected outside the treatment area,

but detected at various concentrations within or near the treatment area. Elevated concentrations were detected at MW12, MW13, and MW16. Ethene and ethane are produced as the innocuous end products of reductive dechlorination (biodegradation pathway of CVOCs). Only MW13 showed detections of ethene and ethane, suggesting that complete reductive dechlorination occurred near MW13. Furthermore, the absence of ethene and ethane detections at MW-12 suggests that the abiotic degradation of CVOC through β-elimination could be the main degradation path at the source area.

- Electron acceptors including nitrate and sulfate, which compete for electrons with CVOCs, can interfere with CVOC biodegradation. Nitrite is the daughter product of nitrate reduction. An increase in the nitrite concentration could indicate that nitrate may be present and interfere with CVOC biodegradation. Nitrate, nitrite, and sulfate levels were detected during a pre-design investigation at concentrations up to 9.75 micrograms per liter (mg/L), 1.00 mg/L, and 125 mg/L, respectively. During performance monitoring events, nitrate (up to 9.35 mg/L) and sulfate (up to 820 mg/L) were detected in most wells, except for MW12 and MW13. EZVI likely reduced (removed) nitrate and sulfate at these two wells. Furthermore, a significant decrease in the sulfate concentration occurred between the fourth and fifth monitoring events at MW-14. The reduction of sulfate and nitrate at the source and transitional areas could begin to impact the plume perimeter. Biodegradation of CVOCS was expected to be initiated at the plume perimeter when the main electron acceptors including nitrate and sulfate were reduced to low levels.

- Dissolved iron could increase as ZVI is reduced to ferrous iron and/or ferric iron. Naturally-occurring ferric iron is also reduced to ferrous iron in the presence of EVO; therefore, the levels of total and dissolved iron indicate distribution of EZVI and can be indirect evidence of treatment effectiveness. Before injection, the maximum concentrations of total and dissolved iron of 29.3 mg/L at MW8 and 0.14 mg/L at MW11 were detected, respectively. EZVI increased iron levels both on-site and off-site after treatment, with the greatest total and dissolved iron concentrations detected at MW12 (40,100 mg/L and 32,500 mg/L, respectively). Concentrations of both total and dissolved iron peaked at the second and third sampling events, respectively. MW13 showed a trend of increasing total and dissolved iron concentrations. Other on-site and off-site wells also showed increases of total and dissolved iron, suggesting a distribution of EZVI across the site.

- TOC can serve as direct evidence of EVO distribution. TOC levels were detected at a maximum concentration of 3.6 mg/L before the injection with increasing TOC levels (more than 100 mg/L) were detected in MW12 and MW13 during the performance monitoring events. In December 2016, TOC was still detected at levels that were sufficient for biodegradation in MW12. In December 2016, the TOC level at MW13 was

13 mg/L, which may not maintain rapid biodegradation but could still assist the abiotic degradation. TOC levels (25 mg/L) capable of supporting microbial activities were detected in MW16 in February 2016. However, TOC levels in MW16 and other on-site monitoring wells (MW14, MW15) decreased to near the background level (near 4 mg/L) within 1.5 years of the injection.

Biological Conditions

DHC is the bacterial strain that can reduce CVOCs to the harmless end products (ethene and ethane). DHC levels were analyzed by the laboratory (Microbial Insights). The analytical laboratory reports are included in Attachment C and the analytical results are summarized in Table 3. DHC levels serve as indicators for the level of microbial activities. During the pre-design investigation, DHC levels were below or just above the detection limit of 1 cell per milliliter (cell/ml).

- At the source and transitional areas, DHC levels in wells MW12 and MW13 showed increases to more than 10^4 and 10^5 cell/ml during the third sampling event. Typically, a DHC level at 10^4 cell/ml indicates effective biodegradation and a DHC level at 10^5 cell/ml indicates rapid biodegradation. Between the third and fifth quarterly monitoring events, DHC levels fluctuated but generally maintained levels near 10^4 cells/ml at MW12. During the same period, DHC levels continuously increased to more than 10^6 cells/ml at MW13. The greater increase in MW13, in conjunction with geochemical condition and contaminant trends, suggests that more microbial activity has occurred at this well. Contaminant reduction in MW13 was likely mediated by microbes (biodegradation).
- The highest DHC level at MW16 was more than 10^2 cells/ml in September 2016, one year after injection. By the fifth sampling event, the DHC level at this well was above 10 cells/ml. The data suggests that biodegradation was stimulated during the first year after injection, but never reached levels sufficient for effective biodegradation.
- Wells MW05, MW07, MW14, and MW15 showed DHC levels below 10 cells/ml in most monitoring events, suggesting that reductive dechlorination was never effectively stimulated.

Findings

Significant contaminant reduction has been achieved at the site, with the greatest reduction detected at the source area, where the ZVI dosage was 10 grams of iron per liter of pore water (g/L), while fewer reductions were detected at the plume perimeter, where ZVI dosage was 2.5 g/L. Based on an evaluation of the VOC concentrations and geochemical and biological parameters, the ZVI dosage appears to have contributed significantly to the degradation pathways and efficiency.

- The degradation at the source area was mainly via β-elimination pathway, because daughter products were not produced and moderate levels of DHC were also detected. β-elimination, being the abiotic degradation pathway mediated by ZVI, is believed to be a more rapid and efficient degradation pathway than biodegradation. The most reducing conditions were also observed at the source area. Meanwhile, sulfate and nitrate were depleted and iron concentration spiked at the source area, indicating the β-elimination pathway was effectively enhanced at the source area.
- At the transitional area, CVOCs were reduced to less than 50 µg/L mainly via bio-mediated pathways that produced primarily cis-1,2-dichlorethene as the daughter product. The DHC population increased to more than 10^6 cells/ml, indicating effective bioremediation. The overall decrease in sulfate concentrations and increase in dissolved iron concentrations were observed when CVOCs were reduced, indicating reductive dechlorination was the main degradation pathway in this area.
- At the plume perimeter area, a moderate reduction of PCE concentration and production of cis-1,2-DCE was detected. A lack of DHC in this area suggests that reductive dechlorination was not effectively enhanced by the microbial populations. Increases in dissolved iron concentrations and decreases in sulfate concentrations were observed. Therefore, as the geochemical parameters were being converted to more favorable conditions for reductive dechlorination, CVOCs degradation is expected to be initiated.

Based on the contaminant trends and geochemical conditions, continued reductions of contaminants are anticipated. The reduction of CVOCs via biotic and abiotic pathways could continue to remove contaminant mass and control contaminant migration. Because remedial action objectives for groundwater treatment in the source area have been achieved, no further groundwater monitoring is recommended.

Sincerely,

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C

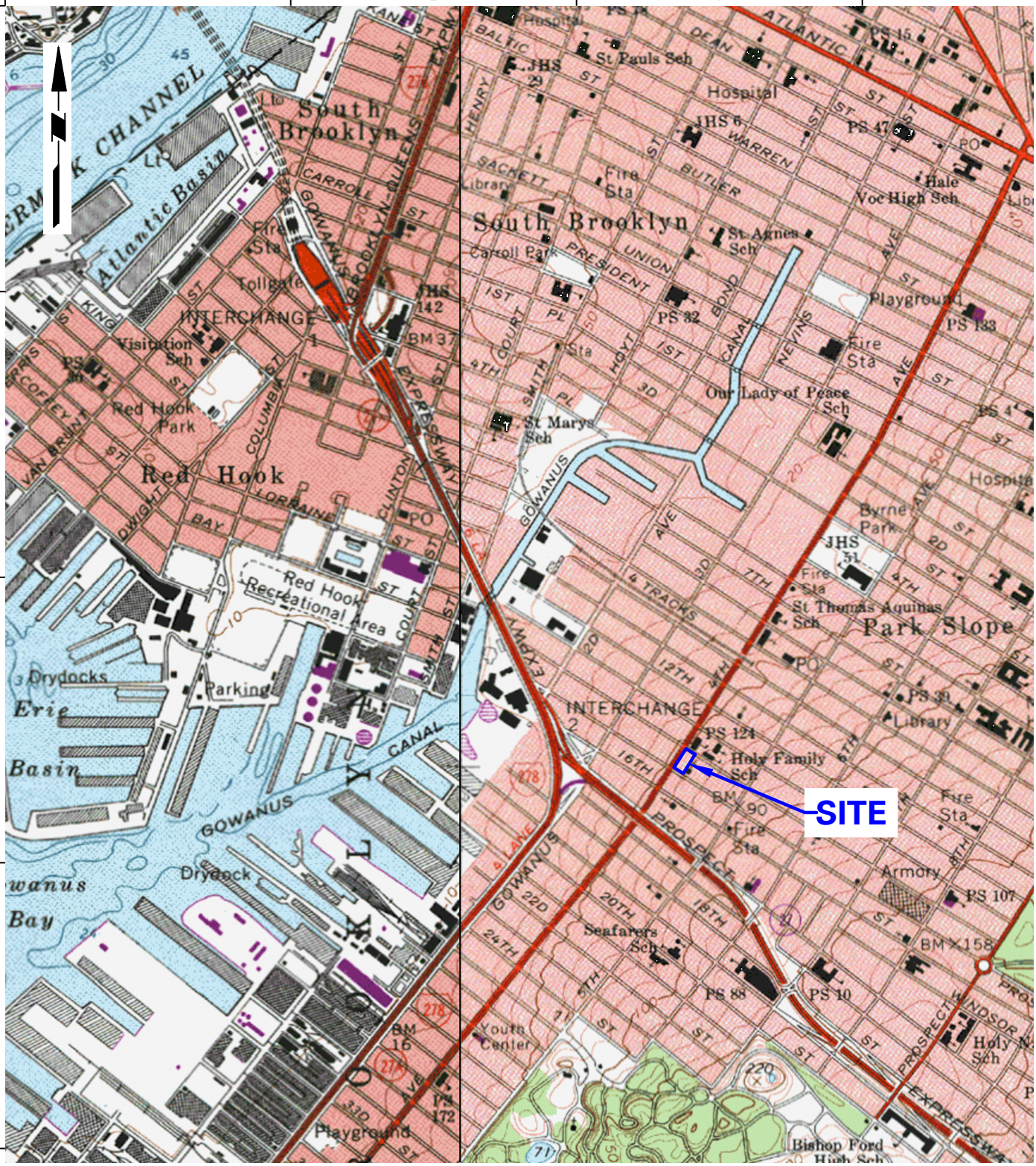
Jason J. Hayes, P.E., LEED AP
Principal/Vice President

Enclosure(s):

Figure 1	Site Location Map
Figure 2	Injection Point Locations and Volumes
Figure 3	Monitoring Well Location Map
Figure 4	Baseline and First Five Performance Monitoring PCE Concentrations
Table 1	Groundwater Sample Detection Summary – Remedial Investigation Report
Table 2	Fourth and Fifth Quarterly Groundwater Monitoring Event Results (VOCs)
Table 3	Fourth and Fifth Quarterly Groundwater Monitoring Results (Geochemical and Biological Parameters)
Table 4	Fourth and Fifth Quarterly Groundwater Monitoring Results – QA/QC Samples (VOCs and Geochemical Parameters)
Attachment A	Groundwater Sampling Forms
Attachment B	Data Usability Report
Attachment C	Laboratory Analytical Reports, Chain-of-Custody and Certifications

cc: Partners VII/535 Fourth Owner LLC

FIGURES



SOURCE: USGS 7.5-MINUTE BROOKLYN AND JERSEY CITY TOPOGRAPHIC QUADRANGLE MAPS, DATED 1967, REVISED 1979

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21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

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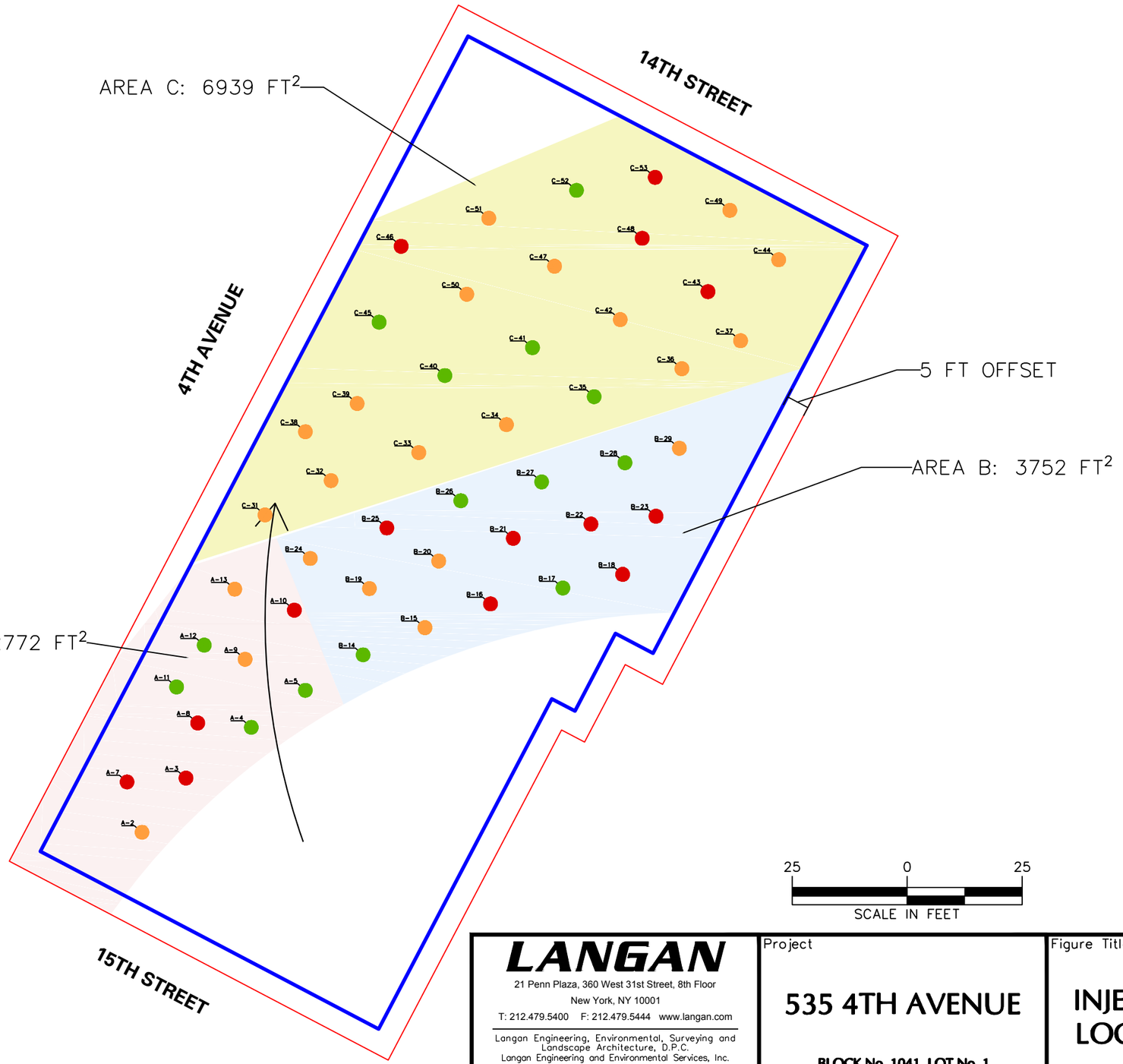
Project	535 4TH AVENUE BLOCK No. 1041, LOT No. 1 BROOKLYN KINGS NEW YORK
Figure Title	SITE LOCATION MAP
Project No.	170264501
Date	9/30/2016
Scale	1"=1,500'
Drawn By	AT
Checked By	–
Submission Date	–
Figure No.	1
Sheet	1 of 4

Filename: \\langan.com\data\NY\data5\170264501\Cadd Data - 170264501\2D-DesignFiles\Environmental\Quarterly GW Monitoring Reports\Figure 1 - Site Location Map.dwg Date: 5/26/2017 Time: 10:59 User: jyanowitz Style Table: Langan.stb Layout: Site Location Map



LEGEND:

- SITE BOUNDARY
- AREA A: TREATMENT AREA WITH 3 FT SAND OVER DENSE CLAY LAYER. GROUNDWATER FLOW VELOCITY IS APPROXIMATELY 2.7 FT PER DAY.
- AREA B: TREATMENT AREA WITH 5 FT SAND OVER DENSE CLAY LAYER. GROUNDWATER FLOW VELOCITY IS APPROXIMATELY 1.7 FT PER DAY.
- AREA C: TREATMENT AREA WITH 10 FT SAND OVER DENSE CLAY LAYER. GROUNDWATER FLOW VELOCITY IS APPROXIMATELY 0.2 FT PER DAY.
- GROUNDWATER FLOW DIRECTION
- DPT (HIGH) INJECTION POINT LOCATION
- DPT (TARGET) INJECTION POINT LOCATION
- DPT (LOW) INJECTION POINT LOCATION

25 0 25

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New York, NY 10001
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Project

535 4TH AVENUE

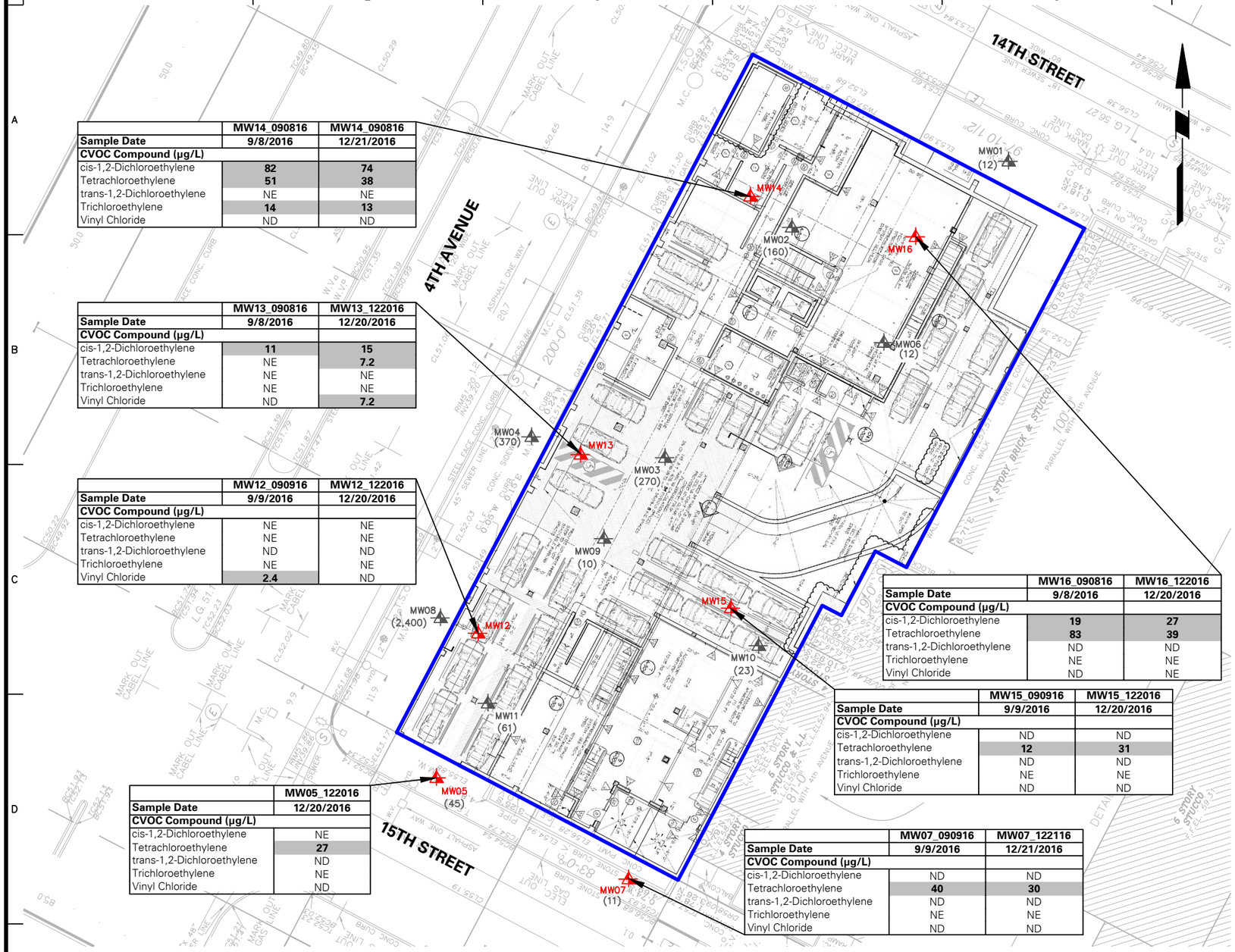
BLOCK No. 1041, LOT No. 1
BROOKLYN
KINGS **NEW YORK**

Figure Title

INJECTION POINT LOCATIONS AND VOLUMES

Project No. 170264501	Figure No. 2
Date 1/21/2016	
Scale 1"=25'	
Drawn By AS / Checked By MNG	
Submission Date	Sheet 2 of 4

Filename: \\langan.com\data\NY\data5\170264501\Cadd Data - 170264501\2D-DesignFiles\Environmental\FER\Figure 6 - Injection Point Locations and Volumes.dwg Date: 6/15/2017 Time: 11:58 User: jyanowitz Style Table: Langan.stb Layout: Sample Location Map



	MW14_090816	MW14_090816
Sample Date	**9/8/2016**	**12/21/2016**
CVOC Compound (µg/L)		
cis-1,2-Dichloroethylene	**82**	**74**
Tetrachloroethylene	**51**	**38**
trans-1,2-Dichloroethylene	NE	NE
Trichloroethylene	**14**	**13**
Vinyl Chloride	ND	ND

	MW13_090816	MW13_122016
Sample Date	**9/8/2016**	**12/20/2016**
CVOC Compound (µg/L)		
cis-1,2-Dichloroethylene	**11**	**15**
Tetrachloroethylene	NE	**7.2**
trans-1,2-Dichloroethylene	NE	NE
Trichloroethylene	NE	NE
Vinyl Chloride	ND	**7.2**

	MW12_090916	MW12_122016
Sample Date	**9/9/2016**	**12/20/2016**
CVOC Compound (µg/L)		
cis-1,2-Dichloroethylene	NE	NE
Tetrachloroethylene	NE	NE
trans-1,2-Dichloroethylene	ND	ND
Trichloroethylene	NE	NE
Vinyl Chloride	**2.4**	ND

	MW16_090816	MW16_122016
Sample Date	**9/8/2016**	**12/20/2016**
CVOC Compound (µg/L)		
cis-1,2-Dichloroethylene	**19**	**27**
Tetrachloroethylene	**83**	**39**
trans-1,2-Dichloroethylene	ND	ND
Trichloroethylene	NE	NE
Vinyl Chloride	ND	NE

	MW15_090916	MW15_122016
Sample Date	**9/9/2016**	**12/20/2016**
CVOC Compound (µg/L)		
cis-1,2-Dichloroethylene	ND	ND
Tetrachloroethylene	**12**	**31**
trans-1,2-Dichloroethylene	ND	ND
Trichloroethylene	NE	NE
Vinyl Chloride	ND	ND

	MW05_122016
Sample Date	**12/20/2016**
CVOC Compound (µg/L)	
cis-1,2-Dichloroethylene	NE
Tetrachloroethylene	**27**
trans-1,2-Dichloroethylene	ND
Trichloroethylene	NE
Vinyl Chloride	ND

	MW07_090916	MW07_122116
Sample Date	**9/9/2016**	**12/21/2016**
CVOC Compound (µg/L)		
cis-1,2-Dichloroethylene	ND	ND
Tetrachloroethylene	**40**	**30**
trans-1,2-Dichloroethylene	ND	ND
Trichloroethylene	NE	NE
Vinyl Chloride	ND	ND

LEGEND:

- SITE BOUNDARY
- MW01 — REMEDIAL INVESTIGATION MONITORING WELL LOCATION (LANGAN, JANUARY AND FEBRUARY 2014)
- (12) — PRE-TREATMENT CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN REMEDIAL INVESTIGATION (MARCH 2015) AND CORRESPONDING ADDITIONAL INVESTIGATION (FEBRUARY 2015) MONITORING WELLS IN µg/L
- MW12 — POST-INJECTION PERFORMANCE MONITORING WELL LOCATION (LANGAN, SEPTEMBER 2015)

NOTES:

1. BASE MAP IS TAKEN FROM TOPOGRAPHICAL SURVEY, PREPARED BY ROGUSKI LAND SURVEYING, P.C., DATED SEPTEMBER 29, 2014, AND FOUNDATION/CELLAR FRAMING PLAN PREPARED BY AUFGANG ARCHITECTS, DATED AUGUST 1, 2014.
2. MONITORING WELL LOCATIONS WERE SURVEYED BY LANGAN ON FEBRUARY 24 AND OCTOBER 29, 2014, JANUARY 30 AND NOVEMBER 25, 2015.
3. OFF-SITE WELLS MW05 AND MW07 WERE INSTALLED DURING THE RI, AND ARE TO BE USED AS POST-INJECTION PERFORMANCE MONITORING WELLS. ALL OTHER REMEDIAL INVESTIGATION (RI) MONITORING WELLS WERE EITHER ABANDONED VIA THE APPLICATION OF GROUT, OR DESTROYED DURING SITE DEMOLITION.
4. POST-INJECTION PERFORMANCE MONITORING WELLS WERE INSTALLED UNDER LANGAN OVERSIGHT IN SEPTEMBER OF 2015 .
5. MONITORING WELL MW05 WAS NOT SAMPLED DURING THE SEPTEMBER 2016 SAMPLING EVENT AS IT WAS NOT ACCESSIBLE AT THAT TIME.
6. GROUNDWATER SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS (AWQS) AND GUIDANCE VALUES FOR CLASS GA - DRINKING WATER.
7. ONLY CHLORINATED VOLATILE ORGANIC COMPOUNDS (CVOCs) DETECTED IN ONE OR MORE SAMPLES ARE SHOWN.
8. CONCENTRATIONS EXCEEDING THE NYSDEC REGULATORY CRITERIA ARE HIGHLIGHTED AND IN BOLD.
9. NE = CONCENTRATION DID NOT EXCEED THE NYSDEC REGULATORY CRITERIA
10. ND = NOT DETECTED
11. µg/L = MICROGRAM PER LITER

NYSDEC TOGS 1.1.1 AWQS - Class GA (µg/L)	
cis-1,2-Dichloroethylene	5
Tetrachloroethylene	5
trans-1,2-Dichloroethylene	5
Trichloroethylene	5
Vinyl Chloride	2

30 0 15 30
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21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com
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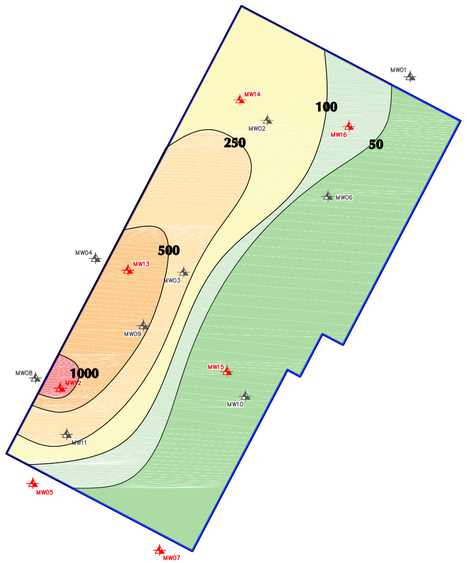
Project
535 4TH AVENUE
BLOCK No. 1041, LOT No. 1
BROOKLYN
KINGS **NEW YORK**

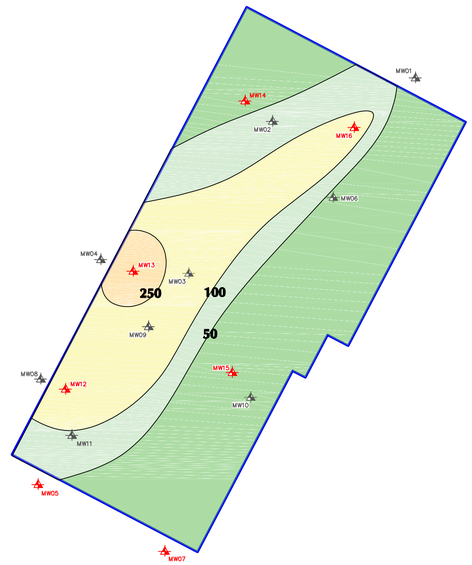
Figure Title
PERFORMANCE MONITORING WELL LOCATIONS AND RESULTS

Project No. 170264501	Figure No. 3
Date 03/16/2017	
Scale 1" = 30'	
Drawn By AS / Checked By BG	
Submission Date TBD	Sheet 3 of 4

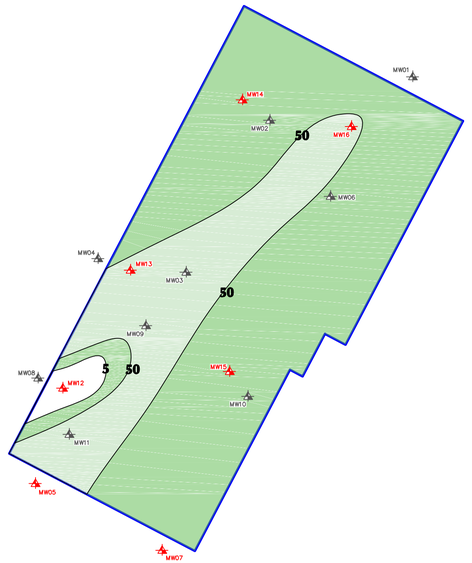
Filename: \\langan.com\data\NY\data5\170264501\Cadd Data - 170264501\2D-DesignFiles\Environmental\Quarterly GW Monitoring Reports\Figure 2 - Q4Q5_Performance Monitoring Well Locations and Results.dwg Date: 5/26/2017 Time: 11:07 User: jyanowitz Style Table: Langan.stb Layout: ANSIB-BL



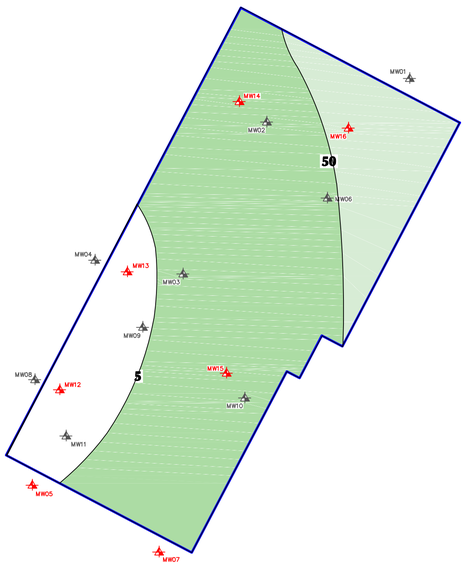
BASELINE



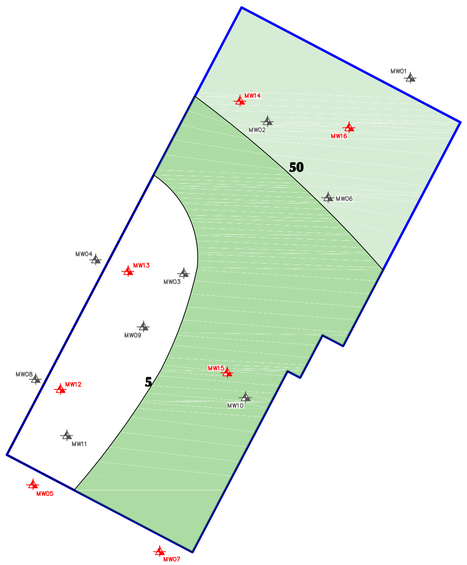
FIRST PERFORMANCE SAMPLING



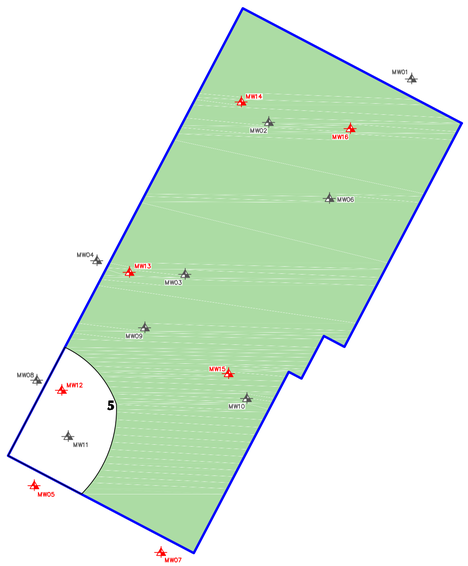
SECOND PERFORMANCE SAMPLING



THIRD PERFORMANCE SAMPLING



FOURTH PERFORMANCE SAMPLING



FIFTH PERFORMANCE SAMPLING

LEGEND:

- SITE BOUNDARY
- MW01 — REMEDIAL INVESTIGATION MONITORING WELL LOCATION
- MW12 — POST-INJECTION PERFORMANCE MONITORING WELL LOCATION

PCE CONCENTRATION (µg/L)

- >1000
- 500 - 1000
- 250 - 500
- 100 - 250
- 50 - 100
- 5 - 50
- 0 - 5

NOTES:

1. MONITORING WELL LOCATIONS WERE SURVEYED BY LANGAN ON FEBRUARY 24 AND OCTOBER 29, 2014, JANUARY 30, 2015, AND NOVEMBER 25, 2015
2. REMEDIAL INVESTIGATION (RI) MONITORING WELLS WERE EITHER ABANDONED VIA THE APPLICATION OF GROUT, OR DESTROYED DURING SITE DEMOLITION.
3. MW-05 AND MW-07 WERE INSTALLED DURING THE RI, AND ARE ALSO USED AS POST-INJECTION PERFORMANCE MONITORING WELLS.
4. POST-INJECTION PERFORMANCE MONITORING WELLS WERE INSTALLED UNDER LANGAN OVERSIGHT IN SEPTEMBER OF 2015 .
5. MONITORING WELLS MW-05 AND MW-07 WERE NOT SAMPLED DURING THE NOVEMBER 2015 SAMPLING EVENT DUE TO INACCESSIBILITY
6. CONTOUR LINES REPRESENT CONCENTRATIONS OF TETRACHLOROETHYLENE (PCE) IN GROUNDWATER IN MICROGRAMS PER LITER (µg/L).

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21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A
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Project: 535 4TH AVENUE
BLOCK No. 1041, LOT No.1
BROOKLYN
KINGS NEY YORK

Figure Title: BASELINE AND PERFORMANCE MONITORING PCE CONCENTRATIONS

Project No. 170264501	Figure No. 4
Date 5/26/17	
Scale N.T.S	
Drawn By JFY / Checked By SH	
Submission Date	Sheet 4 of 4

LANGAN
SUBMISSION DATE: ####
PROJECT NO. ####

Filename: \\langan.com\data\NY\data5\170264501\Cadd Data - 170264501\2D-DesignFiles\Environmental\Quarterly GW Monitoring Reports\Figure 7 - BASELINE AND FIRST FIVE PERFORMANCE MONITORING SAMPLING RESULTS.dwg Date: 6/15/2017 Time: 11:56 User: jyanowitz Style Table: Langan.stb Layout: ANSID-BL

TABLES

Table 1
Initial Remedial Investigation Groundwater Sample Detection Summary
535 4th Avenue
Brookyln, New York 11215
Langan Project No. 170264501

Well ID		MW01		MW02		MW03		MW04			MW05		MW06		MW07	MW08	MW09	MW10	MW11
Sample ID	NYSDEC TOGS Standards and Guidance Values - GA	MW01_021114	MW01_100914	MW02_021114	MW02_100814	MW03_021014	MW03_100814	MW04_021114	MW04_100814	GWDUP01_100814	MW05_021114	MW05_100914	MW06_021014	MW06_100914	MW07_110214	MW08_103114	MW09_110214	MW10_103114	MW11_012915
Sampling Date		2/11/2014	10/9/2014	2/11/2014	10/8/2014	2/10/2014	10/8/2014	2/11/2014	10/8/2014	10/8/2014	2/11/2014	10/9/2014	2/10/2014	10/9/2014	11/2/2014	10/31/2014	11/2/2014	10/31/2014	1/29/2015
Lab Sample ID		14B0261-03	14J0446-06	14B0261-01	14J0446-02	14B0220-02	14J0446-01	14B0261-02	14J0446-03	14J0446-04	14B0261-04	14J0446-05	14B0220-01	14J0446-07	14K0070-02	14K0021-02	14K0070-01	14K0021-01	15A0884-01
Volatile Organic Compounds (µg/L)																			
1,2-Dibromo-3-chloropropane	0.04	NT	*0.80* U	NT	*4* U	NT	*4* U	NT	*4* U	*4* U	NT	*0.80* U	NT	*0.80* U	*0.20* U	*0.20* U	*0.20* U	*0.20* U	0.20 U
1,2-Dichloroethane	0.6	0.20 U	0.20 U	0.20 U	*1* U	0.20 U	*1* U	0.20 U	*1* U	*1* U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	**3.50**	0.20 U	0.20 U
1,2-Dichloropropane	1	NT	0.20 U	NT	1 U	NT	1 U	NT	1 U	1 U	NT	0.20 U	NT	0.20 U	0.20 U	0.20 U	0.23 J	0.20 U	0.20 U
1,4-Dichlorobenzene	3	0.20 U	0.20 U	0.20 U	1 U	0.20 U	1 U	0.31 J	1 U	1 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ	1.50 UJ	0.20 UJ	0.20 UJ	0.20 U
4-Methyl-2-pentanone	~	NT	0.20 U	NT	1 U	NT	1 U	NT	1 U	1 U	NT	0.20 U	NT	0.20 U	0.20 U	0.20 U	0.28 J	0.20 U	0.20 U
Acetone	50	9.20	1 U	33	5 U	1.70 J	5 U	1 U	10.00 U	8 U	9.80	1 U	1 U	1 U	4.20 U	1 U	11 U	1 UJ	1 U
Benzene	1	0.20 U	0.20 U	0.20 U	1 U	0.20 U	1 U	0.20 U	1 U	1 U	0.20 U	0.20 U	0.20 U	0.20 U	0.30 J	0.21 J	**17**	0.20 U	0.20 U
Chlorobenzene	5	0.20 U	0.20 U	0.20 U	1 U	0.20 U	1 U	0.20 U	1 U	1 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.24 J	0.35 J	0.20 U	0.20 U
Chloroform	7	0.30 J	0.23 J	0.41 J	1 U	0.41 J	1 U	0.54	1 U	1 U	0.27 J	0.20 U	0.41 J	0.28 J	0.45 J	2.50	1.20	0.22 J	0.20 U
cis-1,2-Dichloroethylene	5	0.20 U	0.20 U	2.40	**10** D	**22**	**16** D	**60** D	**55** D	**56** D	0.66	0.44 J	0.20 U	0.20 U	0.28 J	**230** D	0.47 J	0.20 U	0.72
cis-1,3-Dichloropropylene	0.4	NT	0.20 U	NT	*1* U	NT	*1* U	NT	*1* U	*1* U	NT	0.20 U	NT	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Ethyl Benzene	5	0.20 U	0.20 U	0.20 U	1 U	0.20 U	1 U	0.20 U	1 U	1 U	0.20 U	0.20 U	0.20 U	0.20 U	0.22 J	0.20 U	0.87	0.20 U	0.20 U
Methyl tert-butyl ether (MTBE)	10	0.26 J	0.29 J	0.20 U	1 U	0.20 U	1 U	0.20 U	1 U	1 U	0.20 U	0.20 U	0.35 J	0.31 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Methylene chloride	5	1 U	1 U	1 U	5 U	1 U	5 U	1 U	5 U	5 U	1 U	1 U	1 U	1 U	*8.80* U	1 U	*8.80* U	1 U	1 U
o-Xylene	5	0.20 U	0.20 U	0.20 U	1 U	0.20 U	1 U	0.20 U	1 U	1 U	0.20 U	0.20 U	0.20 U	0.20 U	0.35 J	0.20 U	0.40 J	0.20 U	0.20 U
p- & m- Xylenes	5	0.50 U	0.50 U	0.50 U	2.50 U	0.50 U	2.50 U	0.50 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.54 J	0.50 U	0.50 U
tert-Butyl alcohol (TBA)	~		0.50 UJ	NT	2.50 UJ	NT	2.50 UJ	NT	2.50 UJ	2.50 UJ	NT	0.50 UJ	NT	0.50 UJ	0.50 U	0.50 U	29	0.50 U	0.50 U
Tetrachloroethylene	5	**12**	**12**	**78** D	**160** D	**340** D	**270** D	**510** D	**370** D	**380** D	**37**	**45** D	**16**	**12**	**11**	**2,200** D	**10**	**23**	**61** D
Toluene	5	0.20 U	0.20 U	0.20 U	1 U	0.20 U	1 U	0.20 U	1 U	1 U	0.20 U	0.20 U	0.20 U	0.20 U	1.40	0.20 U	3	0.20 U	0.20 U
trans-1,2-Dichloroethylene	5	0.20 U	0.20 U	0.20 U	1 U	0.20 U	1 U	0.67	1 U	1 U	0.20 U	0.26 J	0.20 U	0.20 U	0.20 U	1.10	2.20	0.20 U	0.20 U
Trichloroethylene	5	0.22 J	0.21 J	1.70	3.20 D	**10**	**7** D	**17**	**9.80** D	**10** D	1.10	1.10	0.20 J	0.20 U	0.23 J	**47** D	0.36 J	0.28 J	1.90
Vinyl Chloride	2	0.50 U	0.20 U	0.50 U	1 U	0.50 U	1 U	0.50 U	1 U	1 U	0.50 U	0.20 U	0.50 U	0.20 U	0.20 U	0.39 J	0.20 U	0.20 U	0.20 U
Xylenes, Total	5	0.60 U	0.60 U	0.60 U	3 U	0.60 U	3 U	0.60 U	3 U	3 U	0.60 U	0.60 U	0.60 U	0.60 U	0.84 J	0.60 U	0.94 J	0.60 U	0.60 U
Semi-Volatile Organic Compounds (µg/L)																			
Benzo(a)anthracene	0.002	*0.051* U	*0.051* U	*0.053* U	*0.051* U	*0.054* U	*0.053* U	*0.053* U	*0.051* UJ	**0.47** J	*0.053* U	*0.057* U	*0.051* U	*0.054* U	*0.063* U	*0.057* U	*0.054* U	*0.059* U	NT
Benzo(a)pyrene	0.002	*0.051* UJ	*0.051* U	*0.053* U	*0.051* U	*0.054* U	*0.053* U	*0.053* U	*0.051* UJ	**0.41** J	*0.053* U	*0.057* U	*0.051* U	*0.054* U	*0.063* U	*0.057* U	*0.054* U	*0.059* U	NT
Benzo(b)fluoranthene	0.002	*0.051* UJ	*0.051* UJ	*0.053* U	*0.051* U	*0.054* U	*0.053* U	*0.053* U	*0.051* UJ	**0.30** J	*0.053* U	*0.057* U	*0.051* U	**0.12**	*0.063* U	*0.057* U	*0.054* U	*0.059* U	NT
Benzo(g,h,i)perylene	~	0.051 UJ	0.051 UJ	0.053 U	0.051 U	0.054 U	0.053 U	0.053 U	0.051 U	0.54	0.053 U	0.057 U	0.051 U	0.087	0.063 U	0.057 U	0.054 U	0.059 U	NT
Benzo(k)fluoranthene	0.002	*0.051* UJ	*0.051* U	*0.053* U	*0.051* U	*0.054* U	*0.053* U	*0.053* U	*0.051* UJ	**0.38** J	*0.053* U	*0.057* U	*0.051* U	**0.087**	*0.063* U	*0.057* U	*0.054* U	*0.059* U	NT
Bis(2-ethylhexyl)phthalate	5	NT	2.91	NT	0.89	NT	2.57	NT	1.14	1.51	NT	1.35	NT	1.12	*21.80* U	0.811 U	1.81 U	1.22 U	NT
Chrysene	0.002	*0.051* U	*0.051* U	*0.053* U	*0.051* U	*0.054* U	*0.053* U	*0.053* U	*0.051* UJ	**0.31** J	*0.053* U	*0.057* U	*0.051* U	*0.054* U	*0.063* U	*0.057* U	*0.054* U	*0.059* U	NT
Dibenzo(a,h)anthracene	~	0.051 UJ	0.051 UK	0.053 U	0.051 U	0.054 U	0.053 U	0.053 U	0.051 U	0.47	0.053 U	0.057 U	0.051 U	0.065	0.063 U	0.057 U	0.054 U	0.059 U	NT
Fluorene	50	0.051 U	0.051 U	0.053 U	0.051 U	0.054 U	0.053 U	0.053 U	0.051 U	0.10	0.053 U	0.057 U	0.051 U	0.054 U	0.063 U	0.057 U	0.054 U	0.18	NT
Indeno(1,2,3-cd)pyrene	0.002	*0.051* UJ	*0.051* UJ	*0.053* U	*0.051* U	*0.054* U	*0.053* U	*0.053* U	*0.051* U	*0.051* U	*0.053* U	*0.057* U	*0.051* U	**0.076**	*0.063* U	*0.057* U	*0.054* U	*0.059* U	NT
Naphthalene	10	0.062 J	0.051 J	0.053 U	0.051 U	0.054 U	0.074	0.053 U	0.062	0.051 U	0.053 J	0.057 U	0.051 U	0.054 U	0.063 U	0.057 U	0.12	0.059 U	NT
Phenanthrene	50	0.051 U	0.051 U	0.053 U	0.051 U	0.054 U	0.053 U	0.053 U	0.051 U	0.23	0.053 U	0.057 U	0.072	0.054 U	0.063 U	0.057 U	0.054 U	0.059 U	NT
Pyrene	50	0.051 U	0.051 U	0.053 U	0.051 U	0.054 U	0.053 U	0.053 U	0.051 U	0.29	0.053 U	0.069	0.051 U	0.054 U	0.063 U	0.057 U	0.054 U	0.059 U	NT
Dissolved Metals (µg/L)																			
Aluminum	~	NT	92	NT	10 U	NT	1,900	NT	47	44	NT	2,780	NT	808	80 U	97	72 U	133	NT
Barium	1000	NT	84	NT	81	NT	167	NT	325	326	NT	121	NT	57	54	199	478	78	NT
Calcium	~	NT	64,100	NT	165,000	NT	197,000	NT	193,000	196,000	NT	58,200	NT	47,400	30,700	290,000	162,000	128,000	NT
Chromium	50	NT	5 U	NT	5 U	NT	38	NT	5 U	5 U	NT	23	NT	13	5 U	5 U	5 U	5 U	NT
Cobalt	~	NT	5 U	NT	5 U	NT	5 U	NT	5 U	5 U	NT	5 U	NT	5 U	5 U	5 U	31	5 U	NT
Copper	200	NT	3 U	NT	**1,140**	NT	121	NT	3 U	3 U	NT	8	NT	3 U	4 U	3 U	3 U	5	NT
Iron	~	NT	114	NT	243	NT	2,820	NT	66	62	NT	4,440	NT	1,290	20 U	20 U	7,850	20 U	NT
Lead	25	NT	3 U	NT	3	NT	4	NT	3 U	3 U	NT	4	NT	3 U	3 U	8 J	4 U	8 J	NT
Magnesium	35000	NT	21,600	NT	**70,000**	NT	**78,500**	NT	**61,300**	**62,200**	NT	24,200	NT	16,500	7,270	**103,000**	30,800	**51,500**	NT
Manganese	300	NT	169	NT	71	NT	115	NT	33	28	NT	**410**	NT	85	232	137	**9,060**	108	NT
Nickel	100	NT	5 U	NT	6	NT	22	NT	5 U	5 U	NT	17	NT	12	5 U	5 U	**122**	5 U	NT
Potassium	~	NT	4,530	NT	4,530	NT	4,220	NT	6,640	6,690	NT	5,410	NT	5,150	8,770	7,520	14,300	3,870	NT
Selenium	10	NT	10 U	NT	**30**	NT	10 U	NT	**15**	**16**	NT	10 U	NT	10	10 U	**57**	**35**	**38**	NT
Sodium	20000	NT	**41,100** B	NT	**64,900** B	NT	**171,000** B	NT	**465,000** B	**469,000** B	NT	**144,000** B	NT	17,600 B	**110,000**	**499,000**	**196,000**	**44,400**	NT
Thallium	~	NT	5 U	NT	5 U	NT	5 U	NT	5 U	5 U	NT	5 U	NT	5 U	5 U	5 U	5 U	5 U	NT
Vanadium	~	NT	10 U	NT	10 U	NT	10 U	NT	10 U	10 U	NT	10 U	NT	10 U	10 U	10 U	10 U	10 U	NT
Zinc	2000	NT	10	NT	83	NT	98	NT	14	12	NT	25	NT	15	10 U	20	41 U	15	NT
Total Metals (µg/L)																			
Aluminum	~	NT	10 U	NT	10 U	NT	10 U	NT	10 U	10 U	NT	10 U	NT	10 U	4,480	5,910	7,160	8,060	NT
Barium	1000	NT	81	NT	80	NT	149	NT	329	326	NT	82	NT	46	133	267	622	179	NT
Calcium	~	NT	63,400	NT	165,000	NT	192,000	NT	197,000	197,000	NT	57,400	NT	47,800	45,600	307,000	174,000	146,000	NT
Chromium	50	NT	5 U	NT	5 U	NT	5 U	NT	5 U	5 U	NT	5 U	NT	5 U	21	14	**99**	15	NT
Cobalt	~	NT	5 U	NT	5 U	NT	5 U	NT	5 U	5 U	NT	5 U	NT	5 U	5 U	6	38	8	NT
Copper	200	NT	3 U	NT	130	NT	9	NT	3 U	3 U	NT	3 U	NT	3 U	17 U	17	44	33	NT
Iron	~	NT	20 U	NT	37	NT	96	NT	20 U	20 U	NT	20 U	NT	20 U	7,550	8,410	51,800	10,700	NT
Lead	25	NT	3 U	NT	3 U	NT	3 U	NT	3 U	3 U	NT	3 U	NT	3 U	8	8	16	12	NT
Magnesium	35000	NT	21,200	NT	**69,700**	NT	**79,300**	NT	**61,900**	**62,100**	NT	22,700	NT	15,900	13,600	**115,000**	**35,800**	**60,700**	NT
Manganese	300	NT	150	NT	62	NT	15	NT	27	26	NT	36	NT	22	**689**	**469**	**9,540**	**693**	NT
Nickel	100	NT	5 U	NT	5	NT	5 U	NT	5 U	5 U	NT	5 U	NT	6	16	20	**156**	22	NT
Potassium	~	NT	4,340	NT	4,450	NT	3,480	NT	6,520	6,520	NT	4,360	NT	4,660	10,300	9,900	17,600	6,480	NT
Selenium	10	NT	10	NT	**28**	NT	**16**	NT	**16**	**13**	NT	**12**	NT	**12**	**12**	**48**	**41**	**39**	NT
Sodium	20000	NT	**40,900**	NT	**64,300**	NT	**167,000**	NT	**464,000**	**460,000**	NT	**142,000**	NT	17,500	**137,000** B	**516,000** B,E	**208,000** B	**48,300** B	NT
Vanadium	~	NT	10 U	NT	10 U	NT	10 U	NT	10 U	10 U	NT	10 U	NT	10 U	10 U	13	15	16	NT
Zinc	2000	NT	13	NT	70	NT	57	NT	15	16	NT	10	NT	11	70	46	108	64	NT

Notes:
1. Groundwater samples analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values.
2. µg/L = micrograms per liter
3. "~" = Criterion does not exist
4. NT = Sample not tested for constituent
5. Only detected compounds are shown in the table.
6. Groundwater sample analysis results exceeding NYSDEC TOGS AWQS are highlighted and in **bold.**
7. Groundwater sample analysis results whose detection limits exceed NYSDEC TOGS AWQS are *italicized*.
8. GWDUP01_100814 is a duplicate sample of MW04_100814.

Qualifiers:
D = result is from an analysis that required a dilution
J = Estimated value. The target analyte concentration is below the reporting limit, but greater than or equal to the method detection limit (MDL) or limit of detection (LOD).
U = analyte not detected at or above the level indicated
B = analyte found in the analysis batch blank
E = result is estimated and cannot be accurately reported due to levels encountered or interferences

Table 2
Fourth and Fifth Quarterly Groundwater Monitoring Event Results (VOCs)
535 4th Avenue
Brooklyn, New York
Langan Project No. 170264501

Sample Location	NYSDEC TOGS	MW05				MW07					MW12					MW13				
Sample ID	Standards and	MW05_021114	MW05_100914	MW05_022416	MW05_122016	MW07_110214	MW07_022416	MW07_052316	MW07_090916	MW07_122116	MW12_112015	MW12_022316	MW12_052416	MW12_090916	MW12_122016	MW13_112015	MW13_022316	MW13_052416	MW13_090816	MW13_122016
Lab Sample ID	Guidance Values -	14B0261-04	14J0446-05	16B0816-03	16L0844-08	14K0070-02	16B0816-04	16E0944-03	16I0330-03	16L0909-01	15K0769-03	16B0761-03	16E1019-03	16I0330-01	16L0844-05	15K0769-04	16B0761-05	16E1019-02	16I0285-05	16L0844-06
Sample Date	GA	2/11/2014	10/9/2014	2/24/2016	12/20/2016	11/2/2014	2/24/2016	5/23/2016	9/9/2016	12/21/2016	11/20/2015	2/23/2016	5/24/2016	9/9/2016	12/20/2016	11/20/2015	2/23/2016	5/24/2016	9/8/2016	12/20/2016
Volatile Organic Compounds (µg/l)		Initial	Initial	Quarter 2	Quarter 5	Initial	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5
1,1,1-Trichloroethane	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,1-Dichloroethane	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,1-Dichloroethene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.24 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,2-Dichloroethane	0.6	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene (Mesitylene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.38 J	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
1,4-Dioxane (P-Dioxane)	~	40 U	40 U	80 U	40 U	40 U	80 U	40 U	40 U	40 U	40 U	4000 U	2000 U	40 U	40 U	80 U	800 U	400 U	40 U	40 U
Acetone	50	9.8	1 U	1 U	2.1 U	4.2 U	1 U	1 U	1.1 J	1.7 U	**21000** D	**6900** D	**5900** BD	**410** D	**260** BD	**240** D	**1200** DE	**1100** D	**430** J	38 BD
Benzene	1	0.2 U	0.2 U	0.2 U	0.2 U	0.3 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
Carbon Tetrachloride	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
Chlorobenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
Chloroform	7	0.27 J	0.2 U	4.5	2.1	0.45 J	1	0.37 J	0.31 J	0.22 J	0.35 J	20 U	10 U	0.2 U	0.2 U	0.46 JD	4 U	2 U	0.2 U	0.2 U
cis-1,2-Dichloroethylene	5	0.66	0.44 J	0.2 U	0.36 J	0.28 J	0.2 U	0.2 U	0.2 U	0.2 U	**20**	**90** D	**14** JD	2.7	2.1	**29** D	**270** D	**55** D	**11**	**15**
Ethylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.22 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
m,p-Xylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	25 U	0.5 U	0.5 U	1 U	10 U	5 U	0.5 U	0.5 U
Methyl Ethyl Ketone (2-Butanone)	50	1.1	0.2 U	0.2 U	0.2 U	1.8	0.2 U	0.2 U	0.2 U	0.2 U	**240** D	**210** D	**230** D	**91**	45	0.4 U	**110** D	**55** D	36	19
Methylene Chloride	5	1 U	1 U	1 U	1 U	8.8 U	1 U	1 U	1 U	1 U	1 U	100 U	50 U	1 U	1 U	2 U	20 U	10 U	1 U	1 U
Naphthalene	10	NT	NT	1 U	1 U	NT	1 U	1 U	1 U	1 U	1 U	100 U	50 U	1 U	1 U	2 U	20 U	10 U	1 U	1 U
n-Butylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
n-Propylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
o-Xylene (1,2-Dimethylbenzene)	5	0.2 U	0.2 U	0.2 U	0.2 U	0.35 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
sec-Butylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
Tert-Butyl Methyl Ether (MTBE)	10	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
tert-Butylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.2 U	0.2 U
Tetrachloroethylene (PCE)	5	**37**	**45** D	**34**	**27**	**11**	**35**	**21** J	**40**	**30** J	**140**	20 U	10 U	2.4	3.9	**270** D	**63** D	3.7 J	4	**7.2**
Toluene	5	0.2 U	0.2 U	0.2 U	0.2 U	1.4	0.2 U	0.2 U	0.2 U	0.2 U	0.52	20 U	10 U	0.33 J	0.46 J	0.4 U	4 U	2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	5	0.2 U	0.26 J	0.2 U	0.2 U	0.2 U	0.25 J	0.2 U	0.2 U	0.2 U	0.2 U	20 U	10 U	0.2 U	0.2 U	0.4 U	4 U	2 U	0.37 J	0.2 U
Trichloroethylene (TCE)	5	1.1	1.1	0.52	1.2	0.23 J	0.76	0.56	0.64	0.71	**42**	20 U	10 U	3.4	3	**9.6** D	**21** D	2 U	2.2	3.3
Vinyl Chloride	2	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 U,J	0.25 J	20 U	10 U	**2.4** J	1.5	0.4 U	4 U	**11** D	0.2 U	**7.2**
Xylenes, Total	5	0.6 U	0.6 U	0.6 U	0.6 U	0.84 J	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	60 U	30 U	0.6 U	0.6 U	1.2 U	12 U	6 U	0.6 U	0.6 U
Total VOCs and CVOCs (µg/l)																				
Total VOCs	~	49.93	46.8	39.02	32.76	17.11	37.01	21.93	42.05	32.63	21443.5	7200	6144	512.23	315.96	549.06	1664	1224.7	483.62	90.07
Total CVOCs	~	38.76	46.8	34.52	28.56	11.51	36.01	21.56	40.64	30.71	202.25	90	14	10.9	10.5	308.6	354	69.7	17.62	33.07

Notes:

1. Groundwater samples analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values.
2. Groundwater sample analysis results exceeding NYSDEC TOGS AWQS are highlighted and in bold.
3. MW05 and MW07 are located off-site.
4. Initial = Pre-injection groundwater sampling
5. VOC = volatile organic compond
6. CVOC = chlorinated volatile organic compound
7. µg/l = micrograms per liter
8. NT = Sample not tested for constituent
9. B = The analyte was detected above the reporting limit in the associated method blank.
10. D = Concentrations of analyte was quantified from diluted analysis.
11. E = Concentrations of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
12. J = The analyte was detected above the Method Detection Limit (MDL), but below the Reporting Limit (RL); therefore, the result is an estimated concentration.
13. U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.
14. ~ = No standard or guidance value for this compound

Table 2
Fourth and Fifth Quarterly Groundwater Monitoring Event Results (VOCs)
535 4th Avenue
Brooklyn, New York
Langan Project No. 170264501

Sample Location	NYSDEC TOGS	MW14					MW15					MW16									
Sample ID	Standards and	MW14_112315	MW14_022416	MW14_052316	MW14_090816	MW14_122116	MW15_112315	MW15_022416	MW15_052416	MW15_090916	MW15_122016	MW16_112015	DUP01_112015	MW16_022316	DUP01_022316	MW16_052316	DUP01_052316	MW16_090816	DUP01_090816	MW16_122016	DUP01_122016
Lab Sample ID	Guidance Values -	15K0828-02	16B0816-01	16E0944-02	16I0285-04	16L0909-02	15K0828-03	16B0816-02	16E1019-01	16I0330-02	16L0844-04	15K0769-05	15K0769-06	16B0761-01	16B0761-02	16E0944-01	16E0944-04	16I0285-03	16I0285-06	16L0844-03	16L0844-07
Sample Date	GA	11/23/2015	2/24/2016	5/23/2016	9/8/2016	12/21/2016	11/23/2015	2/24/2016	5/24/2016	9/9/2016	12/20/2016	11/20/2015	11/20/2015	2/23/2016	2/23/2016	5/23/2016	5/23/2016	9/8/2016	9/8/2016	12/20/2016	12/20/2016
Volatile Organic Compounds (µg/l)		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Quarter 5	
1,1,1-Trichloroethane	5	0.2 U	2.8	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.29 J	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	0.6	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene (Mesitylene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dioxane (P-Dioxane)	~	40 U	80 U	40 U	40 U	40 U	40 U	80 U	40 U	40 U	40 U	40 U	40 U	800 U	800 U	80 U	80 U	40 U	40 U	40 U	40 U
Acetone	50	1 U	1 U	1 U	3.2 U	1 U	1 U	1 U	1 U	3.4	1.2 U	2.3	1.1 J	**1200** D	**1200** D	**410** D	**370** D	1.5 U	3 U	4.8 U	7.9 U
Benzene	1	0.2 UJ	0.2 U	0.2 U	0.2 U	0.22 J	0.29 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon Tetrachloride	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroform	7	0.94	0.32 J	0.28 J	0.25 J	0.23 J	0.2 U	0.33 J	0.38 J	0.2 U	0.44 J	2.6	2.5	4 U	4 U	0.4 U	0.4 U	0.23 J	0.22 J	0.22 J	0.3 J
cis-1,2-Dichloroethylene	5	**62**	**98**	**76**	**82**	**74** D	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.1	1.1	**41** D	**38** D	**20** D	**20** D	**19**	**19**	**27**	**24**
Ethylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	10 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl Ethyl Ketone (2-Butanone)	50	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.66	0.2 U	0.86 J	0.2 U	0.2 U	0.2 U	**62** D	**59** D	22 D	20 D	0.2 U	0.2 U	0.2 U	0.2 U
Methylene Chloride	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	20 U	2 U	2 U	1 U	1 U	1 U	1 U
Naphthalene	10	1 U	1 U	1 U	1 U	6.9 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	20 U	2 U	2 U	1 U	1 U	1 U	1 U
n-Butylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
n-Propylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene (1,2-Dimethylbenzene)	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
sec-Butylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Tert-Butyl Methyl Ether (MTBE)	10	0.99	1.1	1.2	1	1.5 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
tert-Butylbenzene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethylene(PCE)	5	**52**	**63**	**43** J	**51**	**38** J	**5.7**	**25**	**31** J	**12**	**31**	**110**	**120**	**62** D	**58** D	**62** J	**65** J	**83** E	**86** E	**39** D	**48** D
Toluene	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	5	0.47 J	0.55	1.2	1	0.41 J	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethylene (TCE)	5	**14**	**17**	**13**	**14**	**13**	0.2 U	0.32 J	0.44 J	0.22 J	0.44 J	2.4	2.4	4.6 JD	4 U	3.6 D	3.6 D	4.4	4.5	4.6	4.5
Vinyl Chloride	2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U,J	0.2 U	0.2 U	0.2 U	4 U	4 U	0.4 U	0.4 U	0.2 U	0.2 U	0.66	0.59
Xylenes, Total	5	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	12 U	12 U	1.2 U	1.2 U	0.6 U	0.6 U	0.6 U	0.6 U
Total VOCs and CVOCs (µg/l)																					
Total VOCs	~	130.4	179.97	134.68	152.45	134.26	5.99	26.31	32.11	16.48	33.08	118.4	127.1	1369.6	1355	517.6	478.6	108.13	112.72	76.28	85.29
Total CVOCs	~	128.47	178.55	133.2	148	125.41	5.7	25.32	31.44	12.22	31.44	113.5	123.5	107.6	96	85.6	88.6	106.4	109.5	71.26	77.09

Notes:

1. Groundwater samples analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values.
2. Groundwater sample analysis results exceeding NYSDEC TOGS AWQS are highlighted and in bold.
3. MW05 and MW07 are located off-site.
4. Initial = Pre-injection groundwater sampling
5. VOC = volatile organic compond
6. CVOC = chlorinated volatile organic compound
7. µg/l = micrograms per liter
8. NT = Sample not tested for constituent
9. B = The analyte was detected above the reporting limit in the associated method blank.
10. D = Concentrations of analyte was quantified from diluted analysis.
11. E = Concentrations of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
12. J = The analyte was detected above the Method Detection Limit (MDL), but below the Reporting Limit (RL); therefore, the result is an estimated concentration.
13. U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.
14. ~ = No standard or guidance value for this compound

Table 3
Fourth and Fifth Quarterly Groundwater Monitoring Results (Geochemical and Biological Parameters)
535 4th Avenue
Brooklyn, New York
Langan Project No. 170264501

Sample Location	NYSDEC TOGS Standards and Guidance Values - GA	MW05				MW07					MW12					MW13				
Sample ID		MW05_021114	MW05_100914	MW05_022416	MW05_122016	MW07_110214	MW07_022416	MW07_052316	MW07_090916	MW07_122116	MW12_112015	MW12_022316	MW12_052416	MW12_090916	MW12_122016	MW13_112015	MW13_022316	MW13_052416	MW13_090816	MW13_122016
Lab Sample ID		14B0261-04	14J0446-05	16B0816-03	16L0844-08	14K0070-02	16B0816-04	16E0944-03	16I0330-03	16L0909-01	15K0769-03	16B0761-03	16E1019-03	16I0330-01	16L0844-05	15K0769-04	16B0761-05	16E1019-02	16I0285-05	16L0844-06
Sample Date		2/11/2014	10/9/2014	2/24/2016	12/20/2016	11/2/2014	2/24/2016	5/23/2016	9/9/2016	12/21/2016	11/20/2015	2/23/2016	5/24/2016	9/9/2016	12/20/2016	11/20/2015	2/23/2016	5/24/2016	9/8/2016	12/20/2016
		Initial	Initial	Quarter 2	Quarter 5	Initial	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5
Methane, Ethane & Ethylene (µg/l)																				
Ethane	~	NT	NT	10 U	10 U	NT	10 U	10 U	10 U	10 U	NT	10 U	10 U	250 U	2000 U	NT	10 U	17	10 U	500 U
Ethylene (Ethene)	~	NT	NT	10 U	10 U	NT	10 U	10 U	10 U	10 U	NT	10 U	10 U	250 U	2000 U	NT	10 U	10 U	12	500 U
Methane	~	NT	NT	10 U	10 U	NT	10 U	10 U	10 U	10 U	NT	69	6400	2800 D	38000 D	NT	10 U	130	210	8600 D
Iron (µg/l)																				
Total	300	NT	**4440**	**2510**	**39000**	**7550**	**18000**	**5420**	**15000**	**5820**	NT	**40100**	**76900**	**50900**	**43100**	NT	**7310**	**16900**	**18800**	**25500**
Dissolved	300	NT	20 U	58.5	22.200 U	20 U	59.9	96.3	46.2	172	NT	**32500**	**19800**	205	**20100**	NT	**916**	**490**	**2700**	**3600**
General Chemistry (µg/l)																				
Alkalinity	~	NT	NT	120000	200000	NT	432000	500000	515000	450000	NT	684000	880000	810000	770000	NT	506000	656000	655000	650000
Chloride	250000	NT	NT	222000 D	**311000** D	**NT**	**937000** DE	**1730000** DE	**2180000** J	**2330000** JD	NT	219000 D	**2450000** DE	**1660000** DE	**1370000** J	NT	**746000** DE	**1080000** DE	**1020000** J	**1010000** J
Nitrate	10000	NT	NT	NT	NT	NT	NT	967 D	2910 D	NT	NT	NT	50 U	277 D	NT	NT	NT	50 U	209 U	NT
Nitrite	1000	NT	NT	4 U	106 D	NT	4 U	NT	NT	36.5 JD	NT	4 U	NT	NT	36 U	NT	4 U	NT	NT	36.600 U
Sulfate	250000	NT	NT	**397000** DE	**398000** J	**NT**	**643000** DE	67100 D	68300 D	72400 D	NT	1000 U	1850	5710 D	50000 U	NT	3860	1000 U	2000 U	2020 D
Total Organic Carbon	~	NT	NT	4580	5190 U	NT	4120	6370	4960	5510	NT	2740	NT	204000	84400 D	NT	103000	NT	62900	13100 D
General Chemistry (ppt)																				
Salinity	~	NT	NT	0.0000	0.00000 U	NT	0.0000	0.0000	0.00000	0.00000	NT	0.0000	0.0000	0.00000	0.00000	NT	0.0000	0.0000	0.00000 U	0.00000 U
Microbial Activity (cells/mL)																				
Dehalococcoides spp. (DHC)	~	NT	NT	0.6	9.1 U	NT	0.8	0.5	58.7	0.7	NT	14.3	80000	600	68100	NT	1380	705000	468000	3980000
Field Parameters																				
pH (standard units)	~	NA	NA	7.03	6.81	NA	7.27	6.73	6.96	7.4	6.41	6.72	6.37	6.56	6.87	7.32	7.51	6.58	6.55	7.06
Temperature (°C)	~	NA	NA	13.91	18.70	NA	14.62	17.14	22.3	14.84	20.50	13.24	15.82	20.45	14.34	19.67	12.7	17	20.78	14.00
Specific Conductivity (mS/cm)	~	NA	NA	1.83	1.81	NA	7.62	6.60	.017	7.52	5.99	7.98	7.21	6.22	4.74	3.21	4.22	3.92	4.07	4.17
Dissolved Oxygen (mg/L)	~	NA	NA	0.00	0.66	NA	0.00	4.62	8.4	1.95	0.00	0.00	1.73	2.63	0.46	1.56	0.00	2.21	2.80	0.92
Redox Potential (mV)	~	NA	NA	135	58	NA	-17	4	42	102	-86	-96	-92	-113	-124	-113	-180	-98	-91	-125
Turbidity (NTU)	~	NA	NA	87	260	NA	800	289	167	200	129	48	23.1	65.6	87.1	20.0	50	5.0	37.0	315

Notes:

1. Groundwater samples analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values.
2. µg/l = micrograms per liter
3. ppt = parts per trillion
4. cells/mL = cells per milliliter
5. mS/cm = milliSiemens per centimeter
6. mg/L = milligrams per liter
7. mV = millivolts
8. NTU = Nephelometric Turbidity Unit
9. Groundwater sample analysis results exceeding NYSDEC TOGS AWQS are highlighted and in bold.
10 NT = Sample not tested for constituent
11. ~ = No standard or guidance value
12. J = The analyte was detected above the Method Detection Limit (MDL), but below the Reporting Limit (RL); therefore, the result is an estimated concentration.
13. U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.
14. D = Concentrations of aNTlyte was quantified from diluted analysis.
15. E = Concentrations of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
16. NA = Not applicable

Table 3
Fourth and Fifth Quarterly Groundwater Monitoring Results (Geochemical and Biological Parameters)
535 4th Avenue
Brooklyn, New York
Langan Project No. 170264501

Sample Location	NYSDEC TOGS Standards and Guidance Values - GA	MW14					MW15					MW16									
Sample ID		MW14_112315	MW14_022416	MW14_052316	MW14_090816	MW14_122116	MW15_112315	MW15_022416	MW15_052416	MW15_090916	MW15_122016	MW16_112015	DUP01_112015	MW16_022316	DUP01_022316	MW16_052316	DUP01_052316	MW16_090816	DUP01_090816	MW16_122016	DUP01_122016
Lab Sample ID		15K0828-02	16B0816-01	16E0944-02	16I0285-04	16L0909-02	15K0828-03	16B0816-02	16E1019-01	16I0330-02	16L0844-04	15K0769-05	15K0769-06	16B0761-01	16B0761-02	16E0944-01	16E0944-04	16I0285-03	16I0285-06	16L0844-03	16L0844-07
Sample Date		11/23/2015	2/24/2016	5/23/2016	9/8/2016	12/21/2016	11/23/2015	2/24/2016	5/24/2016	9/9/2016	12/20/2016	11/20/2015	11/20/2015	2/23/2016	2/23/2016	5/23/2016	5/23/2016	9/8/2016	9/8/2016	12/20/2016	12/20/2016
		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Quarter 5	
Methane, Ethane & Ethylene (µg/l)																					
Ethane	~	NT	10 U	10 U	10 U	10 U	NT	10 U	10 U	10 U	10 U	NT	NT	10 U	NT	10 U	NT	100 U	20 U	100 U	500 U
Ethylene (Ethene)	~	NT	10 U	10 U	10 U	10 U	NT	10 U	10 U	10 U	10 U	NT	NT	10 U	NT	10 U	NT	100 U	20 U	100 U	500 U
Methane	~	NT	10 U	10 U	10 U	10 U	NT	10 U	10 U	10 U	200	NT	NT	96	NT	990	NT	600 J	360 J	1000 J	7800 J
Iron (µg/l)																					
Total	300	NT	**722**	**3320**	**4470**	**627**	NT	**3620**	**10600**	**2820**	**14200**	NT	NT	**3720**	NT	**2180**	NT	**1940**	**2030**	**2200** J	**2940**
Dissolved	300	NT	97.1	26.6	**438**	41.800	NT	22.2	54.6	41.9	104	NT	NT	**2580**	NT	**412**	NT	22.2 U	221 U	**1040**	**1700**
General Chemistry (µg/l)																					
Alkalinity	~	NT	342000	376000	400000	390000	NT	122000	136000	120000	110000	NT	NT	532000	NT	480000	NT	416000	414000	455000	470000
Chloride	250000	NT	**317000** DE	**327000** DE	**315000** D	**348000** JD	NT	69800 D	77900 D	61300 D	40400 D	NT	NT	175000 D	NT	105000 D	NT	94700 D	96600 D	125000 D	124000 D
Nitrate	10000	NT	NT	6960 D	7440 D	NT	NT	NT	9350	6020 D	NT	NT	NT	NT	NT	2990 D	NT	5360 J	5860 D	NT	NT
Nitrite	1000	NT	4 U	NT	NT	36.200 JD	NT	4 U	NT	NT	36.8 U	NT	NT	491	NT	NT	NT	NT	NT	22 U	55 U
Sulfate	250000	NT	**797000** DE	**820000** DE	**690000** J	59300 D	NT	187000 D	191000 D	201000 J	188000 J	NT	NT	**426000** DE	NT	**254000** DE	NT	235000 J	243000 J	**304000** J	**305000** J
Total Organic Carbon	~	NT	2870	4620	3440 U	3910	NT	1820	NT	4780	3640 U	NT	NT	24200	NT	16900	NT	3960 U	5070 J	5530 U	4490 U
General Chemistry (ppt)																					
Salinity	~	NT	0.0000	0.0000	0.00000 U	0.00000 U	NT	0.0000	0.0000	0.00000 U	0.00000 U	NT	NT	0.0000	NT	0.0000	NT	0.00000 U	0.00000 U	0.00000 U	0.00000 U
Microbial Activity (cells/mL)																					
Dehalococcoides spp. (DHC)	~	NT	0.5	2.3	0.4 J	12.6	NT	1.1	1.3	0.5 U	3.2 U	NT	NT	168	7.8	53	64.5	343	324	35.3	57.2
Field Parameters																					
pH (standard units)	~	7.27	7.03	6.83	6.86	NA	9.31	7.64	6.93	6.72	6.94	6.67	NA	7.73	NA	6.72	NA	6.59	NA	6.94	NA
Temperature (°C)	~	16.81	11.47	16.41	19.61	NA	14.17	12.88	14.45	22.13	13.94	18.61	NA	16.54	NA	15.91	NA	16.45	NA	13.94	NA
Specific Conductivity (mS/cm)	~	2.36	.002	2.81	2.64	NA	.393	.847	.94	.897	0	1.41	NA	2.520	NA	1.58	NA	1.47	NA	0	NA
Dissolved Oxygen (mg/L)	~	2.99	2.07	3.24	3.95	NA	2.62	1.2	8.28	2.00	10.05	1.99	NA	0.00	NA	1.28	NA	2.1	NA	10.05	NA
Redox Potential (mV)	~	114	58	98	77	NA	57	76	195	144	26	167	NA	-109	NA	-144	NA	-52	NA	26	NA
Turbidity (NTU)	~	130	200	743	34.7	NA	>1000	420	1000	323	231	0.0	NA	22.9	NA	0.0	NA	0.0	NA	231	NA

Notes:

1. Groundwater samples analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values.
2. µg/l = micrograms per liter
3. ppt = parts per trillion
4. cells/mL = cells per milliliter
5. mS/cm = milliSiemens per centimeter
6. mg/L = milligrams per liter
7. mV = millivolts
8. NTU = Nephelometric Turbidity Unit
9. Groundwater sample analysis results exceeding NYSDEC TOGS AWQS are highlighted and in bold.
10 NT = Sample not tested for constituent
11. ~ = No standard or guidance value
12. J = The analyte was detected above the Method Detection Limit (MDL), but below the Reporting Limit (RL); therefore, the result is an estimated concentration.
13. U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.
14. D = Concentrations of aNTlyte was quantified from diluted analysis.
15. E = Concentrations of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
16. NA = Not applicable

Table 4
Fourth and Fifth Quarterly Groundwater Monitoring Results - QA/QC Samples
535 4th Avenue
Brooklyn, New York
Langan Project No. 170264501

Sample ID	NYSDEC TOGS Standards and Guidance Values - GA	FB01_090816		TB01_090816		TB02_090916		FB01_122016		TB01_122016		TB02_122116	
Lab Sample ID		16I0285-01		16I0285-02		16I0330-04		16L0844-01		16L0844-02		16L0909-03	
Sample Date		9/8/2016		9/8/2016		9/9/2016		12/20/2016		12/20/2016		12/21/2016	
Quarter		Q4						Q5					
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,1-Dichloroethane	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,1-Dichloroethylene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,2,4-Trimethylbenzene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,2-Dichlorobenzene	3	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,2-Dichloroethane	0.6	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	UJ
1,3,5-Trimethylbenzene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,3-Dichlorobenzene	3	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,4-Dichlorobenzene	3	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,4-Dioxane	~	40	U	40	U	40	U	40	U	40	U	40	U
2-Butanone	50	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Acetone	50	1.500	J	1	U	1	U	1.500		1	U	1.400	J
Benzene	1	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Carbon tetrachloride	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Chlorobenzene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Chloroform	7	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
cis-1,2-Dichloroethylene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Ethyl Benzene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Methyl tert-butyl ether (MTBE)	10	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Methylene chloride	5	1	U	1	U	1	U	1		1		2.200	U
Naphthalene	10	1	U	1	U	1	U	1	U	1	U	1.500	J
n-Butylbenzene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
n-Propylbenzene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
o-Xylene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
p- & m- Xylenes	5	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
sec-Butylbenzene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
tert-Butylbenzene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Tetrachloroethylene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	UJ
Toluene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
trans-1,2-Dichloroethylene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Trichloroethylene	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Vinyl Chloride	2	0.200	U	0.200	U	0.200	UJ	0.200	U	0.200	U	0.200	U
Xylenes, Total	5	0.600	U	0.600	U	0.600	U	0.600	U	0.600	U	0.600	U
Methane, Ethane & Ethylene (µg/l)													
Ethane	~	10	U	NT		NT		10	U	NT		NT	
Ethylene (Ethene)	~	10	U	NT		NT		10	U	NT		NT	
Methane	~	10	U	NT		NT		10	U	NT		NT	
Iron (µg/l)													
Total	~	22.200	U	NT		NT		43.8		NT		NT	
Dissolved	~	39.600		NT		NT		22.2	U	NT		NT	
General Chemistry (µg/l)													
Alkalinity	~	2,000	U	NT		NT		2000		NT		NT	
Chloride	250000	1,000	U	NT		NT		1000	U	NT		NT	
Nitrate	10000	211	D	NT		NT		NT		NT		NT	
Nitrite	1000	NT		NT		NT		36.9	U	NT		NT	
Sulfate	250000	2,000	U	NT		NT		2000	U	NT		NT	
Total Organic Carbon	~	2,310		NT		NT		2720		NT		NT	
General Chemistry (ppt)													
Salinity	~	0.00000	U	NT		NT		0.00000	U	NT		NT	

Notes:

1. Groundwater samples analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values.
2. QA/QC = Quality Assurance/Quality Control
3. Q4 = Fourth quarter of groundwater sampling
4. Q5 = Fifth quarter of groundwater sampling
5. µg/l = micrograms per liter
6. ppt = parts per trillion
7. NT = Sample not tested for constituent
8. D = Concentrations of analyte was quantified from diluted analysis.
9. J = The analyte was detected above the Method Detection Limit (MDL), but below the Reporting Limit (RL); therefore, the result is an estimated concentration.
10. U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.
11. ~ = No standard or guidance valuefor this constituent

APPENDIX A

GROUNDWATER SAMPLING FORMS

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW07**	**Job No. 170264501**
Date: 09/09/2016	**Weather: Sunny, 80's**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW07_090916
Well Depth (ft)	39.05
Screened Interval (ft)	-
Casing Elevation (msl)	56.71
Casing Diameter (in)	2
Depth to Water (ft)	32.3
Water Elevation (msl)	24.41
Casing Volume (gal)	1.1
PID Reading (ppm)	0.0

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	14:50
End Purge Time	15:05
Volume Purged (gal)	1

Sampling Information

Sampling Method	Bailer
Start Sampling Time	15:35
End Sampling Time	15:40
Depth Before Sampling (ft)	36.2
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
14:55	22.33	6.56	142	6.57	1,000	4.54	31.2	0.25
15:00	21.75	7.12	61	0.027	165	3.2	38.3	0.75
15:05	22.3	6.96	42	0.017	167	8.4	NA	1.00
15:06	well purged dry							

Notes/Remarks

Stablility	
PH - ± 0.1 unit	- Groundwater sampled via bailer
Specific Conductance - ± 3%	- Silty groundwater purged and sampled
Temperature - ± 3%	- Interface probe on the top of the pump
Dissolved Oxygen - ±10% above 0.5 mg/L	
Turbidity - ± 10% above 5 NTU	
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW12**	**Job No. 170264501**
Date: 09/09/2016	**Weather: Sunny, 80's**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW12_090916
Well Depth (ft)	22.3
Screened Interval (ft)	-
Casing Elevation (msl)	39.5
Casing Diameter (in)	2
Depth to Water (ft)	16.45
Water Elevation (msl)	23.05
Casing Volume (gal)	0.95
PID Reading (ppm)	0.0

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	7:45
End Purge Time	8:02
Volume Purged (gal)	0.75

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	12:30
End Sampling Time	12:40
Depth Before Sampling (ft)	17.3
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
7:50	18.32	6.9	-60	6.16	94.2	4.6	19.95	0.25
7:55	18.57	6.59	-82	6.13	77.6	3.83	NA	0.50
8:00	20.45	6.56	-113	6.22	65.6	2.63	NA	0.75
8:02	well purged dry							

Notes/Remarks

Stablility	
PH - ± 0.1 unit	- Groundwater sampled via bailer
Specific Conductance - ± 3%	- Silty groundwater during sampling
Temperature - ± 3%	- Interface probe on the top of the pump
Dissolved Oxygen - ±10% above 0.5 mg/L	- Vegetable oil-like odor
Turbidity - ± 10% above 5 NTU	- Oil droplets on purged groundwater (visible in the bucket)
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW13**	**Job No. 170264501**
Date: 09/08/2016	**Weather: Sunny, 80's**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW13_090816
Well Depth (ft)	25.2
Screened Interval (ft)	-
Casing Elevation (msl)	39.7
Casing Diameter (in)	2
Depth to Water (ft)	22.25
Water Elevation (msl)	17.45
Casing Volume (gal)	0.48
PID Reading (ppm)	0.5

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	13:38
End Purge Time	14:20
Volume Purged (gal)	1.75

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	14:22
End Sampling Time	14:50
Depth Before Sampling (ft)	22
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
13:40	19.11	6.82	-29	4.04	345	9.67	22.1	0.25
13:45	19.39	6.74	-95	4.08	340	5.17	NA	0.40
13:50	20.29	6.61	-88	4.03	188	3.53	NA	0.50
13:55	20.97	6.61	-89	3.96	177	2.87	NA	0.60
14:00	20.88	6.61	-90	4.04	150.0	2.74	NA	0.75
14:05	20.82	6.59	-91	4.08	128.0	2.64	NA	1.00
14:10	20.80	6.55	-90	4.06	30.0	2.60	NA	1.25
14:15	20.81	6.54	-92	4.04	32.0	2.70	NA	1.50
14:20	20.78	6.55	-91	4.07	37.0	2.80	NA	1.75

Notes/Remarks

Stablility	
PH - ± 0.1 unit	- Slow recharge
Specific Conductance - ± 3%	- Interface probe on the top of the pump
Temperature - ± 3%	
Dissolved Oxygen - ±10% above 0.5 mg/L	
Turbidity - ± 10% above 5 NTU	
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW14**	**Job No. 170264501**
Date: 09/08/2016	**Weather: Sunny, 80's**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW14_090816
Well Depth (ft)	24.41
Screened Interval (ft)	-
Casing Elevation (msl)	39.59
Casing Diameter (in)	2
Depth to Water (ft)	20.52
Water Elevation (msl)	19.07
Casing Volume (gal)	0.63
PID Reading (ppm)	0.0

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	11:15
End Purge Time	11:22
Volume Purged (gal)	<0.5

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	15:00
End Sampling Time	15:15
Depth Before Sampling (ft)	21.1
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
11:17	18.61	8.63	46	2.65	47.4	5.79	21.8	0.25
11:22	19.61	6.86	77	2.64	34.7	3.95	NA	<0.5
11:23	well purged dry							

Notes/Remarks

Stablility	
PH - ± 0.1 unit	- Slow recharge
Specific Conductance - ± 3%	- Interface probe on the top of the pump
Temperature - ± 3%	
Dissolved Oxygen - ±10% above 0.5 mg/L	
Turbidity - ± 10% above 5 NTU	
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW15**	**Job No. 170264501**
Date: 09/09/2016	**Weather: Sunny, 80's**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW15_090916
Well Depth (ft)	22.05
Screened Interval (ft)	-
Casing Elevation (msl)	39.29
Casing Diameter (in)	2
Depth to Water (ft)	16.7
Water Elevation (msl)	22.59
Casing Volume (gal)	0.87
PID Reading (ppm)	0.0

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	8:20
End Purge Time	8:35
Volume Purged (gal)	2

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	14:00
End Sampling Time	14:15
Depth Before Sampling (ft)	19.9
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
12:55	19.33	7.61	76	0.975	1000	8.19	19.9	0.25
13:00	17.28	7.14	112	0.814	964	6.90	NA	0.50
13:05	18.75	6.75	128	0.802	744	5.55	NA	0.75
13:10	19.71	6.70	134	0.807	664	4.91	NA	0.85
13:15	20.4	6.65	138	0.822	576	4.50	NA	0.95
13:20	21.78	6.69	143	0.890	271	7.25	NA	1.10
13:25	21.94	6.71	143	0.892	243	5.46	NA	1.25
13:30	21.98	6.70	144	0.890	225	5.20	NA	1.35
13:35	21.95	6.65	143	0.878	230	4.92	NA	1.50
13:40	21.94	6.68	143	0.890	235	3.27	NA	1.65
13:45	21.96	6.70	144	0.892	245	3.20	NA	1.75
13:50	22.03	6.69	143	0.876	237	1.75	NA	1.9
13:55	22.13	6.72	144	0.897	323	2.00	NA	2

Notes/Remarks

Stablility	
PH - ± 0.1 unit	- Dilty groundwater during sampling
Specific Conductance - ± 3%	- Interface probe on the top of the pump
Temperature - ± 3%	- Yellowish color of purged groundwater
Dissolved Oxygen - ±10% above 0.5 mg/L	- Slow recharge
Turbidity - ± 10% above 5 NTU	
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW16**	**Job No. 170264501**
Date: 09/08/2016	**Weather: Sunny, 80's**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW16_090816
Well Depth (ft)	25.02
Screened Interval (ft)	-
Casing Elevation (msl)	39.61
Casing Diameter (in)	2
Depth to Water (ft)	20.78
Water Elevation (msl)	18.83
Casing Volume (gal)	0.69
PID Reading (ppm)	0.0

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	9:15
End Purge Time	10:15
Volume Purged (gal)	10.5

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	10:17
End Sampling Time	10:35
Depth Before Sampling (ft)	20.7
Number Bottles Collected	30

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
9:15	17.68	6.21	127	1.43	287	7.22	21.30	0.50
9:20	17.25	6.32	44	1.41	17.3	5.48	21.40	1.50
9:25	17.88	6.46	-11	1.39	3.3	4.06	20.95	2.25
9:30	18.39	6.48	-24	1.42	3.7	3.47	20.95	2.50
9:35	18.82	6.53	-36	1.42	5.1	3.03	21.10	3.25
9:40	16.70	6.59	-49	1.46	0.6	2.44	21.30	3.75
9:45	16.68	6.59	-50	1.46	0.4	2.38	21.10	4.50
9:50	16.68	6.60	-52	1.47	0.3	2.28	20.80	5.50
9:55	16.63	6.58	-50	1.46	0.3	2.26	20.70	6.25
10:00	16.60	6.58	-51	1.46	0.0	2.20	20..75	7.75
10:05	16.50	6.59	-52	1.48	0.0	2.10	20.70	8.50
10:10	16.47	6.58	-50	1.46	0.0	2.13	20.90	9.25
10:15	16.45	6.59	-52	1.47	0.0	2.1	20.7	10.5

Notes/Remarks

Stablility
PH - ± 0.1 unit
Specific Conductance - ± 3%
Temperature - ± 3%
Dissolved Oxygen - ±10% above 0.5 mg/L
Turbidity - ± 10% above 5 NTU
ORP/Eh - ±10 millivolts
Maximum flow rate - <0.5 L/m or 0.13 gpm
Maximum drawdown - <0.33 feet

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW05**	**Job No. 170264501**
Date: 12/20/2016	**Weather: Partly Cloudy, 30s**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW05_122016
Well Depth (ft)	41.55
Screened Interval (ft)	-
Casing Elevation (msl)	56.71
Casing Diameter (in)	2
Depth to Water (ft)	29.35
Water Elevation (msl)	27.36
Casing Volume (gal)	1.1
PID Reading (ppm)	1.2

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	13:45
End Purge Time	14:15
Volume Purged (gal)	3.75

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	14:30
End Sampling Time	14:45
Depth Before Sampling (ft)	37.2
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
13:45	12.35	7.41	31	1.95	6	5.72	29.35	0.25
13:50	16.36	6.89	44	1.530	1,000	0.96	34.65	1.20
13:55	16.78	6.77	56	1.390	678	1.89	35.5	1.70
14:00	17.01	6.81	55	1.47	553.0	1.47	36.18	2.50
14:05	16.4	6.86	54	1.61	356.0	0.57	36.70	2.75
14:10	16.35	6.87	54	1.65	253.0	0.48	37.15	3.20
14:15	18.70	6.81	58	1.81	260.0	0.66	37.20	3.75

Notes/Remarks

Stablility	
PH - ± 0.1 unit	- Well purged dry at 14:20
Specific Conductance - ± 3%	- Groundwater sampled with a monsoon pump at 1430 <MW05_122016>
Temperature - ± 3%	- Interface probe on the top of the pump
Dissolved Oxygen - ±10% above 0.5 mg/L	
Turbidity - ± 10% above 5 NTU	
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW07**	**Job No. 170264501**
Date: 12/20/16-12/21/16	**Weather: Partly Cloudy, 30s**	**Sampling Personnel: Elizabeth Adkins**

Well Information

Sample ID	MW07_122116
Well Depth (ft)	39.2
Screened Interval (ft)	-
Casing Elevation (msl)	56.71
Casing Diameter (in)	2
Depth to Water (ft)	32.18
Water Elevation (msl)	24.53
Casing Volume (gal)	1.1
PID Reading (ppm)	0.4

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	15:12
End Purge Time	15:17
Volume Purged (gal)	1

Sampling Information

Sampling Method	Bailer
Start Sampling Time	9:45
End Sampling Time	9:55
Depth Before Sampling (ft)	32
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
15:12	15.13	6.97	109	7.02	229	2.07	32.1	0.50
15:17	14.84	7.40	102	7.520	200	1.95	35.72	1.00

Notes/Remarks

Stablility

PH - ± 0.1 unit
Specific Conductance - ± 3%
Temperature - ± 3%
Dissolved Oxygen - ±10% above 0.5 mg/L
Turbidity - ± 10% above 5 NTU
ORP/Eh - ±10 millivolts
Maximum flow rate - <0.5 L/m or 0.13 gpm
Maximum drawdown - <0.33 feet

- Well purged dry at 15:17 on 12/20/2016
- Groundwater sampled using a bailer on 12/21/2016 <MW07_122116>
- Interface probe on the top of the pump

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW12**	**Job No. 170264501**
Date: 12/20/16	**Weather: Partly Cloudy, 30s**	**Sampling Personnel: Elizabeth Adkins**

Well Information

Sample ID	MW12_122016
Well Depth (ft)	22.3
Screened Interval (ft)	-
Casing Elevation (msl)	39.5
Casing Diameter (in)	2
Depth to Water (ft)	16.05
Water Elevation (msl)	23.45
Casing Volume (gal)	0.95
PID Reading (ppm)	4.2

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	11:00
End Purge Time	11:05
Volume Purged (gal)	1.25

Sampling Information

Sampling Method	Bailer
Start Sampling Time	12:45
End Sampling Time	14:55
Depth Before Sampling (ft)	19
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
11:00	14.2	6.79	-85	4.58	87.1	1.89	19	1.00
11:03	14.34	6.87	-124	4.74	87.1	0.46	19	1.25

Notes/Remarks

Stablility	
PH - ± 0.1 unit	
Specific Conductance - ± 3%	- Well purged dry at 11:05 on 12/20/2016 using Monsoon pump
Temperature - ± 3%	- Groundwater sampled using a bailer on 12/20/2016 <MW12_122016>
Dissolved Oxygen - ±10% above 0.5 mg/L	- Interface probe on the top of the pump
Turbidity - ± 10% above 5 NTU	- Vegetable oil-like odor
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW13**	**Job No. 170264501**
Date: 12/20/16	**Weather: Partly Cloudy, 30s**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW13_122016
Well Depth (ft)	25.15
Screened Interval (ft)	-
Casing Elevation (msl)	39.7
Casing Diameter (in)	2
Depth to Water (ft)	22.23
Water Elevation (msl)	17.47
Casing Volume (gal)	0.48
PID Reading (ppm)	17.3

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	11:40
End Purge Time	11:45
Volume Purged (gal)	1

Sampling Information

Sampling Method	Bailer
Start Sampling Time	13:05
End Sampling Time	13:15
Depth Before Sampling (ft)	24.2
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
11:40	14.15	7.06	-120	4.14	252	1.53	24.2	0.50
11:45	14.00	7.06	-125	4.17	315	0.92	24.2	1.00

Notes/Remarks

Stablility	
PH - ± 0.1 unit	
Specific Conductance - ± 3%	- Well purged dry at 11:45 on 12/20/2016 using Monsoon pump
Temperature - ± 3%	- Groundwater sampled using a bailer on 12/20/2016 <MW13_122016>
Dissolved Oxygen - ±10% above 0.5 mg/L	- Interface probe on the top of the pump
Turbidity - ± 10% above 5 NTU	
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW14**	**Job No. 170264501**
Date: 12/20/2016 - 12/21/2016	**Weather: Cloudy, 30s**	**Sampling Personnel: Elizabeth Adkins**

Well Information

Sample ID	MW14_122116
Well Depth (ft)	24.41
Screened Interval (ft)	-
Casing Elevation (msl)	39.59
Casing Diameter (in)	2
Depth to Water (ft)	20.52
Water Elevation (msl)	19.07
Casing Volume (gal)	0.63
PID Reading (ppm)	0.5

Purging Information

Purging Method	Bailer
Purging Rate (l/m; gpm)	
Start Purge Time	12/20/2016 9:45
End Purge Time	12/20/2016 9:50
Volume Purged (gal)	0.75

Sampling Information

Sampling Method	Bailer
Start Sampling Time	12/21/2016 9:00
End Sampling Time	12/21/2016 13:00
Depth Before Sampling (ft)	21.1
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
Purged dry								

Notes/Remarks

Stablility
PH - ± 0.1 unit
Specific Conductance - ± 3%
Temperature - ± 3%
Dissolved Oxygen - ±10% above 0.5 mg/L
Turbidity - ± 10% above 5 NTU
ORP/Eh - ±10 millivolts
Maximum flow rate - <0.5 L/m or 0.13 gpm
Maximum drawdown - <0.33 feet

- Well purged dry at 9:45 on 12/20/2016 using Bailer
- Groundwater sampled using a bailer on 12/21/2016 <MW14_122016>
- Slow Recharge

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW15**	**Job No. 170264501**
Date: 12/20/2016	**Weather: Partly Cloudy, 30s**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW15_122016
Well Depth (ft)	21.65
Screened Interval (ft)	-
Casing Elevation (msl)	39.29
Casing Diameter (in)	2
Depth to Water (ft)	16.5
Water Elevation (msl)	22.79
Casing Volume (gal)	0.87
PID Reading (ppm)	0.0

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.5 l/m
Start Purge Time	10:40
End Purge Time	10:50
Volume Purged (gal)	1

Sampling Information

Sampling Method	Bailer
Start Sampling Time	11:30
End Sampling Time	11:40
Depth Before Sampling (ft)	19.9
Number Bottles Collected	10

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
10:40	14.82	7	-15	0.728	562	5.32	NA	0.50
10:45	13.94	6.94	26	0.000	231	10.05	NA	1.00

Notes/Remarks

Stablility	
PH - ± 0.1 unit	- Well purged dry at 10:50 on 12/20/2016 using Monsoon pump
Specific Conductance - ± 3%	- Silty groundwater during sampling
Temperature - ± 3%	- Interface probe on the top of the pump
Dissolved Oxygen - ±10% above 0.5 mg/L	- Yellowish color of purged groundwater
Turbidity - ± 10% above 5 NTU	- Slow recharge
ORP/Eh - ±10 millivolts	
Maximum flow rate - <0.5 L/m or 0.13 gpm	
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 535 4th Ave, Brooklyn, NY	**Well#/Location: MW16**	**Job No. 170264501**
Date: 12/20/2016	**Weather: Partly Cloudy, 30s**	**Sampling Personnel: Monika Boguszewski**

Well Information

Sample ID	MW16_122016
Well Depth (ft)	25.1
Screened Interval (ft)	-
Casing Elevation (msl)	39.61
Casing Diameter (in)	2
Depth to Water (ft)	20.3
Water Elevation (msl)	19.31
Casing Volume (gal)	0.69
PID Reading (ppm)	1.2

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	0.15
Start Purge Time	8:30
End Purge Time	9:00
Volume Purged (gal)	9

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	9:00
End Sampling Time	9:45
Depth Before Sampling (ft)	21.8
Number Bottles Collected	40

	Parameters							
Sample Time	**Temp (◦C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
8:30	7.09	5.79	200	1.49	204	4.59	21.35	0.25
8:35	16.20	5.81	-31	1.59	81.4	0.76	21.45	1.00
8:40	16.67	5.81	54	1.63	15.7	0.47	21.70	2.50
8:45	16.75	5.86	-82	1.62	13.0	0.4	21.80	4.00
8:50	16.77	5.95	-86	1.63	9.6	0.32	21.80	5.75
8:55	16.79	6.05	-88	1.63	5.3	0.3	21.80	7.50
9:00	16.80	6.25	-90	1.64	3.8	0.71	21.80	9.00

Notes/Remarks

Stablility	
PH - ± 0.1 unit	
Specific Conductance - ± 3%	- Well purged on 12/20/2016 using Monsoon pump
Temperature - ± 3%	- No sheen
Dissolved Oxygen - ±10% above 0.5 mg/L	- Vegetable oil-like odors
Turbidity - ± 10% above 5 NTU	- Interface probe on the top of the pump
ORP/Eh - ±10 millivolts	- Collected 30 bottles of <MW16_122016> for regular analyses and MSMSD at 9:00
Maximum flow rate - <0.5 L/m or 0.13 gpm	- Collected DUP01_122016 at 9:30
Maximum drawdown - <0.33 feet	

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

5/23/2016			
Well ID#	**TOC (feet NAVD88)**	**DTW (feet bgs)**	**GW elev (feet NAVD88)**
MW05	53.35	NA	NA
MW07	56.71	32.05	24.66
MW12	39.5	16.6	22.9
MW13	39.7	21.76	17.94
MW14	39.59	19.95	19.64
MW15	39.29	16.12	23.17
MW16	39.61	20.4	19.21

APPENDIX B

DATA USIBILITY SUMMARY REPORTS

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Monika Boguszewski, Langan Senior Staff Scientist

From: Emily Strake, Langan Senior Project Chemist/Risk Assessor

Date: October 31, 2016

Re: Data Usability Summary Report
For 535 4th Avenue
Brooklyn, New York
Groundwater Samples Collected September 2016
Langan Project No.: 170264501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected in September 2016 by Langan Engineering and Environmental Services ("Langan") at 535 4th Avenue located in Brooklyn, New York. The samples were analyzed by York Analytical Laboratories, Inc. (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), methane, ethane, ethane, total and dissolved iron, anions, total alkalinity, salinity, and total organic carbon (TOC) by the methods below:

- VOCs by SW-846 Method 8260C
- Methane, ethane and ethene by RSK-175 (GC Headspace)
- Total and dissolved iron by SW-846 Method 6010C
- Anions chloride, nitrite, and sulfate by USEPA 300.0
- Total alkalinity by Standard Method 2320B
- Salinity by Standard Method 2520B
- TOC by Standard Method 5310C

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

TABLE 1: SAMPLE SUMMARY

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
16I0285	16I0285-01	DUP01_090816	9/8/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16I0285	16I0285-02	FB01_090816	9/8/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC

SDG	Lab Sample ID	Client Sample ID	Sample Date	Analytical Parameters
16I0285	16I0285-03	MW13_090816	9/8/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16I0285	16I0285-04	MW14_090816	9/8/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16I0285	16I0285-05	MW16_090816	9/8/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16I0285	16I0285-06	TB01_090816	9/8/2016	VOCs
16I0330	16I0330-01	MW07_090916	9/9/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16I0330	16I0330-02	MW12_090916	9/9/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16I0330	16I0330-03	MW15_090916	9/9/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16I0330	16I0330-04	TB02_090916	9/9/2016	VOCs

VALIDATION OVERVIEW

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34a, "Trace Volatile Data Validation" (July 2015, Revision 0), USEPA Region II SOP #HW-3a, "ICP-AES Data Validation" (July 2015, Revision 0), the USEPA Contract Laboratory Program "National Functional Guidelines for Superfund Organic Methods Data Review" (USEPA-540R-014-002, August 2014), USEPA "National Functional Guidelines for Inorganic Data Review" (USEPA-540-R-013-001, August 2014) and the specifics of the methods employed.

Validation includes evaluation of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction, sample digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, CRDL standards, ICP interference check samples, matrix spike/spike duplicate recoveries, interference check samples, laboratory duplicates, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

R – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

TABLE 2: VALIDATOR-APPLIED QUALIFICATION

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
DUP01_090816	Anions	Sulfate (As SO4)	14808-79-8	J
DUP01_090816	VOCs	Acetone	67-64-1	U (3)
DUP01_090816	Metals	Dissolved Iron	7439-89-6	U (0.221)
DUP01_090816	TOC	Total Organic Carbon	TOC	J
DUP01_090816	VOCs	Methane	74-82-8	J
MW13_090816	Anions	Chloride (As Cl)	16887-00-6	J
MW13_090816	Anions	Nitrogen, Nitrate (As N)	14797-55-8	U (0.209)
MW13_090816	VOCs	Acetone	67-64-1	J
MW14_090816	Anions	Sulfate (As SO4)	14808-79-8	J
MW14_090816	TOC	Total Organic Carbon	TOC	U (3.44)
MW14_090816	VOCs	Acetone	67-64-1	U (3.2)
MW16_090816	Anions	Sulfate (As SO4)	14808-79-8	J
MW16_090816	Anions	Nitrogen, Nitrate (As N)	14797-55-8	J
MW16_090816	TOC	Total Organic Carbon	TOC	U (3.96)

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
MW16_090816	VOCs	Acetone	67-64-1	U (1.5)
MW16_090816	VOCs	Methane	74-82-8	J
MW07_090916	Anions	Chloride (As Cl)	16887-00-6	J
MW07_090916	VOCs	Vinyl Chloride	75-01-4	UJ
MW12_090916	Anions	Chloride (As Cl)	16887-00-6	J
MW12_090916	VOCs	Vinyl Chloride	75-01-4	J
MW15_090916	Anions	Sulfate (As SO4)	14808-79-8	J
MW15_090916	VOCs	Vinyl Chloride	75-01-4	UJ
TB02_090916	VOCs	Vinyl Chloride	75-01-4	UJ

MAJOR DEFICIENCIES:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

MINOR DEFICIENCIES:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

Field blank sample FB01_090816 displayed a positive detection for acetone at 1.5 µg/L. The associated positive detections are qualified as "U" at the sample concentration.

Sample MW13_090816 displayed a positive detection for acetone greater than the range of the instrument calibration. The associated sample result is qualified as "J."

The continuing calibration analyzed on 9/15/16 at 7:37 displayed a %D greater than the control limit for vinyl chloride at 30.8%. The associated sample results are qualified as estimated.

Nitrogen by Standard Method SM4500:

Field blank sample FB01_090816 displayed a positive detection for nitrate at 0.211 mg/L. The associated positive detections are qualified as "U" at the sample concentration.

TOC by Standard Method SM5310C:

Field blank sample FB01_090816 displayed a positive detection for TOC at 2.31 mg/L. The associated positive detections are qualified as "U" at the sample concentration.

Anions by USEPA Method 300.0:

Samples DUP01_090816, MW13_090816, MW14_090816, and MW16_090816 displayed positive detections greater than the linear range of the instrument calibration for sulfate and chloride. The associated sample results re qualified as "J."

MS sample MW16_090816 displayed recoveries less than the lower control limit for chloride, nitrate and sulfate at -945%, -52.1%, and -2340%, respectively. The sample result for nitrate is qualified as "J."

Samples MW07_090916, MW12_090916, and MW15_090916 displayed positive detections greater than the linear range of the instrument calibration for sulfate and chloride. The associated sample results re qualified as "J."

Total and Dissolved Iron by SW-846 Method 6010B:

Field blank sample FB01_090816 displayed a positive detection for dissolved iron at 0.0396 mg/L. The associated field duplicate sample result is qualified as "U".

OTHER DEFICIENCIES:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

MS/SD sample MW16_090816 displayed a RPD greater than the control limit for 1,4-dioxane at 46.9%. The associated sample results were non-detect; on the basis of professional judgment, qualification is not necessary.

LCS/LCSD BI60693 displayed a RPD greater than the control limit for 1,4-dioxane at 37.6%. The associated sample results were non-detect; on the basis of professional judgment, qualification is not necessary.

MS/SD sample BI60658 displayed recoveries and RPDs outside of control limits for 1,1,1-trichloroethane, 1,1-dichloroethene, 1,3-dichlorobenzene, 1,4-dioxane, carbon tetrachloride, chlorobenzene, n-butylbenzene, n-propylbenzene, sec-butylbenzene, tert-butylbenzene,

tetrachloroethene, trichloroethene, vinyl chloride and trans-1,2-dichloroethene. The spiked volume did not originate from the site; qualification is not necessary.

LCS/LCSD BI60693 displayed a RPD greater than the control limit for acetone at 37.6%. There are no associated investigative sample results; qualification is not necessary.

COMMENTS:

One field duplicate and parent sample pair was collected (DUP01_090816 and MW16_090816). For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. Methane and TOC did not meet the precision criteria.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. The data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake
Senior Project Chemist/Risk Assessor

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ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Monika Boguszewski, Langan Senior Staff Scientist

From: Emily Strake, Langan Senior Project Chemist/Risk Assessor

Date: March 20, 2017

Re: Data Usability Summary Report
For 535 4th Avenue
Brooklyn, New York
Groundwater Samples Collected December 2016
Langan Project No.: 170264501

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected in December 2016 by Langan Engineering and Environmental Services ("Langan") at 535 4th Avenue located in Brooklyn, New York. The samples were analyzed by York Analytical Laboratories, Inc. (NYSDOH ELAP registration # 10854) for volatile organic compounds (VOCs), methane, ethane, ethane, total and dissolved iron, anions, total alkalinity, salinity, and total organic carbon (TOC) by the methods below:

- VOCs by SW-846 Method 8260C
- Methane, ethane and ethene by RSK-175 (GC Headspace)
- Total and dissolved iron by SW-846 Method 6010C
- Anions chloride, nitrite, and sulfate by USEPA 300.0
- Total alkalinity by Standard Method 2320B
- Salinity by Standard Method 2520B
- TOC by Standard Method 5310C

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

TABLE 1: SAMPLE SUMMARY

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
16L0909	16L0909-01	MW07_122116	12/21/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16L0909	16L0909-02	MW14_122116	12/21/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16L0909	16L0909-03	TB02_122116	12/21/2016	VOCs

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
16L0844	16L0844-01	FB01_122016	12/20/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16L0844	16L0844-02	TB01_122016	12/20/2016	VOCs
16L0844	16L0844-03	MW16_122016	12/20/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16L0844	16L0844-04	MW15_122016	12/20/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16L0844	16L0844-05	MW12_122016	12/20/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16L0844	16L0844-06	MW13_122016	12/20/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16L0844	16L0844-07	DUP01_122016	12/20/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC
16L0844	16L0844-08	MW05_122016	12/20/2016	VOCs, Headspace, Iron, Anions, Total alkalinity, Salinity, and TOC

VALIDATION OVERVIEW

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34a, "Trace Volatile Data Validation" (July 2015, Revision 0), USEPA Region II SOP #HW-3a, "ICP-AES Data Validation" (September 2016, Revision 1), the USEPA Contract Laboratory Program "National Functional Guidelines for Organic Superfund Methods Data Review" (USEPA-540R-2017-002, January 2017), USEPA "National Functional Guidelines for Inorganic Superfund Methods Data Review" (USEPA-540-R-2017-001, January 2017) and the specifics of the methods employed.

Validation includes evaluation of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction, sample digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, CRDL standards, ICP interference check samples, matrix spike/spike duplicate recoveries, interference check samples, laboratory duplicates, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

R – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.

U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

TABLE 2: VALIDATOR-APPLIED QUALIFICATION

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
MW07_122116	E300.0	Chloride (As Cl)	16887-00-6	J
MW07_122116	SW8260B	1,2-Dichloroethane	107-06-2	UJ
MW07_122116	SW8260B	Tetrachloroethylene (PCE)	127-18-4	J
MW07_122116	SW8260B	Acetone	67-64-1	U (1.7)
MW14_122116	E300.0	Chloride (As Cl)	16887-00-6	J
MW14_122116	SW8260B	1,2-Dichloroethane	107-06-2	UJ
MW14_122116	SW8260B	Tert-Butyl Methyl Ether	1634-04-4	J
MW14_122116	SW8260B	Naphthalene	91-20-3	J
MW14_122116	SW8260B	Tetrachloroethylene (PCE)	127-18-4	J
TB02_122116	SW8260B	1,2-Dichloroethane	107-06-2	UJ
TB02_122116	SW8260B	Tetrachloroethylene (PCE)	127-18-4	UJ
TB02_122116	SW8260B	Acetone	67-64-1	J

Client Sample ID	*Analysis*	*Analyte*	*CAS #*	*Validator Qualifier*
TB02_122116	SW8260B	Naphthalene	91-20-3	J
DUP01_122016	E300.0	Nitrogen, Nitrite	14797-65-0	U (0.055)
DUP01_122016	E300.0	Sulfate (As SO4)	14808-79-8	J
DUP01_122016	M2720	Methane	74-82-8	J
DUP01_122016	SM5310C	Total Organic Carbon	TOC	U (4.49)
DUP01_122016	SW8260B	Acetone	67-64-1	U (7.9)
FB01_122016	E300.0	Nitrogen, Nitrite	14797-65-0	U (0.0369)
FB01_122016	SW8260B	Methylene Chloride	75-09-2	U (2.1)
MW05_122016	E300.0	Sulfate (As SO4)	14808-79-8	J
MW05_122016	SM5310C	Total Organic Carbon	TOC	U (5.19)
MW05_122016	SW8260B	Acetone	67-64-1	U (2.1)
MW12_122016	E300.0	Nitrogen, Nitrite	14797-65-0	U (0.036)
MW12_122016	E300.0	Chloride (As Cl)	16887-00-6	J
MW13_122016	E300.0	Nitrogen, Nitrite	14797-65-0	U (0.0366)
MW13_122016	E300.0	Chloride (As Cl)	16887-00-6	J
MW15_122016	E300.0	Nitrogen, Nitrite	14797-65-0	U (0.0368)
MW15_122016	E300.0	Sulfate (As SO4)	14808-79-8	J
MW15_122016	SM5310C	Total Organic Carbon	TOC	U (3.64)
MW15_122016	SW8260B	Acetone	67-64-1	U (1.2)
MW16_122016	E300.0	Nitrogen, Nitrite	14797-65-0	U (0.022)
MW16_122016	E300.0	Sulfate (As SO4)	14808-79-8	J
MW16_122016	M2720	Methane	74-82-8	J
MW16_122016	SM5310C	Total Organic Carbon	TOC	U (5.53)
MW16_122016	SW6010B	Iron	7439-89-6	J
MW16_122016	SW8260B	Acetone	67-64-1	U (4.8)

MAJOR DEFICIENCIES:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

MINOR DEFICIENCIES:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

LCS/LCSD BL61309 displayed recoveries greater than the upper control limit for 1,2-dichloroethane (142%), MTBE 142%), and naphthalene (160% and 170%). In addition, the LCS/LCSD RPD for acetone was greater than the control limit at 31.3%. The associated positive detections are qualified as "J."

The continuing calibration analyzed on 12/27/16 at 11:19 displayed %Ds greater than the control limit for 1,2-dichloroethane at 31.8% and tetrachloroethene at 27.3%. The associated sample results are qualified as estimated.

Trip blank sample TB02_122116 displayed positive detections for acetone (1.4 ug/L), methylene chloride (2.2 ug/L), and naphthalene (1.5 ug/L). The associated positive detections are qualified as "U" at the higher of the sample concentration and the reporting limit.

Trip blank sample TB01_122016 displayed a positive detection for methylene chloride at 2.5 ug/L. The associated field blank sample result is qualified as "U" at the sample concentration.

Field blank sample FB01_122016 displayed a positive detection for acetone at 2.3 ug/L. The associated positive detections are qualified as "U" at the sample concentration.

Chloride by EPA Method 300.0:

Sample MW-07_122116 displayed a positive detection greater than the range of the instrument calibration. The associated sample result is qualified as "J."

SRM BL61248 displayed a recovery greater than the upper control limit at 111%. The associated positive detections are qualified as "J."

Samples DUP01_122016, MW05_122016, MW12_122016, MW13_122016, MW15_122016, and MW16_122016 displayed positive detections greater than the range of the instrument calibration. The associated sample results are qualified as "J."

Sulfate by EPA Method 300.0:

Samples DUP01_122016, MW05_122016, MW12_122016, MW13_122016, MW15_122016 and MW16_122016 displayed positive detections greater than the range of the instrument calibration. The associated sample results are qualified as "J."

Nitrogen by Standard Method SM4500:

Field blank sample FB01_122016 displayed a positive detection for nitrite nitrogen at 0.0369 mg/L. The associated positive detections are qualified as "U" at the sample concentration.

TOC by Standard Method SM5310C:

Field blank sample FB01_122016 displayed a positive detection for TOC at 2.72 mg/L. The associated positive detections are qualified as "U" at the sample concentration.

Total and Dissolved Iron by SW-846 Method 6010C:

Laboratory duplicate sample MW16_122016 displayed a RPD greater than the control limit for total iron at 24.1%. The associated positive detection is qualified as "J."

OTHER DEFICIENCIES:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

MS/SD sample MW16_122016 displayed a recovery greater than the upper control limit for PCE at 215% and 263%. In addition, the MS/SD displayed recoveries less than the lower control limit for acetone, cis-1,2-dichloroethene, n-butylbenzene, n-propylbenzene, sec-butylbenzene, and tert-butylbenzene. MS/SD RPDs were greater than the control limit for 2-butanone, acetone, naphthalene, n-butylbenzene, n-propylbenzene, sec-butylbenzene, and tert-butylbenzene. Data is not qualified on the basis of MS/SD recoveries or RPDs alone.

Alkalinity by Standard Method SM2320B:

Field blank sample FB01_122016 displayed a positive detection for alkalinity at 2 mg/L. The associated positive detections were orders of magnitude greater than the blank amount; qualification is not necessary.

Total and Dissolved Iron by SW-846 Method 6010C:

Field blank sample FB01_122016 displayed a positive detection for total iron at 0.0438 mg/L. The associated positive detections were orders of magnitude greater than the blank amount; qualification is not necessary.

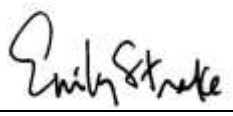
COMMENTS:

One field duplicate and parent sample pair was collected (DUP01_122016 and MW16_122016). For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. Methane did not meet the precision criteria.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. The data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Emily Strake, CEP
Senior Project Chemist/Risk Assessor

APPENDIX C

LABORATORY ANALYTICAL REPORTS

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Brian Gochenaur

Report Date: 09/16/2016
Client Project ID: 170264501 535 4th Ave Brooklyn NY
York Project (SDG) No.: 16I0285

Report Date: 09/16/2016
Client Project ID: 170264501 535 4th Ave Brooklyn NY
York Project (SDG) No.: 16I0285

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Brian Gochenaur

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on September 09, 2016 and listed below. The project was identified as your project: **170264501 535 4th Ave Brooklyn NY**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
16I0285-01	FB01_090816	Water	09/08/2016	09/09/2016
16I0285-02	TB01_090816	Water	09/08/2016	09/09/2016
16I0285-03	MW16_090816	Water	09/08/2016	09/09/2016
16I0285-04	MW14_090816	Water	09/08/2016	09/09/2016
16I0285-05	MW13_090816	Water	09/08/2016	09/09/2016
16I0285-06	DUP01_090816	Water	09/08/2016	09/09/2016

General Notes for York Project (SDG) No.: 16I0285

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By: 

Date: 09/16/2016

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: FB01_090816 **York Sample ID:** 16I0285-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 12:00 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
78-93-3	2-Butanone	ND		ug/L	0.20	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
67-64-1	**Acetone**	**1.5**	CCV-E, J	ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:30	BK

Sample Information

Client Sample ID: FB01_090816 **York Sample ID:** 16I0285-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 12:00 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 12:30	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 12:30	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:30	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:30	BK
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:30	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:30	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:30	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:30	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:30	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 08:51	09/16/2016 12:30	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*103 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.3 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*104 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	* Methane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 12:56	RB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 12:56	RB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 12:56	RB

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	Iron	ND		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/14/2016 10:30	09/14/2016 17:32	KV

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Information

Client Sample ID: FB01_090816 **York Sample ID:** 16I0285-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 12:00 pm	09/09/2016

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.0396**		mg/L	0.0222	0.0222	1	EPA 6010C	09/13/2016 10:02	09/13/2016 16:40	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	Chloride	ND		mg/L	0.138	1.00	2	EPA 300.0	09/09/2016 22:59	09/09/2016 22:59	n.a.
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrate as N

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-55-8	**Nitrate as N**	**0.211**		mg/L	0.0240	0.100	2	EPA 300.0	09/09/2016 22:59	09/09/2016 22:59	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sulfate as SO4

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	Sulfate	ND		mg/L	0.172	2.00	2	EPA 300.0	09/09/2016 22:59	09/09/2016 22:59	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	ND		mg/L	2.00	2.00	1	SM 2320B	09/12/2016 09:54	09/12/2016 16:52	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	09/15/2016 16:51	09/16/2016 15:52	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**2.31**		mg/L	1.00	1.00	1	SM 5310C	09/15/2016 12:48	09/16/2016 14:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: TB01_090816 **York Sample ID:** 16I0285-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 12:00 am	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
78-93-3	2-Butanone	ND		ug/L	0.20	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 12:58	BK

Sample Information

Client Sample ID: TB01_090816 **York Sample ID:** 16I0285-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 12:00 am	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 12:58	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 12:58	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:58	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:58	BK
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:58	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:58	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:58	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:58	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 12:58	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 08:51	09/16/2016 12:58	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*101 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*100 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*107 %*	*79-122*

Sample Information

Client Sample ID: MW16_090816 **York Sample ID:** 16I0285-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 10:17 am	09/09/2016

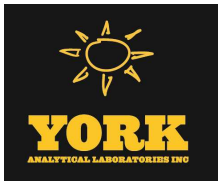
Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:49	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:49	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:49	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:49	BK



Sample Information

Client Sample ID: MW16_090816 **York Sample ID:** 16I0285-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 10:17 am	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
78-93-3	2-Butanone	ND		ug/L	0.20	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
67-64-1	**Acetone**	**1.5**	CCV-E, J	ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
67-66-3	**Chloroform**	**0.23**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
156-59-2	**cis-1,2-Dichloroethylene**	**19**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854	09/16/2016 14:49	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854	09/16/2016 14:49	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:49	BK

Sample Information

Client Sample ID: MW16_090816 **York Sample ID:** 16I0285-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 10:17 am	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**83**	ICV-E	ug/L	0.20	0.50	1	EPA 8260C	09/15/2016 08:51	09/16/2016 14:49	BK
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C	09/15/2016 08:51	09/16/2016 14:49	BK
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	09/15/2016 08:51	09/16/2016 14:49	BK
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
79-01-6	**Trichloroethylene**	**4.4**		ug/L	0.20	0.50	1	EPA 8260C	09/15/2016 08:51	09/16/2016 14:49	BK
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C	09/15/2016 08:51	09/16/2016 14:49	BK
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C	09/15/2016 08:51	09/16/2016 14:49	BK
								Certifications: CTDOH,NJDEP			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*102 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*99.9 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*106 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**600**		ug/L	100	100	10	GC/Headspace	09/16/2016 12:32	09/16/2016 13:03	RB
								Certifications:			
74-84-0	* Ethane	ND		ug/L	100	100	10	GC/Headspace	09/16/2016 12:32	09/16/2016 13:03	RB
								Certifications:			
74-85-1	* Ethylene (Ethene)	ND		ug/L	100	100	10	GC/Headspace	09/16/2016 12:32	09/16/2016 13:03	RB
								Certifications:			

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**1.94**		mg/L	0.0222	0.0222	1	EPA 6010C	09/14/2016 10:30	09/14/2016 17:37	KV
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Iron, Dissolved by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	Iron	ND		mg/L	0.0222	0.0222	1	EPA 6010C	09/13/2016 10:02	09/13/2016 14:40	KV
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW16_090816 **York Sample ID:** 16I0285-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 10:17 am	09/09/2016

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**94.7**		mg/L	0.690	5.00	10	EPA 300.0	09/13/2016 10:53	09/13/2016 10:53	AD
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrate as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-55-8	**Nitrate as N**	**5.36**		mg/L	0.0120	0.0500	1	EPA 300.0	09/09/2016 18:01	09/09/2016 18:01	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**235**		mg/L	0.860	10.0	10	EPA 300.0	09/13/2016 10:53	09/13/2016 10:53	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**416**		mg/L	2.00	2.00	1	SM 2320B	09/12/2016 09:54	09/12/2016 16:52	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	09/15/2016 16:51	09/16/2016 15:52	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**3.96**		mg/L	1.00	1.00	1	SM 5310C	09/15/2016 12:48	09/16/2016 14:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW14_090816 **York Sample ID:** 16I0285-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 3:00 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
78-93-3	2-Butanone	ND		ug/L	0.20	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
67-64-1	**Acetone**	**3.2**	CCV-E	ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
67-66-3	**Chloroform**	**0.25**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
156-59-2	**cis-1,2-Dichloroethylene**	**82**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
1634-04-4	**Methyl tert-butyl ether (MTBE)**	**1.0**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 13:25	BK

Sample Information

Client Sample ID: MW14_090816 **York Sample ID:** 16I0285-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 3:00 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 13:25	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 13:25	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:25	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:25	BK
127-18-4	**Tetrachloroethylene**	**51**	ICV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:25	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:25	BK
156-60-5	**trans-1,2-Dichloroethylene**	**1.0**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:25	BK
79-01-6	**Trichloroethylene**	**14**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:25	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:25	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 08:51	09/16/2016 13:25	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*104 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.7 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*101 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	* Methane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:11	RB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:11	RB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:11	RB

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**4.47**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/14/2016 10:30	09/14/2016 18:08	KV

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Information

Client Sample ID: MW14_090816 **York Sample ID:** 16I0285-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 3:00 pm	09/09/2016

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.438**		mg/L	0.0222	0.0222	1	EPA 6010C	09/13/2016 10:02	09/13/2016 17:04	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**315**		mg/L	3.45	25.0	50	EPA 300.0	09/13/2016 12:58	09/13/2016 12:58	AD
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrate as N

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-55-8	**Nitrate as N**	**7.44**		mg/L	0.0240	0.100	2	EPA 300.0	09/09/2016 00:08	09/09/2016 00:08	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sulfate as SO4

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**690**		mg/L	4.30	50.0	50	EPA 300.0	09/13/2016 12:58	09/13/2016 12:58	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**400**		mg/L	2.00	2.00	1	SM 2320B	09/12/2016 09:54	09/12/2016 16:52	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	09/15/2016 16:51	09/16/2016 15:52	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**3.44**		mg/L	1.00	1.00	1	SM 5310C	09/15/2016 12:48	09/16/2016 14:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW13_090816 **York Sample ID:** 16I0285-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 2:22 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
78-93-3	**2-Butanone**	**36**	CCV-E	ug/L	0.20	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
67-64-1	**Acetone**	**430**	E, CCV-E	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
156-59-2	**cis-1,2-Dichloroethylene**	**11**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK

Sample Information

Client Sample ID: MW13_090816 **York Sample ID:** 16I0285-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 2:22 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 13:53	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 13:53	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
127-18-4	**Tetrachloroethylene**	**4.0**	ICV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
156-60-5	**trans-1,2-Dichloroethylene**	**0.42**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
79-01-6	**Trichloroethylene**	**2.2**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 08:51	09/16/2016 13:53	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*100 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.4 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*104 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**210**		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:15	RB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:15	RB
74-85-1	*** Ethylene (Ethene)**	**12**		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:15	RB

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**18.8**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/14/2016 10:30	09/14/2016 18:13	KV

Sample Information

Client Sample ID: MW13_090816 **York Sample ID:** 16I0285-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 2:22 pm	09/09/2016

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**2.70**		mg/L	0.0222	0.0222	1	EPA 6010C	09/13/2016 10:02	09/13/2016 17:09	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**1020**		mg/L	3.45	25.0	50	EPA 300.0	09/13/2016 13:16	09/13/2016 13:16	AD
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrate as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-55-8	**Nitrate as N**	**0.209**		mg/L	0.0240	0.100	2	EPA 300.0	09/09/2016 00:08	09/09/2016 00:08	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	Sulfate	ND		mg/L	0.172	2.00	2	EPA 300.0	09/09/2016 00:08	09/09/2016 00:08	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**655**		mg/L	2.00	2.00	1	SM 2320B	09/12/2016 09:54	09/12/2016 16:52	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	09/15/2016 16:51	09/16/2016 15:52	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**62.9**		mg/L	1.00	1.00	1	SM 5310C	09/15/2016 12:48	09/16/2016 14:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: DUP01_090816 **York Sample ID:** 16I0285-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 3:00 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
78-93-3	2-Butanone	ND		ug/L	0.20	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
67-64-1	**Acetone**	**3.0**	CCV-E	ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
67-66-3	**Chloroform**	**0.22**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
156-59-2	**cis-1,2-Dichloroethylene**	**19**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 08:51 NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 08:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 14:21	BK

Sample Information

Client Sample ID: DUP01_090816 **York Sample ID:** 16I0285-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 3:00 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 14:21	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 08:51	09/16/2016 14:21	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:21	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:21	BK
127-18-4	**Tetrachloroethylene**	**86**	ICV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:21	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:21	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:21	BK
79-01-6	**Trichloroethylene**	**4.5**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:21	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 08:51	09/16/2016 14:21	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 08:51	09/16/2016 14:21	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*99.7 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*100 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*108 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**360**		ug/L	20	20	2	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:38	RB
74-84-0	* Ethane	ND		ug/L	20	20	2	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:38	RB
74-85-1	* Ethylene (Ethene)	ND		ug/L	20	20	2	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:38	RB

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**2.03**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/14/2016 10:30	09/14/2016 18:18	KV

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Information

Client Sample ID: DUP01_090816 **York Sample ID:** 16I0285-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0285	170264501 535 4th Ave Brooklyn NY	Water	September 8, 2016 3:00 pm	09/09/2016

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.221**		mg/L	0.0222	0.0222	1	EPA 6010C	09/13/2016 10:02	09/13/2016 17:14	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**96.6**		mg/L	0.690	5.00	10	EPA 300.0	09/13/2016 13:34	09/13/2016 13:34	AD
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrate as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-55-8	**Nitrate as N**	**5.86**		mg/L	0.0240	0.100	2	EPA 300.0	09/09/2016 00:08	09/09/2016 00:08	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**243**		mg/L	0.860	10.0	10	EPA 300.0	09/13/2016 13:34	09/13/2016 13:34	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**414**		mg/L	2.00	2.00	1	SM 2320B	09/12/2016 09:54	09/12/2016 16:52	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	09/15/2016 16:51	09/16/2016 15:52	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**5.07**		mg/L	1.00	1.00	1	SM 5310C	09/15/2016 12:48	09/16/2016 14:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Analytical Batch Summary

Batch ID: BI60398 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-01	FB01_090816	09/12/16
16I0285-03	MW16_090816	09/12/16
16I0285-04	MW14_090816	09/12/16
16I0285-05	MW13_090816	09/12/16
16I0285-06	DUP01_090816	09/12/16
BI60398-DUP1	Duplicate	09/12/16
BI60398-SRM1	Reference	09/12/16

Batch ID: BI60408 **Preparation Method:** EPA 300 **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-01	FB01_090816	09/09/16
16I0285-03	MW16_090816	09/09/16
16I0285-04	MW14_090816	09/09/16
16I0285-05	MW13_090816	09/09/16
16I0285-06	DUP01_090816	09/09/16
BI60408-BLK1	Blank	09/09/16
BI60408-BS1	LCS	09/09/16
BI60408-DUP1	Duplicate	09/09/16
BI60408-MS1	Matrix Spike	09/09/16
BI60408-SRM1	Reference	09/09/16

Batch ID: BI60471 **Preparation Method:** EPA 3015A **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-01	FB01_090816	09/13/16
16I0285-03	MW16_090816	09/13/16
16I0285-04	MW14_090816	09/13/16
16I0285-05	MW13_090816	09/13/16
16I0285-06	DUP01_090816	09/13/16
BI60471-BLK1	Blank	09/13/16
BI60471-DUP1	Duplicate	09/13/16
BI60471-MS1	Matrix Spike	09/13/16
BI60471-SRM1	Reference	09/13/16

Batch ID: BI60550 **Preparation Method:** EPA 3015A **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-01	FB01_090816	09/14/16
16I0285-03	MW16_090816	09/14/16
16I0285-04	MW14_090816	09/14/16
16I0285-05	MW13_090816	09/14/16
16I0285-06	DUP01_090816	09/14/16
BI60550-BLK1	Blank	09/14/16

BI60550-DUP1	Duplicate	09/14/16
BI60550-MS1	Matrix Spike	09/14/16
BI60550-SRM1	Reference	09/14/16

Batch ID: BI60578 **Preparation Method:** EPA 300 **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-03	MW16_090816	09/13/16
16I0285-04	MW14_090816	09/13/16
16I0285-05	MW13_090816	09/13/16
16I0285-06	DUP01_090816	09/13/16
BI60578-BLK1	Blank	09/13/16
BI60578-BS1	LCS	09/13/16
BI60578-DUP1	Duplicate	09/13/16
BI60578-SRM1	Reference	09/13/16

Batch ID: BI60648 **Preparation Method:** Analysis Preparation **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-01	FB01_090816	09/15/16
16I0285-03	MW16_090816	09/15/16
16I0285-04	MW14_090816	09/15/16
16I0285-05	MW13_090816	09/15/16
16I0285-06	DUP01_090816	09/15/16
BI60648-BLK1	Blank	09/15/16
BI60648-BLK2	Blank	09/15/16
BI60648-BS1	LCS	09/15/16
BI60648-BS2	LCS	09/15/16
BI60648-DUP1	Duplicate	09/15/16
BI60648-MS1	Matrix Spike	09/15/16

Batch ID: BI60654 **Preparation Method:** Analysis Preparation **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-01	FB01_090816	09/15/16
16I0285-03	MW16_090816	09/15/16
16I0285-04	MW14_090816	09/15/16
16I0285-05	MW13_090816	09/15/16
16I0285-06	DUP01_090816	09/15/16

Batch ID: BI60693 **Preparation Method:** EPA 5030B **Prepared By:** OW

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-01	FB01_090816	09/15/16
16I0285-02	TB01_090816	09/15/16
16I0285-03	MW16_090816	09/15/16
16I0285-04	MW14_090816	09/15/16
16I0285-05	MW13_090816	09/15/16
16I0285-06	DUP01_090816	09/15/16

BI60693-BLK1	Blank	09/16/16
BI60693-BS1	LCS	09/16/16
BI60693-BSD1	LCS Dup	09/16/16

Batch ID: BI60725 **Preparation Method:** Preparation for GC Analysis **Prepared By:** RQB

YORK Sample ID	Client Sample ID	Preparation Date
16I0285-01	FB01_090816	09/16/16
16I0285-03	MW16_090816	09/16/16
16I0285-04	MW14_090816	09/16/16
16I0285-05	MW13_090816	09/16/16
16I0285-06	DUP01_090816	09/16/16
BI60725-BLK1	Blank	09/16/16
BI60725-DUP1	Duplicate	09/16/16

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60693 - EPA 5030B											
Blank (BI60693-BLK1)								Prepared & Analyzed: 09/16/2016			
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	2.0	"								
Acetone	ND	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
Naphthalene	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*9.98*		*"*	*10.0*		*99.8*	*69-130*				
Surrogate: Toluene-d8	*9.89*		*"*	*10.0*		*98.9*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.3*		*"*	*10.0*		*103*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60693 - EPA 5030B											
LCS (BI60693-BS1)								Prepared & Analyzed: 09/16/2016			
1,1,1-Trichloroethane	11		ug/L	10.0		108	78-136				
1,1-Dichloroethane	11		"	10.0		109	82-129				
1,1-Dichloroethylene	11		"	10.0		107	68-138				
1,2,4-Trimethylbenzene	9.7		"	10.0		96.9	82-132				
1,2-Dichlorobenzene	11		"	10.0		110	79-123				
1,2-Dichloroethane	10		"	10.0		102	73-132				
1,3,5-Trimethylbenzene	9.6		"	10.0		96.2	80-131				
1,3-Dichlorobenzene	9.0		"	10.0		90.1	86-122				
1,4-Dichlorobenzene	9.0		"	10.0		90.2	85-124				
1,4-Dioxane	180		"	200		88.1	10-349				
2-Butanone	7.6		"	10.0		76.1	49-152				
Acetone	7.1		"	10.0		71.3	14-150				
Benzene	10		"	10.0		104	85-126				
Carbon tetrachloride	11		"	10.0		110	77-141				
Chlorobenzene	9.2		"	10.0		92.2	88-120				
Chloroform	11		"	10.0		106	82-128				
cis-1,2-Dichloroethylene	10		"	10.0		102	83-129				
Ethyl Benzene	9.8		"	10.0		97.8	80-131				
Methyl tert-butyl ether (MTBE)	10		"	10.0		102	76-135				
Methylene chloride	10		"	10.0		103	55-137				
Naphthalene	12		"	10.0		118	70-147				
n-Butylbenzene	9.7		"	10.0		97.4	79-132				
n-Propylbenzene	9.4		"	10.0		94.5	78-133				
o-Xylene	9.2		"	10.0		91.6	78-130				
p- & m- Xylenes	19		"	20.0		96.2	77-133				
sec-Butylbenzene	8.9		"	10.0		89.4	79-137				
tert-Butylbenzene	9.2		"	10.0		92.2	77-138				
Tetrachloroethylene	9.4		"	10.0		93.5	82-131				
Toluene	9.7		"	10.0		96.7	80-127				
trans-1,2-Dichloroethylene	10		"	10.0		104	80-132				
Trichloroethylene	9.4		"	10.0		94.5	82-128				
Vinyl Chloride	9.6		"	10.0		95.9	58-145				
Surrogate: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*69-130*				
Surrogate: Toluene-d8	*9.87*		*"*	*10.0*		*98.7*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.91*		*"*	*10.0*		*99.1*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60693 - EPA 5030B											
LCS Dup (BI60693-BSD1)							Prepared & Analyzed: 09/16/2016				
1,1,1-Trichloroethane	11		ug/L	10.0		108	78-136		0.556	30	
1,1-Dichloroethane	11		"	10.0		106	82-129		2.70	30	
1,1-Dichloroethylene	11		"	10.0		106	68-138		0.935	30	
1,2,4-Trimethylbenzene	9.7		"	10.0		97.0	82-132		0.103	30	
1,2-Dichlorobenzene	9.5		"	10.0		94.8	79-123		14.4	30	
1,2-Dichloroethane	10		"	10.0		101	73-132		0.591	30	
1,3,5-Trimethylbenzene	9.7		"	10.0		97.3	80-131		1.14	30	
1,3-Dichlorobenzene	9.1		"	10.0		90.9	86-122		0.884	30	
1,4-Dichlorobenzene	9.2		"	10.0		92.0	85-124		1.98	30	
1,4-Dioxane	180		"	200		92.5	10-349		4.80	30	
2-Butanone	9.7		"	10.0		97.1	49-152		24.2	30	
Acetone	10		"	10.0		104	14-150		37.6	30	Non-dir.
Benzene	10		"	10.0		104	85-126		0.385	30	
Carbon tetrachloride	11		"	10.0		112	77-141		1.44	30	
Chlorobenzene	9.3		"	10.0		93.1	88-120		0.971	30	
Chloroform	11		"	10.0		106	82-128		0.188	30	
cis-1,2-Dichloroethylene	10		"	10.0		103	83-129		0.390	30	
Ethyl Benzene	9.8		"	10.0		98.1	80-131		0.306	30	
Methyl tert-butyl ether (MTBE)	10		"	10.0		102	76-135		0.687	30	
Methylene chloride	10		"	10.0		105	55-137		1.34	30	
Naphthalene	13		"	10.0		129	70-147		8.67	30	
n-Butylbenzene	10		"	10.0		100	79-132		3.13	30	
n-Propylbenzene	9.4		"	10.0		94.1	78-133		0.424	30	
o-Xylene	9.2		"	10.0		91.9	78-130		0.327	30	
p- & m- Xylenes	19		"	20.0		97.3	77-133		1.08	30	
sec-Butylbenzene	9.2		"	10.0		91.7	79-137		2.54	30	
tert-Butylbenzene	9.3		"	10.0		93.0	77-138		0.864	30	
Tetrachloroethylene	11		"	10.0		112	82-131		18.1	30	
Toluene	9.8		"	10.0		97.6	80-127		0.926	30	
trans-1,2-Dichloroethylene	10		"	10.0		103	80-132		1.06	30	
Trichloroethylene	9.6		"	10.0		95.6	82-128		1.16	30	
Vinyl Chloride	9.6		"	10.0		96.3	58-145		0.416	30	
Surrogate: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*69-130*				
Surrogate: Toluene-d8	*9.77*		*"*	*10.0*		*97.7*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.81*		*"*	*10.0*		*98.1*	*79-122*				

Gas Chromatography/Flame Ionization Detector - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60725 - Preparation for GC Analysis											
Blank (BI60725-BLK1)									Prepared & Analyzed: 09/16/2016		
Methane	ND	10	ug/L								
Ethane	ND	10	"								
Ethylene (Ethene)	ND	10	"								
Duplicate (BI60725-DUP1)	*Source sample: 16I0285-03 (MW16_090816)								Prepared & Analyzed: 09/16/2016		
Methane	800	100	ug/L		600				29.4	30	
Ethane	ND	100	"		ND					30	
Ethylene (Ethene)	ND	100	"		ND					30	

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60471 - EPA 3015A											
Blank (BI60471-BLK1)								Prepared & Analyzed: 09/13/2016			
Iron - Dissolved	ND	0.0200	mg/L								
Duplicate (BI60471-DUP1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared & Analyzed: 09/13/2016			
Iron - Dissolved	0.0575	0.0222	mg/L		ND					20	
Matrix Spike (BI60471-MS1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared & Analyzed: 09/13/2016			
Iron - Dissolved	1.03	0.0222	mg/L	1.11	ND	92.6	75-125				
Reference (BI60471-SRM1)								Prepared & Analyzed: 09/13/2016			
Iron - Dissolved	0.930		ug/mL	0.900		103	85-115				
Batch BI60550 - EPA 3015A											
Blank (BI60550-BLK1)								Prepared & Analyzed: 09/14/2016			
Iron	ND	0.0200	mg/L								
Duplicate (BI60550-DUP1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared & Analyzed: 09/14/2016			
Iron	2.12	0.0222	mg/L		1.94				9.13	20	
Matrix Spike (BI60550-MS1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared & Analyzed: 09/14/2016			
Iron	3.24	0.0222	mg/L	1.11	1.94	117	75-125				
Reference (BI60550-SRM1)								Prepared: 09/14/2016 Analyzed: 09/15/2016			
Iron	0.859		ug/mL	0.900		95.4	85-115				

Anions by Ion Chromatography - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60408 - EPA 300											
Blank (BI60408-BLK1)								Prepared & Analyzed: 09/09/2016			
Chloride	ND	0.500	mg/L								
Nitrate as N	ND	0.0500	"								
Sulfate	ND	1.00	"								
LCS (BI60408-BS1)								Prepared & Analyzed: 09/09/2016			
Chloride	10.3	0.500	mg/L	10.0		103	85-115				
Nitrate as N	9.39	0.0500	"	10.0		93.9	90-110				
Sulfate	10.8	1.00	"	10.0		108	85-115				
Duplicate (BI60408-DUP1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared & Analyzed: 09/09/2016			
Chloride	108	0.500	mg/L		94.7				12.9	15	
Nitrate as N	5.29	0.0500	"		5.36				1.38	15	
Sulfate	257	1.00	"		235				8.97	15	
Matrix Spike (BI60408-MS1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared & Analyzed: 09/09/2016			
Chloride	0.238	0.500	mg/L	10.0	94.7	NR	85-115	Low Bias			
Nitrate as N	0.151	0.0500	"	10.0	5.36	NR	90-110	Low Bias			
Sulfate	0.969	1.00	"	10.0	235	NR	85-115	Low Bias			
Reference (BI60408-SRM1)								Prepared & Analyzed: 09/09/2016			
Chloride	12.2		mg/L	11.3		108	90-110				
Nitrate as N	14.8		"	14.9		99.3	90-110				
Sulfate	7.59		"	6.95		109	90-110				
Batch BI60578 - EPA 300											
Blank (BI60578-BLK1)								Prepared & Analyzed: 09/13/2016			
Chloride	ND	0.500	mg/L								
Sulfate	ND	1.00	"								

Anions by Ion Chromatography - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60578 - EPA 300											
LCS (BI60578-BS1)								Prepared & Analyzed: 09/13/2016			
Chloride	9.61	0.500	mg/L	10.0		96.1	85-115				
Sulfate	9.35	1.00	"	10.0		93.5	85-115				
Duplicate (BI60578-DUP1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared & Analyzed: 09/13/2016			
Chloride	95.4	5.00	mg/L		94.7				0.733	15	
Sulfate	240	10.0	"		235				1.81	15	
Reference (BI60578-SRM1)								Prepared & Analyzed: 09/13/2016			
Chloride	11.5		mg/L	11.3		102	90-110				
Sulfate	6.87		"	6.95		98.8	90-110				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60398 - Analysis Preparation											
Duplicate (BI60398-DUP1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared & Analyzed: 09/12/2016			
Alkalinity, total	414	2.00	mg/L		416				0.482	15	
Reference (BI60398-SRM1)								Prepared & Analyzed: 09/12/2016			
Alkalinity, total	160	2.00	mg/L	160		100	90.6-111				
Batch BI60648 - Analysis Preparation											
Blank (BI60648-BLK1)								Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	ND	1.00	mg/L								
Blank (BI60648-BLK2)								Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	ND	1.00	mg/L								
LCS (BI60648-BS1)								Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	78.3	1.00	mg/L	78.3		100	79.5-125.1				
LCS (BI60648-BS2)								Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	78.3	1.00	mg/L	78.3		100	79.5-125.1				
Duplicate (BI60648-DUP1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	4.56	1.00	mg/L		3.96				14.1	20	
Matrix Spike (BI60648-MS1)	*Source sample: 16I0285-03 (MW16_090816)							Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	27.1	1.00	mg/L	20.0	3.96	116	70-130				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
16I0285-01	FB01_090816	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16I0285-02	TB01_090816	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16I0285-03	MW16_090816	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16I0285-04	MW14_090816	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16I0285-05	MW13_090816	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16I0285-06	DUP01_090816	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Notes and Definitions

QR-A	The RPD exceeded control limits due to the analyte result being < 5 times the Limit of Quantitation causing variability. The batch LCS meets acceptance criteria.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
ICV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration verification (recovery exceeded 30% of expected value).
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
CCV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).

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*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 16-0285

YOUR Information	Report To:	Invoice To:	YOUR Project ID	Turn-Around Time	Report Type
Company: LANGAN	Company:	Company:	535 4th Ave 170264501	RUSH - Same Day ☐	Summary Report ✓
Address: 360 W 31st St 8th Fl NY, NY	Address:	Address: —11—	Purchase Order No. 170264501	RUSH - Next Day ☐	Summary w/ QA Summary
Phone No. 212-479-5400	Phone No. —11—	Phone No.	Samples from: CT ___ NY ✓ NJ ___	RUSH - Two Day ☐	CT RCP Package
Contact Person: BRIAN GOCKENHAUR	Attention:	Attention:		RUSH - Three Day ☐	CTRCP DQA/DUE Pkg
E-Mail Address: BGOCKENHAUR@LANGAN.COM	E-Mail Address:	E-Mail Address:		RUSH - Four Day ☐	NY ASP A Package
				Standard(5-7 Days) ✓	NY ASP B Package ✓
					NJDEP Red. Deliv.

Electronic Data Deliverables (EDD): Simple Excel ___ | NYSDEC EQuIS ✓ | EQuIS (std) ___ | EZ-EDD (EQuIS) ___ | NJDEP SRP HazSite EDD ___ | GIS/KEY (std) ___ | Other ___

York Regulatory Comparison Excel Spreadsheet ___
Compare to the following Regs. (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

HONIKA BOGUSZEWSKI
Name (printed)

Matrix Codes: S - soil; Other - specify(oil, etc.); WW - wastewater; GW - groundwater; DW - drinking water; Air-A - ambient air; Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part360-Expanded No Dissolve Fractions	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv.Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
FB01_090816	9/8/16 12:00	DI water	①	10
TB01_090816	9/8/16 —	DI water	VOCs	2
MW16_090816	9/8/16 1017	GW	①	30 / MS/MSD
MW14_090816	9/8/16 15:00	GW	①	10
MW13_090816	9/8/16 14:22	GW	①	10
DUP01_090816	9/8/16	GW	①	10

Comments: (VOCs, total and dissolved Iron (lab filtered), SO4, sulfate, nitrate, chloride, alkalinity, hardness, alkalinity)

Preservation Check those Applicable: 4°C ✓ Frozen ___ HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other ICE

Special Instructions: Field Filtered ☐ Lab to Filter ☐

Samples Relinquished By	Date/Time	Samples Received By	Date/Time
[signature]	9/9/16 8:37	[signature]	9-9-16 8:39
Samples Relinquished By	Date/Time	Samples Received in LAB by	Date/Time
		H. Bradley	9/9/16 1510

Temperature on Receipt: 5.9 °C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Brian Gochenaur

Report Date: 09/16/2016
Client Project ID: 170264501 535 4th Ave Brooklyn NY
York Project (SDG) No.: 16I0330

Report Date: 09/16/2016
Client Project ID: 170264501 535 4th Ave Brooklyn NY
York Project (SDG) No.: 16I0330

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Brian Gochenaur

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on September 09, 2016 and listed below. The project was identified as your project: **170264501 535 4th Ave Brooklyn NY**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
16I0330-01	MW12_090916	Water	09/09/2016	09/09/2016
16I0330-02	MW15_090916	Water	09/09/2016	09/09/2016
16I0330-03	MW07_090916	Water	09/09/2016	09/09/2016
16I0330-04	TB02_090916	Water	09/09/2016	09/09/2016

General Notes for York Project (SDG) No.: 16I0330

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By: 

Date: 09/16/2016

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: MW12_090916 **York Sample ID:** 16I0330-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 12:30 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
78-93-3	**2-Butanone**	**91**	CCV-E	ug/L	0.20	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
67-64-1	**Acetone**	**410**	CCV-E	ug/L	10	20	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 11:07	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
156-59-2	**cis-1,2-Dichloroethylene**	**2.7**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK

Sample Information

Client Sample ID: MW12_090916 **York Sample ID:** 16I0330-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 12:30 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 17:51	09/16/2016 00:41	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 17:51	09/16/2016 00:41	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
127-18-4	**Tetrachloroethylene**	**2.4**	ICV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
108-88-3	**Toluene**	**0.33**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
79-01-6	**Trichloroethylene**	**3.4**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
75-01-4	**Vinyl Chloride**	**2.4**	CCV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 17:51	09/16/2016 00:41	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*103 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.6 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*103 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**2800**		ug/L	250	250	25	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:44	RB
74-84-0	* Ethane	ND		ug/L	250	250	25	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:44	RB
74-85-1	* Ethylene (Ethene)	ND		ug/L	250	250	25	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:44	RB

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**50.9**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/14/2016 10:30	09/14/2016 18:53	KV

Sample Information

Client Sample ID: MW12_090916 **York Sample ID:** 16I0330-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 12:30 pm	09/09/2016

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.205**		mg/L	0.0222	0.0222	1	EPA 6010C	09/13/2016 10:02	09/13/2016 17:19	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**1660**		mg/L	6.90	50.0	100	EPA 300.0	09/13/2016 12:40	09/13/2016 16:00	AD
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrate as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-55-8	**Nitrate as N**	**0.277**		mg/L	0.0240	0.100	2	EPA 300.0	09/09/2016 15:36	09/10/2016 09:41	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**5.71**		mg/L	0.172	2.00	2	EPA 300.0	09/09/2016 15:36	09/10/2016 09:41	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**810**		mg/L	2.00	2.00	1	SM 2320B	09/12/2016 09:54	09/12/2016 16:52	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Salinity**	**2.60**		parts/thousand		0.100	1	SM 2520B	09/15/2016 16:51	09/16/2016 15:52	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**204**		mg/L	10.0	10.0	10	SM 5310C	09/15/2016 12:48	09/16/2016 14:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW15_090916 **York Sample ID:** 16I0330-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 2:00 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
78-93-3	**2-Butanone**	**0.86**	CCV-E, J	ug/L	0.20	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
67-64-1	**Acetone**	**3.4**	CCV-E	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK

Sample Information

Client Sample ID: MW15_090916 **York Sample ID:** 16I0330-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 2:00 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 17:51	09/16/2016 01:09	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 17:51	09/16/2016 01:09	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
127-18-4	**Tetrachloroethylene**	**12**	ICV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
79-01-6	**Trichloroethylene**	**0.22**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 17:51	09/16/2016 01:09	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*102 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*97.9 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*106 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	* Methane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:48	RB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:48	RB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:48	RB

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**2.82**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/14/2016 10:30	09/14/2016 19:11	KV

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Information

Client Sample ID: MW15_090916 **York Sample ID:** 16I0330-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 2:00 pm	09/09/2016

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.0419**		mg/L	0.0222	0.0222	1	EPA 6010C	09/13/2016 10:02	09/13/2016 17:38	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**61.3**		mg/L	0.138	1.00	2	EPA 300.0	09/09/2016 15:36	09/10/2016 09:41	n.a.
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrate as N

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-55-8	**Nitrate as N**	**6.02**		mg/L	0.0240	0.100	2	EPA 300.0	09/09/2016 15:36	09/10/2016 09:41	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sulfate as SO4

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**201**		mg/L	0.860	10.0	10	EPA 300.0	09/13/2016 12:40	09/13/2016 16:18	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**120**		mg/L	2.00	2.00	1	SM 2320B	09/12/2016 09:54	09/12/2016 16:52	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	09/15/2016 16:51	09/16/2016 15:52	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**4.78**		mg/L	1.00	1.00	1	SM 5310C	09/15/2016 12:48	09/16/2016 14:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW07_090916 **York Sample ID:** 16I0330-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 3:35 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	09/15/2016 17:51 NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
78-93-3	2-Butanone	ND		ug/L	0.20	2.0	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
67-64-1	**Acetone**	**1.1**	CCV-E, J	ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
67-66-3	**Chloroform**	**0.31**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 17:51 NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 01:37	BK

Sample Information

Client Sample ID: MW07_090916 **York Sample ID:** 16I0330-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 3:35 pm	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 17:51	09/16/2016 01:37	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 17:51	09/16/2016 01:37	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:37	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:37	BK
127-18-4	**Tetrachloroethylene**	**40**	ICV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:37	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:37	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:37	BK
79-01-6	**Trichloroethylene**	**0.64**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:37	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 01:37	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 17:51	09/16/2016 01:37	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*100 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*100 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*107 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	* Methane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:51	RB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:51	RB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	09/16/2016 12:32	09/16/2016 13:51	RB

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**15.0**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/14/2016 10:30	09/14/2016 19:16	KV

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Information

Client Sample ID: MW07_090916 **York Sample ID:** 16I0330-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 3:35 pm	09/09/2016

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.0462**		mg/L	0.0222	0.0222	1	EPA 6010C	09/13/2016 10:02	09/13/2016 17:43	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**2180**		mg/L	6.90	50.0	100	EPA 300.0	09/13/2016 16:36	09/13/2016 16:36	AD
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrate as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-55-8	**Nitrate as N**	**2.91**		mg/L	0.0240	0.100	2	EPA 300.0	09/09/2016 15:36	09/10/2016 09:41	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**68.3**		mg/L	0.172	2.00	2	EPA 300.0	09/09/2016 15:36	09/10/2016 09:41	n.a.
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**515**		mg/L	2.00	2.00	1	SM 2320B	09/12/2016 09:54	09/12/2016 16:52	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Salinity**	**3.10**		parts/thousand		0.100	1	SM 2520B	09/15/2016 16:51	09/16/2016 15:52	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**4.96**		mg/L	1.00	1.00	1	SM 5310C	09/15/2016 12:48	09/16/2016 14:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: TB02_090916 **York Sample ID:** 16I0330-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 12:00 am	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	09/15/2016 17:51 NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
78-93-3	2-Butanone	ND		ug/L	0.20	2.0	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	09/15/2016 17:51 NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	09/15/2016 17:51 CTDOH,NELAC-NY10854,NJDEP	09/16/2016 02:05	BK

Sample Information

Client Sample ID: TB02_090916 **York Sample ID:** 16I0330-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16I0330	170264501 535 4th Ave Brooklyn NY	Water	September 9, 2016 12:00 am	09/09/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 17:51	09/16/2016 02:05	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	09/15/2016 17:51	09/16/2016 02:05	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 02:05	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 02:05	BK
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 02:05	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 02:05	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 02:05	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 02:05	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	09/15/2016 17:51	09/16/2016 02:05	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	09/15/2016 17:51	09/16/2016 02:05	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*106 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.6 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*106 %*	*79-122*

Analytical Batch Summary

Batch ID: BI60398 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/12/16
16I0330-02	MW15_090916	09/12/16
16I0330-03	MW07_090916	09/12/16
BI60398-SRM1	Reference	09/12/16

Batch ID: BI60412 **Preparation Method:** EPA 300 **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/09/16
16I0330-02	MW15_090916	09/09/16
16I0330-03	MW07_090916	09/09/16
BI60412-BLK1	Blank	10/09/16
BI60412-BS1	LCS	10/09/16
BI60412-SRM1	Reference	10/09/16

Batch ID: BI60471 **Preparation Method:** EPA 3015A **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/13/16
16I0330-02	MW15_090916	09/13/16
16I0330-03	MW07_090916	09/13/16
BI60471-BLK1	Blank	09/13/16
BI60471-SRM1	Reference	09/13/16

Batch ID: BI60550 **Preparation Method:** EPA 3015A **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/14/16
16I0330-02	MW15_090916	09/14/16
16I0330-03	MW07_090916	09/14/16
BI60550-BLK1	Blank	09/14/16
BI60550-SRM1	Reference	09/14/16

Batch ID: BI60578 **Preparation Method:** EPA 300 **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/13/16
16I0330-02	MW15_090916	09/13/16
16I0330-03	MW07_090916	09/13/16
BI60578-BLK1	Blank	09/13/16
BI60578-BS1	LCS	09/13/16
BI60578-SRM1	Reference	09/13/16

Batch ID: BI60648 **Preparation Method:** Analysis Preparation **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/15/16
16I0330-02	MW15_090916	09/15/16
16I0330-03	MW07_090916	09/15/16
BI60648-BLK1	Blank	09/15/16
BI60648-BLK2	Blank	09/15/16
BI60648-BS1	LCS	09/15/16
BI60648-BS2	LCS	09/15/16

Batch ID: BI60654 **Preparation Method:** Analysis Preparation **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/15/16
16I0330-02	MW15_090916	09/15/16
16I0330-03	MW07_090916	09/15/16

Batch ID: BI60658 **Preparation Method:** EPA 5030B **Prepared By:** OW

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/15/16
16I0330-02	MW15_090916	09/15/16
16I0330-03	MW07_090916	09/15/16
16I0330-04	TB02_090916	09/15/16
BI60658-BLK1	Blank	09/15/16
BI60658-BS1	LCS	09/15/16
BI60658-BSD1	LCS Dup	09/15/16

Batch ID: BI60693 **Preparation Method:** EPA 5030B **Prepared By:** OW

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01RE1	MW12_090916	09/15/16
BI60693-BLK1	Blank	09/16/16
BI60693-BS1	LCS	09/16/16
BI60693-BSD1	LCS Dup	09/16/16

Batch ID: BI60725 **Preparation Method:** Preparation for GC Analysis **Prepared By:** RQB

YORK Sample ID	Client Sample ID	Preparation Date
16I0330-01	MW12_090916	09/16/16
16I0330-02	MW15_090916	09/16/16
16I0330-03	MW07_090916	09/16/16
BI60725-BLK1	Blank	09/16/16

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60658 - EPA 5030B											
Blank (BI60658-BLK1)								Prepared & Analyzed: 09/15/2016			
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	2.0	"								
Acetone	ND	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
Naphthalene	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*9.83*		*"*	*10.0*		*98.3*	*69-130*				
Surrogate: Toluene-d8	*10.0*		*"*	*10.0*		*100*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.5*		*"*	*10.0*		*105*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60658 - EPA 5030B											
LCS (BI60658-BS1)							Prepared & Analyzed: 09/15/2016				
1,1,1-Trichloroethane	10		ug/L	10.0		102	78-136				
1,1-Dichloroethane	11		"	10.0		107	82-129				
1,1-Dichloroethylene	10		"	10.0		100	68-138				
1,2,4-Trimethylbenzene	9.8		"	10.0		98.1	82-132				
1,2-Dichlorobenzene	9.4		"	10.0		93.7	79-123				
1,2-Dichloroethane	10		"	10.0		100	73-132				
1,3,5-Trimethylbenzene	9.7		"	10.0		96.8	80-131				
1,3-Dichlorobenzene	9.1		"	10.0		90.7	86-122				
1,4-Dichlorobenzene	9.2		"	10.0		91.5	85-124				
1,4-Dioxane	140		"	200		70.6	10-349				
2-Butanone	8.8		"	10.0		87.8	49-152				
Acetone	9.4		"	10.0		94.3	14-150				
Benzene	10		"	10.0		103	85-126				
Carbon tetrachloride	10		"	10.0		104	77-141				
Chlorobenzene	9.5		"	10.0		94.7	88-120				
Chloroform	11		"	10.0		106	82-128				
cis-1,2-Dichloroethylene	10		"	10.0		101	83-129				
Ethyl Benzene	10		"	10.0		99.8	80-131				
Methyl tert-butyl ether (MTBE)	10		"	10.0		99.9	76-135				
Methylene chloride	10		"	10.0		102	55-137				
Naphthalene	12		"	10.0		121	70-147				
n-Butylbenzene	9.9		"	10.0		98.7	79-132				
n-Propylbenzene	9.3		"	10.0		93.4	78-133				
o-Xylene	9.3		"	10.0		93.2	78-130				
p- & m- Xylenes	20		"	20.0		98.2	77-133				
sec-Butylbenzene	9.0		"	10.0		90.0	79-137				
tert-Butylbenzene	9.1		"	10.0		91.4	77-138				
Tetrachloroethylene	11		"	10.0		111	82-131				
Toluene	10		"	10.0		99.6	80-127				
trans-1,2-Dichloroethylene	10		"	10.0		102	80-132				
Trichloroethylene	9.6		"	10.0		96.2	82-128				
Vinyl Chloride	7.4		"	10.0		74.4	58-145				
Surrogate: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*69-130*				
Surrogate: Toluene-d8	*9.97*		*"*	*10.0*		*99.7*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.85*		*"*	*10.0*		*98.5*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60658 - EPA 5030B											
LCS Dup (BI60658-BSD1)								Prepared & Analyzed: 09/15/2016			
1,1,1-Trichloroethane	6.7		ug/L	10.0		67.2	78-136	Low Bias	41.3	30	Non-dir.
1,1-Dichloroethane	9.0		"	10.0		90.4	82-129		16.9	30	
1,1-Dichloroethylene	5.8		"	10.0		58.2	68-138	Low Bias	53.3	30	Non-dir.
1,2,4-Trimethylbenzene	8.7		"	10.0		87.3	82-132		11.7	30	
1,2-Dichlorobenzene	9.2		"	10.0		91.6	79-123		2.27	30	
1,2-Dichloroethane	9.8		"	10.0		98.4	73-132		1.71	30	
1,3,5-Trimethylbenzene	8.2		"	10.0		81.7	80-131		16.9	30	
1,3-Dichlorobenzene	8.6		"	10.0		85.6	86-122	Low Bias	5.79	30	
1,4-Dichlorobenzene	8.8		"	10.0		88.1	85-124		3.79	30	
1,4-Dioxane	24		"	200		12.2	10-349		141	30	Non-dir.
2-Butanone	8.2		"	10.0		81.6	49-152		7.32	30	
Acetone	7.3		"	10.0		72.6	14-150		26.0	30	
Benzene	8.7		"	10.0		87.4	85-126		16.0	30	
Carbon tetrachloride	6.0		"	10.0		59.7	77-141	Low Bias	53.8	30	Non-dir.
Chlorobenzene	8.7		"	10.0		86.7	88-120	Low Bias	8.82	30	
Chloroform	9.6		"	10.0		95.8	82-128		9.83	30	
cis-1,2-Dichloroethylene	8.7		"	10.0		87.3	83-129		14.6	30	
Ethyl Benzene	8.0		"	10.0		80.4	80-131		21.5	30	
Methyl tert-butyl ether (MTBE)	9.8		"	10.0		98.1	76-135		1.82	30	
Methylene chloride	9.8		"	10.0		97.6	55-137		4.51	30	
Naphthalene	12		"	10.0		118	70-147		2.01	30	
n-Butylbenzene	7.3		"	10.0		73.3	79-132	Low Bias	29.5	30	
n-Propylbenzene	7.3		"	10.0		73.4	78-133	Low Bias	24.0	30	
o-Xylene	8.2		"	10.0		82.1	78-130		12.7	30	
p- & m- Xylenes	16		"	20.0		80.5	77-133		19.8	30	
sec-Butylbenzene	6.4		"	10.0		63.7	79-137	Low Bias	34.2	30	Non-dir.
tert-Butylbenzene	6.9		"	10.0		68.8	77-138	Low Bias	28.2	30	
Tetrachloroethylene	6.3		"	10.0		63.4	82-131	Low Bias	54.9	30	Non-dir.
Toluene	8.4		"	10.0		84.2	80-127		16.8	30	
trans-1,2-Dichloroethylene	7.7		"	10.0		77.3	80-132	Low Bias	27.8	30	
Trichloroethylene	7.3		"	10.0		72.9	82-128	Low Bias	27.6	30	
Vinyl Chloride	4.4		"	10.0		44.0	58-145	Low Bias	51.4	30	Non-dir.
Surrogate: 1,2-Dichloroethane-d4	*9.87*		*"*	*10.0*		*98.7*	*69-130*				
Surrogate: Toluene-d8	*9.98*		*"*	*10.0*		*99.8*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.98*		*"*	*10.0*		*99.8*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60693 - EPA 5030B											
Blank (BI60693-BLK1)											
Prepared & Analyzed: 09/16/2016											
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	0.50	"								
Acetone	ND	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
Naphthalene	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*9.98*		*"*	*10.0*		*99.8*	*69-130*				
Surrogate: Toluene-d8	*9.89*		*"*	*10.0*		*98.9*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.3*		*"*	*10.0*		*103*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60693 - EPA 5030B											
LCS (BI60693-BS1)								Prepared & Analyzed: 09/16/2016			
1,1,1-Trichloroethane	11		ug/L	10.0		108	78-136				
1,1-Dichloroethane	11		"	10.0		109	82-129				
1,1-Dichloroethylene	11		"	10.0		107	68-138				
1,2,4-Trimethylbenzene	9.7		"	10.0		96.9	82-132				
1,2-Dichlorobenzene	11		"	10.0		110	79-123				
1,2-Dichloroethane	10		"	10.0		102	73-132				
1,3,5-Trimethylbenzene	9.6		"	10.0		96.2	80-131				
1,3-Dichlorobenzene	9.0		"	10.0		90.1	86-122				
1,4-Dichlorobenzene	9.0		"	10.0		90.2	85-124				
1,4-Dioxane	180		"	200		88.1	10-349				
2-Butanone	7.6		"	10.0		76.1	49-152				
Acetone	7.1		"	10.0		71.3	14-150				
Benzene	10		"	10.0		104	85-126				
Carbon tetrachloride	11		"	10.0		110	77-141				
Chlorobenzene	9.2		"	10.0		92.2	88-120				
Chloroform	11		"	10.0		106	82-128				
cis-1,2-Dichloroethylene	10		"	10.0		102	83-129				
Ethyl Benzene	9.8		"	10.0		97.8	80-131				
Methyl tert-butyl ether (MTBE)	10		"	10.0		102	76-135				
Methylene chloride	10		"	10.0		103	55-137				
Naphthalene	12		"	10.0		118	70-147				
n-Butylbenzene	9.7		"	10.0		97.4	79-132				
n-Propylbenzene	9.4		"	10.0		94.5	78-133				
o-Xylene	9.2		"	10.0		91.6	78-130				
p- & m- Xylenes	19		"	20.0		96.2	77-133				
sec-Butylbenzene	8.9		"	10.0		89.4	79-137				
tert-Butylbenzene	9.2		"	10.0		92.2	77-138				
Tetrachloroethylene	9.4		"	10.0		93.5	82-131				
Toluene	9.7		"	10.0		96.7	80-127				
trans-1,2-Dichloroethylene	10		"	10.0		104	80-132				
Trichloroethylene	9.4		"	10.0		94.5	82-128				
Vinyl Chloride	9.6		"	10.0		95.9	58-145				
Surrogate: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*69-130*				
Surrogate: Toluene-d8	*9.87*		*"*	*10.0*		*98.7*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.91*		*"*	*10.0*		*99.1*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60693 - EPA 5030B											
LCS Dup (BI60693-BSD1)							Prepared & Analyzed: 09/16/2016				
1,1,1-Trichloroethane	11		ug/L	10.0		108	78-136		0.556	30	
1,1-Dichloroethane	11		"	10.0		106	82-129		2.70	30	
1,1-Dichloroethylene	11		"	10.0		106	68-138		0.935	30	
1,2,4-Trimethylbenzene	9.7		"	10.0		97.0	82-132		0.103	30	
1,2-Dichlorobenzene	9.5		"	10.0		94.8	79-123		14.4	30	
1,2-Dichloroethane	10		"	10.0		101	73-132		0.591	30	
1,3,5-Trimethylbenzene	9.7		"	10.0		97.3	80-131		1.14	30	
1,3-Dichlorobenzene	9.1		"	10.0		90.9	86-122		0.884	30	
1,4-Dichlorobenzene	9.2		"	10.0		92.0	85-124		1.98	30	
1,4-Dioxane	180		"	200		92.5	10-349		4.80	30	
2-Butanone	9.7		"	10.0		97.1	49-152		24.2	30	
Acetone	10		"	10.0		104	14-150		37.6	30	Non-dir.
Benzene	10		"	10.0		104	85-126		0.385	30	
Carbon tetrachloride	11		"	10.0		112	77-141		1.44	30	
Chlorobenzene	9.3		"	10.0		93.1	88-120		0.971	30	
Chloroform	11		"	10.0		106	82-128		0.188	30	
cis-1,2-Dichloroethylene	10		"	10.0		103	83-129		0.390	30	
Ethyl Benzene	9.8		"	10.0		98.1	80-131		0.306	30	
Methyl tert-butyl ether (MTBE)	10		"	10.0		102	76-135		0.687	30	
Methylene chloride	10		"	10.0		105	55-137		1.34	30	
Naphthalene	13		"	10.0		129	70-147		8.67	30	
n-Butylbenzene	10		"	10.0		100	79-132		3.13	30	
n-Propylbenzene	9.4		"	10.0		94.1	78-133		0.424	30	
o-Xylene	9.2		"	10.0		91.9	78-130		0.327	30	
p- & m- Xylenes	19		"	20.0		97.3	77-133		1.08	30	
sec-Butylbenzene	9.2		"	10.0		91.7	79-137		2.54	30	
tert-Butylbenzene	9.3		"	10.0		93.0	77-138		0.864	30	
Tetrachloroethylene	11		"	10.0		112	82-131		18.1	30	
Toluene	9.8		"	10.0		97.6	80-127		0.926	30	
trans-1,2-Dichloroethylene	10		"	10.0		103	80-132		1.06	30	
Trichloroethylene	9.6		"	10.0		95.6	82-128		1.16	30	
Vinyl Chloride	9.6		"	10.0		96.3	58-145		0.416	30	
Surrogate: 1,2-Dichloroethane-d4	*10.1*		*"*	*10.0*		*101*	*69-130*				
Surrogate: Toluene-d8	*9.77*		*"*	*10.0*		*97.7*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.81*		*"*	*10.0*		*98.1*	*79-122*				

Gas Chromatography/Flame Ionization Detector - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60725 - Preparation for GC Analysis											
Blank (BI60725-BLK1)											Prepared & Analyzed: 09/16/2016
Methane	ND	10	ug/L								
Ethane	ND	10	"								
Ethylene (Ethene)	ND	10	"								

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60471 - EPA 3015A											
Blank (BI60471-BLK1)								Prepared & Analyzed: 09/13/2016			
Iron - Dissolved	ND	0.0200	mg/L								
Reference (BI60471-SRM1)								Prepared & Analyzed: 09/13/2016			
Iron - Dissolved	0.930		ug/mL	0.900		103	85-115				
Batch BI60550 - EPA 3015A											
Blank (BI60550-BLK1)								Prepared & Analyzed: 09/14/2016			
Iron	ND	0.0200	mg/L								
Reference (BI60550-SRM1)								Prepared: 09/14/2016 Analyzed: 09/15/2016			
Iron	0.859		ug/mL	0.900		95.4	85-115				

Anions by Ion Chromatography - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60412 - EPA 300											
Blank (BI60412-BLK1)									Prepared & Analyzed: 10/09/2016		
Chloride	ND	0.500	mg/L								
Nitrate as N	ND	0.0500	"								
Sulfate	ND	1.00	"								
LCS (BI60412-BS1)									Prepared & Analyzed: 10/09/2016		
Chloride	9.98	0.500	mg/L	10.0		99.8	85-115				
Nitrate as N	9.00	0.0500	"	10.0		90.0	90-110				
Sulfate	10.5	1.00	"	10.0		105	85-115				
Reference (BI60412-SRM1)									Prepared & Analyzed: 10/09/2016		
Chloride	12.2		mg/L	11.3		108	90-110				
Nitrate as N	14.7		"	14.9		98.9	90-110				
Sulfate	7.49		"	6.95		108	90-110				
Batch BI60578 - EPA 300											
Blank (BI60578-BLK1)									Prepared & Analyzed: 09/13/2016		
Chloride	ND	0.500	mg/L								
Sulfate	ND	1.00	"								
LCS (BI60578-BS1)									Prepared & Analyzed: 09/13/2016		
Chloride	9.61	0.500	mg/L	10.0		96.1	85-115				
Sulfate	9.35	1.00	"	10.0		93.5	85-115				
Reference (BI60578-SRM1)									Prepared & Analyzed: 09/13/2016		
Chloride	11.5		mg/L	11.3		102	90-110				
Sulfate	6.87		"	6.95		98.8	90-110				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BI60398 - Analysis Preparation											
Reference (BI60398-SRM1)								Prepared & Analyzed: 09/12/2016			
Alkalinity, total	160	2.00	mg/L	160		100	90.6-111				
Batch BI60648 - Analysis Preparation											
Blank (BI60648-BLK1)								Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	ND	1.00	mg/L								
Blank (BI60648-BLK2)								Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	ND	1.00	mg/L								
LCS (BI60648-BS1)								Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	78.3	1.00	mg/L	78.3		100	79.5-125.1				
LCS (BI60648-BS2)								Prepared: 09/15/2016 Analyzed: 09/16/2016			
Total Organic Carbon (TOC)	78.3	1.00	mg/L	78.3		100	79.5-125.1				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
16I0330-01	MW12_090916	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16I0330-02	MW15_090916	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16I0330-03	MW07_090916	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16I0330-04	TB02_090916	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Notes and Definitions

QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
ICV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration verification (recovery exceeded 30% of expected value).
CCV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).

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*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 16D0330

YOUR Information

Company: LANGAN
Address: 360 (ext 31st
NY, NY
Phone No. 212 479 5400
Contact Person: BRIAN COCHENMAL
E-Mail Address: bcochenmal@langan.com

Report To:

Company:
Address:
Phone No. -11-
Attention:
E-Mail Address:

Invoice To:

Company:
Address:
Phone No. -11-
Attention:
E-Mail Address:

YOUR Project ID

355 4th Ave
17026501

Purchase Order No.

17026501

Samples from: CT ___ NY ✓ NJ ___

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☑

Report Type

- Summary Report ✓
- Summary w/ QA Summary
- CT RCP Package
- CTRCP DQA/DUE Pkg
- NY ASP A Package
- NY ASP B Package ✓
- NJDEP Red. Deliv.

Electronic Data Deliverables (EDD)

- Simple Excel
- NYSDEC EQuIS ✓
- EQuIS (std)
- EZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS/KEY (std)
- Other
- York Regulatory Comparison
- Excel Spreadsheet

Compare to the following Regs. (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

MONIKA BOGUSZEWSKI
Name (printed)

Matrix Codes

S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part360-Expanded Non-Dioxin Furans	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
MW12_090916	9/9/16 1230	GW	VOCs, total and dissolved iron (lab filtered) TOC, sulfate, nitrate, chloride, dissolved gases, alkalinity, salinity, nitrate only for VOCs	10 Glass 10
MW15_090916	9/9/16 1400	GW		8 Glass 10
MW07_090916	9/9/16 1535	GW		8 Glass 10
TB02_090916	9/3/16 —	DI Water		

Comments

nitrate samples meet 48 hr HT
Fedex overnight to York
COC

Preservation Check those Applicable

4°C ✓ Frozen ___ HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other ___

Special Instructions
Field Filtered ☐
Lab to Filter ☐

Samples Relinquished By	Date/Time	Samples Received By	Date/Time
	9/9/16		9/9/16 1540
Samples Relinquished By	Date/Time	Samples Received in LAB by	Date/Time
		Grace	9-9-16 1710

Temperature on Receipt 4.2 °C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Brian Gochenaur

Report Date: 12/29/2016
Client Project ID: 170264501
York Project (SDG) No.: 16L0844

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 12/29/2016
Client Project ID: 170264501
York Project (SDG) No.: 16L0844

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Brian Gochenaur

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 20, 2016 and listed below. The project was identified as your project: **170264501**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

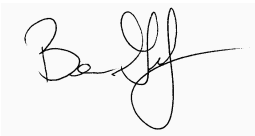
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
16L0844-01	FB01_122016	Water	12/20/2016	12/20/2016
16L0844-02	TB01_122016	Water	12/20/2016	12/20/2016
16L0844-03	MW16_122016	Water	12/20/2016	12/20/2016
16L0844-04	MW15_122016	Water	12/20/2016	12/20/2016
16L0844-05	MW12_122016	Water	12/20/2016	12/20/2016
16L0844-06	MW13_122016	Water	12/20/2016	12/20/2016
16L0844-07	DUP01_122016	Water	12/20/2016	12/20/2016
16L0844-08	MW05_122016	Water	12/20/2016	12/20/2016

General Notes for York Project (SDG) No.: 16L0844

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
9. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 12/29/2016

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: **FB01_122016** **York Sample ID:** **16L0844-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 3:00 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
67-64-1	**Acetone**	**2.3**	SCAL-E	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
75-09-2	**Methylene chloride**	**2.1**		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS

Sample Information

Client Sample ID: FB01_122016 **York Sample ID:** 16L0844-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 3:00 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/28/2016 17:17	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/28/2016 17:17	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 08:48	12/28/2016 17:17	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*111 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*102 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*100 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	* Methane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 15:18	RQB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 15:18	RQB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 15:18	RQB

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.0438**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/21/2016 11:16	12/21/2016 17:47	KV

Sample Information

Client Sample ID: FB01_122016 **York Sample ID:** 16L0844-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 3:00 pm	12/20/2016

Iron, Dissolved by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	Iron	ND		mg/L	0.0222	0.0222	1	EPA 6010C	12/21/2016 11:23	12/21/2016 15:16	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	Chloride	ND		mg/L	0.138	1.00	2	EPA 300.0	12/21/2016 02:58	12/21/2016 02:58	TJM
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrite as N

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.0369**		mg/L	0.00800	0.100	2	EPA 300.0	12/21/2016 02:58	12/21/2016 02:58	TJM
								Certifications:	NELAC-NY10854,CTDOH,PADEP		

Sulfate as SO4

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	Sulfate	ND		mg/L	0.172	2.00	2	EPA 300.0	12/21/2016 02:58	12/21/2016 02:58	TJM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**2.00**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**2.72**		mg/L	1.00	1.00	1	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: TB01_122016 **York Sample ID:** 16L0844-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 3:00 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
75-09-2	**Methylene chloride**	**2.5**		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:20	SS

Sample Information

Client Sample ID: TB01_122016 **York Sample ID:** 16L0844-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 3:00 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 15:20	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 15:20	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 15:20	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 15:20	SS
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 15:20	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 15:20	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 15:20	SS
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 15:20	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 15:20	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 08:48	12/27/2016 15:20	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*102 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*103 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*101 %*	*79-122*

Sample Information

Client Sample ID: MW16_122016 **York Sample ID:** 16L0844-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 9:00 am	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 16:00	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 16:00	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 16:00	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 16:00	SS

Sample Information

Client Sample ID: MW16_122016 **York Sample ID:** 16L0844-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 9:00 am	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
67-64-1	**Acetone**	**4.8**	SCAL-E, B	ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
67-66-3	**Chloroform**	**0.22**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
156-59-2	**cis-1,2-Dichloroethylene**	**27**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854	12/27/2016 16:00	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854	12/27/2016 16:00	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 16:00	SS

Sample Information

Client Sample ID: MW16_122016 **York Sample ID:** 16L0844-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 9:00 am	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**39**		ug/L	2.0	5.0	10	EPA 8260C	12/27/2016 08:48	12/28/2016 15:57	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 08:48	12/27/2016 16:00	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 08:48	12/27/2016 16:00	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
79-01-6	**Trichloroethylene**	**4.6**		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 08:48	12/27/2016 16:00	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
75-01-4	**Vinyl Chloride**	**0.66**		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 08:48	12/27/2016 16:00	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP			
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C	12/27/2016 08:48	12/27/2016 16:00	SS
								Certifications: CTDOH,NJDEP			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*104 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*102 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*97.0 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**1000**		ug/L	100	100	10	GC/Headspace	12/21/2016 08:23	12/21/2016 15:27	RQB
								Certifications:			
74-84-0	* Ethane	ND		ug/L	100	100	10	GC/Headspace	12/21/2016 08:23	12/21/2016 15:27	RQB
								Certifications:			
74-85-1	* Ethylene (Ethene)	ND		ug/L	100	100	10	GC/Headspace	12/21/2016 08:23	12/21/2016 15:27	RQB
								Certifications:			

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**2.20**		mg/L	0.0222	0.0222	1	EPA 6010C	12/21/2016 11:16	12/21/2016 17:52	KV
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**1.04**		mg/L	0.0222	0.0222	1	EPA 6010C	12/21/2016 11:23	12/21/2016 15:21	KV
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW16_122016 **York Sample ID:** 16L0844-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 9:00 am	12/20/2016

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**125**		mg/L	0.690	5.00	10	EPA 300.0	12/27/2016 23:51	12/27/2016 23:51	AD
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrite as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.0220**		mg/L	0.00400	0.0500	1	EPA 300.0	12/21/2016 06:19	12/21/2016 06:19	TJM
								Certifications:	NELAC-NY10854,CTDOH,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**304**		mg/L	0.860	10.0	10	EPA 300.0	12/27/2016 23:51	12/27/2016 23:51	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**455**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**5.53**		mg/L	1.00	1.00	1	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW15_122016 **York Sample ID:** 16L0844-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 11:30 am	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
67-64-1	**Acetone**	**1.2**	SCAL-E, J, B	ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
67-66-3	**Chloroform**	**0.44**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 18:40	SS

Sample Information

Client Sample ID: MW15_122016 **York Sample ID:** 16L0844-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 11:30 am	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 18:40	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 18:40	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 18:40	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 18:40	SS
127-18-4	**Tetrachloroethylene**	**31**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 18:40	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 18:40	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 18:40	SS
79-01-6	**Trichloroethylene**	**0.44**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 18:40	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 18:40	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 08:48	12/27/2016 18:40	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*115 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*102 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*101 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**200**		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 15:46	RQB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 15:46	RQB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 15:46	RQB

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**14.2**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/21/2016 11:16	12/21/2016 18:11	KV

Sample Information

Client Sample ID: MW15_122016 **York Sample ID:** 16L0844-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 11:30 am	12/20/2016

Iron, Dissolved by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.104**		mg/L	0.0222	0.0222	1	EPA 6010C	12/21/2016 11:23	12/21/2016 15:40	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**40.4**		mg/L	0.138	1.00	2	EPA 300.0	12/21/2016 03:16	12/21/2016 03:16	TJM
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrite as N

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.0368**		mg/L	0.00800	0.100	2	EPA 300.0	12/21/2016 03:16	12/21/2016 03:16	TJM
								Certifications:	NELAC-NY10854,CTDOH,PADEP		

Sulfate as SO4

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**188**		mg/L	0.860	10.0	10	EPA 300.0	12/22/2016 07:54	12/22/2016 07:54	TJM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**110**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**3.64**		mg/L	1.00	1.00	1	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW12_122016 **York Sample ID:** 16L0844-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 12:45 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
78-93-3	**2-Butanone**	**45**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
67-64-1	**Acetone**	**260**	B	ug/L	20	40	20	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 15:17	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
156-59-2	**cis-1,2-Dichloroethylene**	**2.1**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 19:20	SS

Sample Information

Client Sample ID: MW12_122016 **York Sample ID:** 16L0844-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 12:45 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 19:20	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 19:20	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 19:20	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 19:20	SS
127-18-4	**Tetrachloroethylene**	**3.9**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 19:20	SS
108-88-3	**Toluene**	**0.46**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 19:20	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 19:20	SS
79-01-6	**Trichloroethylene**	**3.0**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 19:20	SS
75-01-4	**Vinyl Chloride**	**1.5**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 19:20	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 08:48	12/27/2016 19:20	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*121 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*95.6 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*90.8 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**38000**		ug/L	2000	2000	200	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:02	RQB
74-84-0	* Ethane	ND		ug/L	2000	2000	200	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:02	RQB
74-85-1	* Ethylene (Ethene)	ND		ug/L	2000	2000	200	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:02	RQB

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**43.1**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/21/2016 11:16	12/21/2016 18:28	KV

Sample Information

Client Sample ID: MW12_122016 **York Sample ID:** 16L0844-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 12:45 pm	12/20/2016

Iron, Dissolved by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**20.1**		mg/L	0.0222	0.0222	1	EPA 6010C	12/21/2016 11:23	12/21/2016 15:45	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**1370**		mg/L	3.45	25.0	50	EPA 300.0	12/22/2016 08:12	12/22/2016 08:12	TJM
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrite as N

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.0360**		mg/L	0.00800	0.100	2	EPA 300.0	12/21/2016 03:34	12/21/2016 03:34	TJM
								Certifications:	NELAC-NY10854,CTDOH,PADEP		

Sulfate as SO4

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	Sulfate	ND		mg/L	4.30	50.0	50	EPA 300.0	12/22/2016 08:12	12/22/2016 08:12	TJM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**770**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	*** Salinity**	**2.30**		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**84.4**		mg/L	10.0	10.0	10	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW13_122016 **York Sample ID:** 16L0844-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 1:05 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
78-93-3	**2-Butanone**	**19**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
67-64-1	**Acetone**	**38**	B	ug/L	5.0	10	5	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 16:37	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
156-59-2	**cis-1,2-Dichloroethylene**	**15**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:00	SS

Sample Information

Client Sample ID: MW13_122016 **York Sample ID:** 16L0844-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 1:05 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 20:00	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 20:00	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:00	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:00	SS
127-18-4	**Tetrachloroethylene**	**7.2**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:00	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:00	SS
156-60-5	**trans-1,2-Dichloroethylene**	**0.37**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:00	SS
79-01-6	**Trichloroethylene**	**3.3**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:00	SS
75-01-4	**Vinyl Chloride**	**7.2**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:00	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 08:48	12/27/2016 20:00	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*120 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.9 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*97.0 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**8600**		ug/L	500	500	50	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:11	RQB
74-84-0	* Ethane	ND		ug/L	500	500	50	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:11	RQB
74-85-1	* Ethylene (Ethene)	ND		ug/L	500	500	50	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:11	RQB

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**25.5**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/21/2016 11:16	12/21/2016 18:33	KV

Sample Information

Client Sample ID: MW13_122016 **York Sample ID:** 16L0844-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 1:05 pm	12/20/2016

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**3.66**		mg/L	0.0222	0.0222	1	EPA 6010C	12/21/2016 11:23	12/21/2016 15:50	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**1010**		mg/L	1.72	12.5	25	EPA 300.0	12/22/2016 08:30	12/22/2016 08:30	TJM
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrite as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.0366**		mg/L	0.00800	0.100	2	EPA 300.0	12/21/2016 03:52	12/21/2016 03:52	TJM
								Certifications:	NELAC-NY10854,CTDOH,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**2.02**		mg/L	0.172	2.00	2	EPA 300.0	12/21/2016 03:52	12/21/2016 03:52	TJM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**650**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**13.1**		mg/L	10.0	10.0	10	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: DUP01_122016 **York Sample ID:** 16L0844-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 3:00 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
67-64-1	**Acetone**	**7.9**	SCAL-E, B	ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
67-66-3	**Chloroform**	**0.30**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
156-59-2	**cis-1,2-Dichloroethylene**	**24**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 20:40	SS

Sample Information

Client Sample ID: DUP01_122016 **York Sample ID:** 16L0844-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 3:00 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 20:40	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 20:40	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:40	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:40	SS
127-18-4	**Tetrachloroethylene**	**48**		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/28/2016 17:57	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:40	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:40	SS
79-01-6	**Trichloroethylene**	**4.5**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:40	SS
75-01-4	**Vinyl Chloride**	**0.59**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 20:40	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 08:48	12/27/2016 20:40	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*123 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*99.4 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*91.5 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	*** Methane**	**7800**		ug/L	500	500	50	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:18	RQB
74-84-0	* Ethane	ND		ug/L	500	500	50	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:18	RQB
74-85-1	* Ethylene (Ethene)	ND		ug/L	500	500	50	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:18	RQB

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**2.94**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/21/2016 11:16	12/21/2016 18:38	KV

Sample Information

Client Sample ID: DUP01_122016 **York Sample ID:** 16L0844-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 3:00 pm	12/20/2016

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**1.70**		mg/L	0.0222	0.0222	1	EPA 6010C	12/21/2016 11:23	12/21/2016 15:55	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**124**		mg/L	0.690	5.00	10	EPA 300.0	12/22/2016 08:48	12/22/2016 08:48	TJM
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrite as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.0550**		mg/L	0.00800	0.100	2	EPA 300.0	12/21/2016 04:10	12/21/2016 04:10	TJM
								Certifications:	NELAC-NY10854,CTDOH,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**305**		mg/L	0.860	10.0	10	EPA 300.0	12/22/2016 08:48	12/22/2016 08:48	TJM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**470**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**4.49**		mg/L	1.00	1.00	1	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW05_122016 **York Sample ID:** 16L0844-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 2:30 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
67-64-1	**Acetone**	**2.1**	SCAL-E, B	ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
67-66-3	**Chloroform**	**2.1**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
156-59-2	**cis-1,2-Dichloroethylene**	**0.36**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 08:48 NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 08:48 CTDOH,NELAC-NY10854,NJDEP	12/27/2016 21:20	SS

Sample Information

Client Sample ID: MW05_122016 **York Sample ID:** 16L0844-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 2:30 pm	12/20/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 21:20	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 08:48	12/27/2016 21:20	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 21:20	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 21:20	SS
127-18-4	**Tetrachloroethylene**	**27**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 21:20	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 21:20	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 21:20	SS
79-01-6	**Trichloroethylene**	**1.2**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 21:20	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 08:48	12/27/2016 21:20	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 08:48	12/27/2016 21:20	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*128 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*99.3 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*97.5 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	* Methane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:32	RQB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:32	RQB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/21/2016 08:23	12/21/2016 16:32	RQB

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**39.0**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/21/2016 11:16	12/21/2016 18:43	KV

Sample Information

Client Sample ID: MW05_122016 **York Sample ID:** 16L0844-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0844	170264501	Water	December 20, 2016 2:30 pm	12/20/2016

Iron, Dissolved by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	Iron	ND		mg/L	0.0222	0.0222	1	EPA 6010C	12/21/2016 11:23	12/21/2016 16:13	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**311**		mg/L	0.690	5.00	10	EPA 300.0	12/22/2016 09:06	12/22/2016 09:06	TJM
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrite as N

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.106**		mg/L	0.00800	0.100	2	EPA 300.0	12/21/2016 04:29	12/21/2016 04:29	TJM
								Certifications:	NELAC-NY10854,CTDOH,PADEP		

Sulfate as SO4

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**398**		mg/L	0.860	10.0	10	EPA 300.0	12/22/2016 09:06	12/22/2016 09:06	TJM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**200**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**5.19**		mg/L	1.00	1.00	1	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Analytical Batch Summary

Batch ID: BL61073 **Preparation Method:** Preparation for GC Analysis **Prepared By:** RQB

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-01	FB01_122016	12/21/16
16L0844-03	MW16_122016	12/21/16
16L0844-04	MW15_122016	12/21/16
16L0844-05	MW12_122016	12/21/16
16L0844-06	MW13_122016	12/21/16
16L0844-07	DUP01_122016	12/21/16
16L0844-08	MW05_122016	12/21/16
BL61073-BLK1	Blank	12/21/16
BL61073-DUP1	Duplicate	12/21/16

Batch ID: BL61087 **Preparation Method:** EPA 3015A **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-01	FB01_122016	12/21/16
16L0844-03	MW16_122016	12/21/16
16L0844-04	MW15_122016	12/21/16
16L0844-05	MW12_122016	12/21/16
16L0844-06	MW13_122016	12/21/16
16L0844-07	DUP01_122016	12/21/16
16L0844-08	MW05_122016	12/21/16
BL61087-BLK1	Blank	12/21/16
BL61087-DUP2	Duplicate	12/21/16
BL61087-MS2	Matrix Spike	12/21/16
BL61087-SRM1	Reference	12/21/16

Batch ID: BL61091 **Preparation Method:** EPA 3015A **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-01	FB01_122016	12/21/16
16L0844-03	MW16_122016	12/21/16
16L0844-04	MW15_122016	12/21/16
16L0844-05	MW12_122016	12/21/16
16L0844-06	MW13_122016	12/21/16
16L0844-07	DUP01_122016	12/21/16
16L0844-08	MW05_122016	12/21/16
BL61091-BLK1	Blank	12/21/16
BL61091-DUP1	Duplicate	12/21/16
BL61091-MS1	Matrix Spike	12/21/16
BL61091-SRM1	Reference	12/21/16

Batch ID: BL61106 **Preparation Method:** EPA 300 **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-01	FB01_122016	12/21/16

16L0844-04	MW15_122016	12/21/16
16L0844-05	MW12_122016	12/21/16
16L0844-06	MW13_122016	12/21/16
16L0844-07	DUP01_122016	12/21/16
16L0844-08	MW05_122016	12/21/16
BL61106-BLK1	Blank	12/20/16
BL61106-BS1	LCS	12/20/16
BL61106-SRM1	Reference	12/20/16

Batch ID: BL61108 **Preparation Method:** EPA 300 **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-03	MW16_122016	12/21/16
BL61108-BLK1	Blank	12/21/16
BL61108-BS1	LCS	12/21/16
BL61108-DUP1	Duplicate	12/21/16
BL61108-MS1	Matrix Spike	12/21/16
BL61108-SRM1	Reference	12/21/16

Batch ID: BL61193 **Preparation Method:** EPA 300 **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-04	MW15_122016	12/22/16
16L0844-05	MW12_122016	12/22/16
16L0844-06	MW13_122016	12/22/16
16L0844-07	DUP01_122016	12/22/16
16L0844-08	MW05_122016	12/22/16
BL61193-BLK1	Blank	12/22/16
BL61193-BS1	LCS	12/22/16
BL61193-SRM1	Reference	12/22/16

Batch ID: BL61283 **Preparation Method:** EPA 5030B **Prepared By:** RDS

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-02	TB01_122016	12/27/16
16L0844-03	MW16_122016	12/27/16
16L0844-04	MW15_122016	12/27/16
16L0844-05	MW12_122016	12/27/16
16L0844-06	MW13_122016	12/27/16
16L0844-07	DUP01_122016	12/27/16
16L0844-08	MW05_122016	12/27/16
BL61283-BLK1	Blank	12/27/16
BL61283-BS1	LCS	12/27/16
BL61283-BSD1	LCS Dup	12/27/16
BL61283-MS1	Matrix Spike	12/27/16
BL61283-MSD1	Matrix Spike Dup	12/27/16

Batch ID: BL61294 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-01	FB01_122016	12/27/16
16L0844-03	MW16_122016	12/27/16
16L0844-04	MW15_122016	12/27/16
16L0844-05	MW12_122016	12/27/16
16L0844-06	MW13_122016	12/27/16
16L0844-07	DUP01_122016	12/27/16
16L0844-08	MW05_122016	12/27/16
BL61294-DUP1	Duplicate	12/27/16
BL61294-SRM1	Reference	12/27/16

Batch ID: BL61337 **Preparation Method:** EPA 5030B **Prepared By:** RDS

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-01	FB01_122016	12/27/16
16L0844-03RE1	MW16_122016	12/27/16
16L0844-05RE1	MW12_122016	12/27/16
16L0844-06RE1	MW13_122016	12/27/16
16L0844-07RE1	DUP01_122016	12/27/16
BL61337-BLK1	Blank	12/28/16
BL61337-BS1	LCS	12/28/16
BL61337-BSD1	LCS Dup	12/28/16

Batch ID: BL61373 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-01	FB01_122016	12/28/16
16L0844-03	MW16_122016	12/28/16
16L0844-04	MW15_122016	12/28/16
16L0844-05	MW12_122016	12/28/16
16L0844-06	MW13_122016	12/28/16
16L0844-07	DUP01_122016	12/28/16
16L0844-08	MW05_122016	12/28/16
BL61373-BLK1	Blank	12/28/16
BL61373-DUP1	Duplicate	12/28/16

Batch ID: BL61443 **Preparation Method:** Analysis Preparation **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-01	FB01_122016	12/29/16
16L0844-03	MW16_122016	12/29/16
16L0844-04	MW15_122016	12/29/16
16L0844-05	MW12_122016	12/29/16
16L0844-06	MW13_122016	12/29/16
16L0844-07	DUP01_122016	12/29/16
16L0844-08	MW05_122016	12/29/16
BL61443-BLK1	Blank	12/29/16
BL61443-BS1	LCS	12/29/16
BL61443-DUP1	Duplicate	12/29/16
BL61443-MS1	Matrix Spike	12/29/16

Batch ID: BL61474 **Preparation Method:** EPA 300 **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16L0844-03	MW16_122016	12/27/16
BL61474-BLK1	Blank	12/27/16
BL61474-BS1	LCS	12/27/16
BL61474-DUP2	Duplicate	12/28/16
BL61474-SRM1	Reference	12/27/16

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61283 - EPA 5030B											
Blank (BL61283-BLK1)									Prepared & Analyzed: 12/27/2016		
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	0.50	"								
Acetone	1.0	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
Naphthalene	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*10.6*		*"*	*10.0*		*106*	*69-130*				
Surrogate: Toluene-d8	*9.95*		*"*	*10.0*		*99.5*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.71*		*"*	*10.0*		*97.1*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61283 - EPA 5030B											
LCS (BL61283-BS1)								Prepared & Analyzed: 12/27/2016			
1,1,1-Trichloroethane	10		ug/L	10.0		102	78-136				
1,1-Dichloroethane	11		"	10.0		106	82-129				
1,1-Dichloroethylene	10		"	10.0		101	68-138				
1,2,4-Trimethylbenzene	10		"	10.0		104	82-132				
1,2-Dichlorobenzene	9.6		"	10.0		95.5	79-123				
1,2-Dichloroethane	10		"	10.0		102	73-132				
1,3,5-Trimethylbenzene	11		"	10.0		109	80-131				
1,3-Dichlorobenzene	10		"	10.0		102	86-122				
1,4-Dichlorobenzene	10		"	10.0		104	85-124				
1,4-Dioxane	180		"	200		91.2	10-349				
2-Butanone	9.4		"	10.0		94.1	49-152				
Acetone	7.2		"	10.0		72.2	14-150				
Benzene	9.9		"	10.0		98.9	85-126				
Carbon tetrachloride	9.8		"	10.0		98.5	77-141				
Chlorobenzene	10		"	10.0		104	88-120				
Chloroform	10		"	10.0		104	82-128				
cis-1,2-Dichloroethylene	10		"	10.0		102	83-129				
Ethyl Benzene	11		"	10.0		110	80-131				
Methyl tert-butyl ether (MTBE)	10		"	10.0		104	76-135				
Methylene chloride	9.6		"	10.0		95.9	55-137				
Naphthalene	11		"	10.0		108	70-147				
n-Butylbenzene	11		"	10.0		110	79-132				
n-Propylbenzene	11		"	10.0		111	78-133				
o-Xylene	11		"	10.0		109	78-130				
p- & m- Xylenes	22		"	20.0		109	77-133				
sec-Butylbenzene	11		"	10.0		106	79-137				
tert-Butylbenzene	11		"	10.0		107	77-138				
Tetrachloroethylene	9.0		"	10.0		90.3	82-131				
Toluene	11		"	10.0		109	80-127				
trans-1,2-Dichloroethylene	10		"	10.0		103	80-132				
Trichloroethylene	10		"	10.0		103	82-128				
Vinyl Chloride	9.1		"	10.0		90.6	58-145				
Surrogate: 1,2-Dichloroethane-d4	*9.78*		*"*	*10.0*		*97.8*	*69-130*				
Surrogate: Toluene-d8	*10.2*		*"*	*10.0*		*102*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.2*		*"*	*10.0*		*102*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61283 - EPA 5030B											
LCS Dup (BL61283-BSD1)								Prepared & Analyzed: 12/27/2016			
1,1,1-Trichloroethane	10		ug/L	10.0		103	78-136		1.76	30	
1,1-Dichloroethane	11		"	10.0		107	82-129		1.60	30	
1,1-Dichloroethylene	10		"	10.0		105	68-138		3.79	30	
1,2,4-Trimethylbenzene	9.9		"	10.0		98.6	82-132		5.14	30	
1,2-Dichlorobenzene	10		"	10.0		102	79-123		6.78	30	
1,2-Dichloroethane	11		"	10.0		109	73-132		6.45	30	
1,3,5-Trimethylbenzene	9.8		"	10.0		98.5	80-131		9.94	30	
1,3-Dichlorobenzene	9.9		"	10.0		98.6	86-122		3.49	30	
1,4-Dichlorobenzene	10		"	10.0		100	85-124		4.21	30	
1,4-Dioxane	200		"	200		101	10-349		10.0	30	
2-Butanone	11		"	10.0		109	49-152		14.8	30	
Acetone	7.0		"	10.0		70.5	14-150		2.38	30	
Benzene	9.9		"	10.0		98.8	85-126		0.101	30	
Carbon tetrachloride	10		"	10.0		101	77-141		2.51	30	
Chlorobenzene	10		"	10.0		104	88-120		0.577	30	
Chloroform	11		"	10.0		106	82-128		2.09	30	
cis-1,2-Dichloroethylene	10		"	10.0		101	83-129		0.295	30	
Ethyl Benzene	11		"	10.0		108	80-131		1.19	30	
Methyl tert-butyl ether (MTBE)	12		"	10.0		116	76-135		10.8	30	
Methylene chloride	9.9		"	10.0		99.4	55-137		3.58	30	
Naphthalene	14		"	10.0		143	70-147		27.8	30	
n-Butylbenzene	10		"	10.0		104	79-132		6.17	30	
n-Propylbenzene	10		"	10.0		100	78-133		10.5	30	
o-Xylene	11		"	10.0		108	78-130		0.368	30	
p- & m- Xylenes	21		"	20.0		107	77-133		1.06	30	
sec-Butylbenzene	9.8		"	10.0		98.3	79-137		7.73	30	
tert-Butylbenzene	9.6		"	10.0		96.5	77-138		10.6	30	
Tetrachloroethylene	8.8		"	10.0		88.0	82-131		2.58	30	
Toluene	11		"	10.0		108	80-127		0.184	30	
trans-1,2-Dichloroethylene	10		"	10.0		99.9	80-132		2.67	30	
Trichloroethylene	10		"	10.0		100	82-128		2.66	30	
Vinyl Chloride	8.8		"	10.0		88.4	58-145		2.46	30	
Surrogate: 1,2-Dichloroethane-d4	*9.97*		*"*	*10.0*		*99.7*	*69-130*				
Surrogate: Toluene-d8	*10.1*		*"*	*10.0*		*101*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.54*		*"*	*10.0*		*95.4*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61283 - EPA 5030B											
Matrix Spike (BL61283-MS1)	*Source sample: 16L0844-03 (MW16_122016)							Prepared & Analyzed: 12/27/2016			
1,1,1-Trichloroethane	11		ug/L	10.0	ND	106	70-146				
1,1-Dichloroethane	10		"	10.0	ND	103	54-146				
1,1-Dichloroethylene	11		"	10.0	ND	111	44-165				
1,2,4-Trimethylbenzene	9.2		"	10.0	ND	91.7	72-129				
1,2-Dichlorobenzene	8.7		"	10.0	ND	87.0	63-122				
1,2-Dichloroethane	10		"	10.0	ND	99.5	68-131				
1,3,5-Trimethylbenzene	8.9		"	10.0	ND	88.8	69-126				
1,3-Dichlorobenzene	8.8		"	10.0	ND	87.9	74-119				
1,4-Dichlorobenzene	9.0		"	10.0	ND	89.8	70-124				
1,4-Dioxane	130		"	200	ND	64.4	10-310				
2-Butanone	15		"	10.0	ND	152	10-193				
Acetone	11		"	10.0	4.8	60.1	13-149				
Benzene	9.5		"	10.0	ND	95.3	38-155				
Carbon tetrachloride	11		"	10.0	ND	107	71-146				
Chlorobenzene	9.7		"	10.0	ND	96.6	81-117				
Chloroform	10		"	10.0	0.22	101	80-124				
cis-1,2-Dichloroethylene	39		"	10.0	27	124	76-125				
Ethyl Benzene	10		"	10.0	ND	102	72-128				
Methyl tert-butyl ether (MTBE)	9.3		"	10.0	ND	93.0	75-128				
Methylene chloride	9.2		"	10.0	ND	92.3	57-128				
Naphthalene	11		"	10.0	ND	108	39-158				
n-Butylbenzene	8.6		"	10.0	ND	86.4	61-138				
n-Propylbenzene	9.6		"	10.0	ND	96.4	66-134				
o-Xylene	10		"	10.0	ND	102	69-126				
p- & m- Xylenes	20		"	20.0	ND	102	67-130				
sec-Butylbenzene	9.0		"	10.0	ND	90.0	53-155				
tert-Butylbenzene	9.4		"	10.0	ND	93.8	65-139				
Tetrachloroethylene	61		"	10.0	39	215	64-139	High Bias			
Toluene	10		"	10.0	ND	104	76-123				
trans-1,2-Dichloroethylene	10		"	10.0	ND	102	79-131				
Trichloroethylene	15		"	10.0	4.6	104	53-145				
Vinyl Chloride	11		"	10.0	0.66	106	31-165				
Surrogate: 1,2-Dichloroethane-d4	*10.5*		*"*	*10.0*		*105*	*69-130*				
Surrogate: Toluene-d8	*10.5*		*"*	*10.0*		*105*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.70*		*"*	*10.0*		*97.0*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61283 - EPA 5030B											
Matrix Spike Dup (BL61283-MSD1)	*Source sample: 16L0844-03 (MW16_122016)								Prepared & Analyzed: 12/27/2016		
1,1,1-Trichloroethane	11		ug/L	10.0	ND	106	70-146		0.473	30	
1,1-Dichloroethane	9.8		"	10.0	ND	98.3	54-146		5.06	30	
1,1-Dichloroethylene	11		"	10.0	ND	109	44-165		2.46	30	
1,2,4-Trimethylbenzene	8.3		"	10.0	ND	82.6	72-129		10.4	30	
1,2-Dichlorobenzene	8.1		"	10.0	ND	81.4	63-122		6.65	30	
1,2-Dichloroethane	9.9		"	10.0	ND	99.4	68-131		0.101	30	
1,3,5-Trimethylbenzene	7.8		"	10.0	ND	77.7	69-126		13.3	30	
1,3-Dichlorobenzene	8.2		"	10.0	ND	81.9	74-119		7.07	30	
1,4-Dichlorobenzene	8.9		"	10.0	ND	89.3	70-124		0.558	30	
1,4-Dioxane	140		"	200	ND	69.3	10-310		7.38	30	
2-Butanone	8.8		"	10.0	ND	87.9	10-193		53.3	30	Non-dir.
Acetone	4.9		"	10.0	4.8	0.500	13-149	Low Bias	75.9	30	Non-dir.
Benzene	9.0		"	10.0	ND	89.9	38-155		5.83	30	
Carbon tetrachloride	10		"	10.0	ND	102	71-146		4.70	30	
Chlorobenzene	9.5		"	10.0	ND	94.6	81-117		2.09	30	
Chloroform	10		"	10.0	0.22	100	80-124		0.0973	30	
cis-1,2-Dichloroethylene	34		"	10.0	27	73.4	76-125	Low Bias	13.8	30	
Ethyl Benzene	7.6		"	10.0	ND	76.2	72-128		28.5	30	
Methyl tert-butyl ether (MTBE)	9.5		"	10.0	ND	95.3	75-128		2.44	30	
Methylene chloride	8.8		"	10.0	ND	88.0	57-128		4.77	30	
Naphthalene	4.8		"	10.0	ND	48.5	39-158		75.6	30	Non-dir.
n-Butylbenzene	1.6		"	10.0	ND	15.5	61-138	Low Bias	139	30	Non-dir.
n-Propylbenzene	0.79		"	10.0	ND	7.90	66-134	Low Bias	170	30	Non-dir.
o-Xylene	9.7		"	10.0	ND	96.9	69-126		5.52	30	
p- & m- Xylenes	19		"	20.0	ND	96.8	67-130		4.99	30	
sec-Butylbenzene	1.6		"	10.0	ND	16.5	53-155	Low Bias	138	30	Non-dir.
tert-Butylbenzene	6.3		"	10.0	ND	62.9	65-139	Low Bias	39.4	30	Non-dir.
Tetrachloroethylene	66		"	10.0	39	263	64-139	High Bias	7.58	30	
Toluene	9.7		"	10.0	ND	97.1	76-123		6.86	30	
trans-1,2-Dichloroethylene	9.7		"	10.0	ND	97.1	79-131		4.53	30	
Trichloroethylene	14		"	10.0	4.6	96.7	53-145		5.33	30	
Vinyl Chloride	11		"	10.0	0.66	102	31-165		4.06	30	
Surrogate: 1,2-Dichloroethane-d4	*10.8*		*"*	*10.0*		*108*	*69-130*				
Surrogate: Toluene-d8	*10.0*		*"*	*10.0*		*100*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.84*		*"*	*10.0*		*98.4*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61337 - EPA 5030B											
Blank (BL61337-BLK1)											Prepared & Analyzed: 12/28/2016
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	0.50	"								
Acetone	ND	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
Naphthalene	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*10.0*		*"*	*10.0*		*100*	*69-130*				
Surrogate: Toluene-d8	*10.1*		*"*	*10.0*		*101*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.2*		*"*	*10.0*		*102*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61337 - EPA 5030B											
LCS (BL61337-BS1)								Prepared & Analyzed: 12/28/2016			
1,1,1-Trichloroethane	10		ug/L	10.0		105	78-136				
1,1-Dichloroethane	10		"	10.0		101	82-129				
1,1-Dichloroethylene	9.8		"	10.0		97.7	68-138				
1,2,4-Trimethylbenzene	9.5		"	10.0		95.1	82-132				
1,2-Dichlorobenzene	9.4		"	10.0		94.0	79-123				
1,2-Dichloroethane	10		"	10.0		104	73-132				
1,3,5-Trimethylbenzene	9.6		"	10.0		96.1	80-131				
1,3-Dichlorobenzene	9.4		"	10.0		94.0	86-122				
1,4-Dichlorobenzene	9.4		"	10.0		94.0	85-124				
1,4-Dioxane	210		"	200		106	10-349				
2-Butanone	11		"	10.0		106	49-152				
Acetone	7.0		"	10.0		69.5	14-150				
Benzene	9.5		"	10.0		95.4	85-126				
Carbon tetrachloride	10		"	10.0		102	77-141				
Chlorobenzene	9.8		"	10.0		97.8	88-120				
Chloroform	10		"	10.0		103	82-128				
cis-1,2-Dichloroethylene	10		"	10.0		100	83-129				
Ethyl Benzene	10		"	10.0		99.9	80-131				
Methyl tert-butyl ether (MTBE)	11		"	10.0		108	76-135				
Methylene chloride	9.3		"	10.0		92.7	55-137				
Naphthalene	12		"	10.0		117	70-147				
n-Butylbenzene	9.6		"	10.0		95.8	79-132				
n-Propylbenzene	9.9		"	10.0		99.1	78-133				
o-Xylene	10		"	10.0		100	78-130				
p- & m- Xylenes	20		"	20.0		102	77-133				
sec-Butylbenzene	9.5		"	10.0		94.7	79-137				
tert-Butylbenzene	9.4		"	10.0		94.5	77-138				
Tetrachloroethylene	8.6		"	10.0		85.6	82-131				
Toluene	10		"	10.0		102	80-127				
trans-1,2-Dichloroethylene	9.8		"	10.0		98.5	80-132				
Trichloroethylene	9.4		"	10.0		94.2	82-128				
Vinyl Chloride	8.1		"	10.0		80.8	58-145				
Surrogate: 1,2-Dichloroethane-d4	*10.6*		*"*	*10.0*		*106*	*69-130*				
Surrogate: Toluene-d8	*10.0*		*"*	*10.0*		*100*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.1*		*"*	*10.0*		*101*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61337 - EPA 5030B											
LCS Dup (BL61337-BSD1)							Prepared & Analyzed: 12/28/2016				
1,1,1-Trichloroethane	11		ug/L	10.0		113	78-136		7.44	30	
1,1-Dichloroethane	10		"	10.0		105	82-129		3.49	30	
1,1-Dichloroethylene	10		"	10.0		102	68-138		4.60	30	
1,2,4-Trimethylbenzene	10		"	10.0		104	82-132		8.94	30	
1,2-Dichlorobenzene	10		"	10.0		100	79-123		6.29	30	
1,2-Dichloroethane	10		"	10.0		104	73-132		0.768	30	
1,3,5-Trimethylbenzene	11		"	10.0		106	80-131		9.51	30	
1,3-Dichlorobenzene	10		"	10.0		99.9	86-122		6.09	30	
1,4-Dichlorobenzene	10		"	10.0		104	85-124		9.72	30	
1,4-Dioxane	200		"	200		98.9	10-349		6.54	30	
2-Butanone	9.4		"	10.0		93.6	49-152		12.1	30	
Acetone	8.2		"	10.0		82.3	14-150		16.9	30	
Benzene	9.9		"	10.0		99.2	85-126		3.91	30	
Carbon tetrachloride	11		"	10.0		106	77-141		4.53	30	
Chlorobenzene	11		"	10.0		105	88-120		7.29	30	
Chloroform	11		"	10.0		106	82-128		2.67	30	
cis-1,2-Dichloroethylene	11		"	10.0		106	83-129		4.95	30	
Ethyl Benzene	11		"	10.0		108	80-131		7.61	30	
Methyl tert-butyl ether (MTBE)	11		"	10.0		106	76-135		1.31	30	
Methylene chloride	9.3		"	10.0		93.2	55-137		0.538	30	
Naphthalene	11		"	10.0		106	70-147		9.42	30	
n-Butylbenzene	11		"	10.0		106	79-132		9.64	30	
n-Propylbenzene	11		"	10.0		107	78-133		7.76	30	
o-Xylene	11		"	10.0		107	78-130		6.28	30	
p- & m- Xylenes	22		"	20.0		110	77-133		7.77	30	
sec-Butylbenzene	11		"	10.0		105	79-137		10.5	30	
tert-Butylbenzene	10		"	10.0		103	77-138		8.99	30	
Tetrachloroethylene	9.5		"	10.0		95.3	82-131		10.7	30	
Toluene	11		"	10.0		109	80-127		6.91	30	
trans-1,2-Dichloroethylene	10		"	10.0		102	80-132		3.88	30	
Trichloroethylene	11		"	10.0		106	82-128		11.3	30	
Vinyl Chloride	8.8		"	10.0		87.6	58-145		8.08	30	
Surrogate: 1,2-Dichloroethane-d4	*10.0*		*"*	*10.0*		*100*	*69-130*				
Surrogate: Toluene-d8	*10.3*		*"*	*10.0*		*103*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.6*		*"*	*10.0*		*106*	*79-122*				

Gas Chromatography/Flame Ionization Detector - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61073 - Preparation for GC Analysis											
Blank (BL61073-BLK1)									Prepared & Analyzed: 12/21/2016		
Methane	ND	10	ug/L								
Ethane	ND	10	"								
Ethylene (Ethene)	ND	10	"								
Duplicate (BL61073-DUP1)	*Source sample: 16L0844-03 (MW16_122016)								Prepared & Analyzed: 12/21/2016		
Methane	900	100	ug/L		1000				10.3	30	
Ethane	ND	100	"		ND					30	
Ethylene (Ethene)	ND	100	"		ND					30	

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61087 - EPA 3015A											
Blank (BL61087-BLK1)								Prepared & Analyzed: 12/21/2016			
Iron	ND	0.0200	mg/L								
Duplicate (BL61087-DUP2)	*Source sample: 16L0844-03 (MW16_122016)							Prepared & Analyzed: 12/21/2016			
Iron	2.81	0.0222	mg/L		2.20				24.1	20	Non-dir.
Matrix Spike (BL61087-MS2)	*Source sample: 16L0844-03 (MW16_122016)							Prepared & Analyzed: 12/21/2016			
Iron	3.57	0.0222	mg/L	1.11	2.20	123	75-125				
Reference (BL61087-SRM1)								Prepared & Analyzed: 12/21/2016			
Iron	0.997		ug/mL	1.10		90.7	85-115				
Batch BL61091 - EPA 3015A											
Blank (BL61091-BLK1)								Prepared & Analyzed: 12/21/2016			
Iron - Dissolved	ND	0.0200	mg/L								
Duplicate (BL61091-DUP1)	*Source sample: 16L0844-03 (MW16_122016)							Prepared & Analyzed: 12/21/2016			
Iron - Dissolved	0.995	0.0222	mg/L		1.04				4.03	20	
Matrix Spike (BL61091-MS1)	*Source sample: 16L0844-03 (MW16_122016)							Prepared & Analyzed: 12/21/2016			
Iron - Dissolved	1.87	0.0222	mg/L	1.11	1.04	75.2	75-125				
Reference (BL61091-SRM1)								Prepared & Analyzed: 12/21/2016			
Iron - Dissolved	1.09		ug/mL	1.10		99.5	85-115				

Anions by Ion Chromatography - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61106 - EPA 300											
Blank (BL61106-BLK1)								Prepared & Analyzed: 12/20/2016			
Chloride	ND	0.500	mg/L								
Nitrite as N	ND	0.0500	"								
Sulfate	ND	1.00	"								
LCS (BL61106-BS1)								Prepared & Analyzed: 12/20/2016			
Chloride	10.9	0.500	mg/L	10.0		109	85-115				
Nitrite as N	10.2	0.0500	"	10.0		102	90-110				
Sulfate	10.4	1.00	"	10.0		104	85-115				
Reference (BL61106-SRM1)								Prepared & Analyzed: 12/20/2016			
Chloride	12.5	0.500	mg/L	11.3		110	90-110				
Nitrite as N	3.91	0.0500	"	4.00		97.7	90-110				
Sulfate	7.54	1.00	"	6.95		108	90-110				
Batch BL61108 - EPA 300											
Blank (BL61108-BLK1)								Prepared & Analyzed: 12/21/2016			
Nitrite as N	ND	0.0500	mg/L								
LCS (BL61108-BS1)								Prepared & Analyzed: 12/21/2016			
Nitrite as N	9.48	0.0500	mg/L	10.0		94.8	90-110				
Duplicate (BL61108-DUP1)	*Source sample: 16L0844-03 (MW16_122016)							Prepared & Analyzed: 12/21/2016			
Nitrite as N	0.0215	0.0500	mg/L		0.0220				2.30	15	
Matrix Spike (BL61108-MS1)	*Source sample: 16L0844-03 (MW16_122016)							Prepared & Analyzed: 12/21/2016			
Nitrite as N	10.1	0.0500	mg/L	10.0	0.0220	101	90-110				

Anions by Ion Chromatography - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61108 - EPA 300											
Reference (BL61108-SRM1)								Prepared & Analyzed: 12/21/2016			
Nitrite as N	3.98	0.0500	mg/L	4.00		99.5	90-110				
Batch BL61193 - EPA 300											
Blank (BL61193-BLK1)								Prepared & Analyzed: 12/22/2016			
Chloride	ND	0.500	mg/L								
Sulfate	ND	1.00	"								
LCS (BL61193-BS1)								Prepared & Analyzed: 12/22/2016			
Chloride	10.9	0.500	mg/L	10.0		109	85-115				
Sulfate	10.6	1.00	"	10.0		106	85-115				
Reference (BL61193-SRM1)								Prepared & Analyzed: 12/22/2016			
Chloride	12.4		mg/L	11.3		109	90-110				
Sulfate	7.61		"	6.95		109	90-110				
Batch BL61474 - EPA 300											
Blank (BL61474-BLK1)								Prepared & Analyzed: 12/27/2016			
Chloride	ND	0.500	mg/L								
Sulfate	ND	1.00	"								
LCS (BL61474-BS1)								Prepared & Analyzed: 12/27/2016			
Chloride	10.9	0.500	mg/L	10.0		109	85-115				
Sulfate	10.3	1.00	"	10.0		103	85-115				

Anions by Ion Chromatography - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61474 - EPA 300											
Duplicate (BL61474-DUP2)	*Source sample: 16L0844-03 (MW16_122016)							Prepared & Analyzed: 12/28/2016			
Chloride	125	5.00	mg/L		125				0.0482	15	
Sulfate	306	10.0	"		304				0.643	15	
Reference (BL61474-SRM1)								Prepared & Analyzed: 12/27/2016			
Chloride	12.5		mg/L	11.3		110	90-110				
Sulfate	7.54		"	6.95		108	90-110				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61294 - Analysis Preparation											
Duplicate (BL61294-DUP1)	*Source sample: 16L0844-03 (MW16_122016)								Prepared & Analyzed: 12/27/2016		
Alkalinity, total	450	2.00	mg/L		455				1.10	15	
Reference (BL61294-SRM1)									Prepared & Analyzed: 12/27/2016		
Alkalinity, total	160	2.00	mg/L	160		100	90.6-111				
Batch BL61373 - Analysis Preparation											
Blank (BL61373-BLK1)									Prepared & Analyzed: 12/28/2016		
Salinity	ND	0.100	parts/thousand								
Duplicate (BL61373-DUP1)	*Source sample: 16L0844-03 (MW16_122016)								Prepared & Analyzed: 12/28/2016		
Salinity	ND	0.100	parts/thousand		ND					15	
Batch BL61443 - Analysis Preparation											
Blank (BL61443-BLK1)									Prepared & Analyzed: 12/29/2016		
Total Organic Carbon (TOC)	ND	1.00	mg/L								
LCS (BL61443-BS1)									Prepared & Analyzed: 12/29/2016		
Total Organic Carbon (TOC)	80.5	1.00	mg/L	78.3		103	79.5-125.1				
Duplicate (BL61443-DUP1)	*Source sample: 16L0844-03 (MW16_122016)								Prepared & Analyzed: 12/29/2016		
Total Organic Carbon (TOC)	6.73	1.00	mg/L		5.53				19.6	20	
Matrix Spike (BL61443-MS1)	*Source sample: 16L0844-03 (MW16_122016)								Prepared & Analyzed: 12/29/2016		
Total Organic Carbon (TOC)	27.3	1.00	mg/L	20.0	5.53	109	70-130				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
16L0844-01	FB01_122016	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0844-02	TB01_122016	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0844-03	MW16_122016	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0844-04	MW15_122016	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0844-05	MW12_122016	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0844-06	MW13_122016	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0844-07	DUP01_122016	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0844-08	MW05_122016	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Notes and Definitions

SCAL-E	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%).
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
M-RPD	Sample conc. <5 X reporting limit.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

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*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 16L0844

YOUR Information
Company: LANGAN
Address: 360 West 31st Street NY, NY 10001
Phone No. 212-479-5400
Contact Person: BRIAN GOCHENAUR
E-Mail Address: bgochenaur@langan.com

Report To:
Company:
Address:
Phone No. —//—
Attention:
E-Mail Address:

Invoice To:
Company:
Address:
Phone No. —//—
Attention:
E-Mail Address:

YOUR Project ID
170264501

Purchase Order No.
170264501

Samples from: CT ___ NY ✓ NJ ___

Turn-Around Time
- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ✓

Report Type
- Summary Report ___
- Summary w/ QA Summary ✓
- CT RCP Package ___
- CTRCP DQA/DUE Pkg ___
- NY ASP A Package ___
- NY ASP B Package ✓
- NJDEP Red. Deliv. ___

Electronic Data Deliverables (EDD)
- Simple Excel ___
- NYSDEC EQuIS ✓
- EQuIS (std) ___
- EZ-EDD (EQuIS) ___
- NJDEP SRP HazSite EDD ___
- GIS/KEY (std) ___
- Other ___
- **York Regulatory Comparison**
- **Excel Spreadsheet**

Compare to the following Regs. (please fill in): TOGS

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

M. Bogusz
Samples Collected/Authorized By (Signature)

MONIKA BOGUSZEWSKI
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dioxins/Furans	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
FB01_122016	12/20/16	DI water	(1)	10
TB01_122016		DI water	VOCs	2
MH16_122016 MS/MSD	0900	GW	(1)	30
MH15_122016	1130		(1)	10
MH12_122016	1245		(1)	10
MH13_122016	1305		(1)	10
DUP01_122016	—		(1)	10
MW05_122016	1430	↓	(1)	10

Comments
VOCs, Total and dissolved iron/manganese, total organic carbon, sulfate, nitrate, chloride, dissolved gases, alkalinity, turbidity

Preservation
Check those Applicable
Special Instructions
Field Filtered ☐
Lab to Filter ☐

4°C ✓ Frozen ___ HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___
ZnAc Ascorbic Acid Other wet ice

M. Bogusz — 12/20/16 — Samples Relinquished By / Date/Time
Samples Relinquished By / Date/Time

JAMES CHOMKO 12-20-16 1515/1550 — Samples Received By / Date/Time
12/20/16 1922 — Samples Received in LAB by / Date/Time

Temperature on Receipt 4.8 °C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Brian Gochenaur

Report Date: 12/29/2016
Client Project ID: 170264501
York Project (SDG) No.: 16L0909

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 12/29/2016
Client Project ID: 170264501
York Project (SDG) No.: 16L0909

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Brian Gochenaur

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 21, 2016 and listed below. The project was identified as your project: **170264501**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

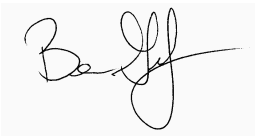
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
16L0909-01	MW07_122116	Water	12/21/2016	12/21/2016
16L0909-02	MW14_122116	Water	12/21/2016	12/21/2016
16L0909-03	TB02_122116	Water	12/21/2016	12/21/2016

General Notes for York Project (SDG) No.: 16L0909

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
9. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 12/29/2016

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: MW07_122116 **York Sample ID:** 16L0909-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 9:45 am	12/21/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
67-64-1	**Acetone**	**1.7**	CCV-E, SCAL-E, J	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
67-66-3	**Chloroform**	**0.22**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS

Sample Information

Client Sample ID: MW07_122116 **York Sample ID:** 16L0909-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 9:45 am	12/21/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/28/2016 08:41	12/28/2016 20:37	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/28/2016 08:41	12/28/2016 20:37	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
127-18-4	**Tetrachloroethylene**	**30**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
79-01-6	**Trichloroethylene**	**0.71**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/28/2016 08:41	12/28/2016 20:37	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*112 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*98.8 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*100 %*	*79-122*

Methane, Ethane & Ethylene

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	* Methane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/22/2016 10:11	12/22/2016 10:21	RQB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/22/2016 10:11	12/22/2016 10:21	RQB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/22/2016 10:11	12/22/2016 10:21	RQB

Iron by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: MW07_122116 **York Sample ID:** 16L0909-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 9:45 am	12/21/2016

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**5.82**		mg/L	0.0222	0.0222	1	EPA 6010C	12/22/2016 10:52	12/22/2016 16:31	KV
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.172**		mg/L	0.0222	0.0222	1	EPA 6010C	12/28/2016 11:08	12/28/2016 15:49	ALD
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**2330**		mg/L	3.45	25.0	50	EPA 300.0	12/24/2016 00:21	12/24/2016 00:21	DM1
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Nitrite as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.0365**		mg/L	0.00800	0.100	2	EPA 300.0	12/22/2016 03:59	12/22/2016 03:59	TJM
								Certifications:	NELAC-NY10854,CTDOH,PADEP		

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**72.4**		mg/L	1.72	20.0	20	EPA 300.0	12/23/2016 10:11	12/23/2016 10:11	DM1
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**450**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: MW07_122116 **York Sample ID:** 16L0909-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 9:45 am	12/21/2016

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	2.90		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	5.51		mg/L	1.00	1.00	1	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: MW14_122116 **York Sample ID:** 16L0909-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 9:00 am	12/21/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	NELAC-NY10854,NJDEP		
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:16	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		

Sample Information

Client Sample ID: MW14_122116 **York Sample ID:** 16L0909-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 9:00 am	12/21/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
71-43-2	**Benzene**	**0.22**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
67-66-3	**Chloroform**	**0.23**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
156-59-2	**cis-1,2-Dichloroethylene**	**74**		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 19:57	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
1634-04-4	**Methyl tert-butyl ether (MTBE)**	**1.5**	CCV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
91-20-3	**Naphthalene**	**6.9**		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 15:41	12/28/2016 09:16	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	12/27/2016 15:41	12/28/2016 09:16	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
127-18-4	**Tetrachloroethylene**	**38**		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 19:57	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
156-60-5	**trans-1,2-Dichloroethylene**	**0.41**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
79-01-6	**Trichloroethylene**	**13**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 15:41	12/28/2016 09:16	SS

Surrogate Recoveries	Result	Acceptance Range

Sample Information

Client Sample ID: MW14_122116 **York Sample ID:** 16L0909-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 9:00 am	12/21/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*116 %*			*69-130*						
2037-26-5	*Surrogate: Toluene-d8*	*97.2 %*			*81-117*						
460-00-4	*Surrogate: p-Bromofluorobenzene*	*94.0 %*			*79-122*						

Methane, Ethane & Ethylene

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Preparation for GC Analysis

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-82-8	* Methane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/22/2016 10:11	12/22/2016 10:30	RQB
74-84-0	* Ethane	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/22/2016 10:11	12/22/2016 10:30	RQB
74-85-1	* Ethylene (Ethene)	ND		ug/L	10	10	1	GC/Headspace Certifications:	12/22/2016 10:11	12/22/2016 10:30	RQB

Iron by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.627**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/22/2016 10:52	12/22/2016 16:36	KV

Iron, Dissolved by EPA 6010

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-89-6	**Iron**	**0.0418**		mg/L	0.0222	0.0222	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/28/2016 11:08	12/28/2016 15:54	ALD

Chloride

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**348**		mg/L	1.72	12.5	25	EPA 300.0 Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/23/2016 10:29	12/23/2016 10:29	DM1

Nitrite as N

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14797-65-0	**Nitrite as N**	**0.0362**		mg/L	0.00800	0.100	2	EPA 300.0 Certifications: NELAC-NY10854,CTDOH,PADEP	12/22/2016 04:17	12/22/2016 04:17	TJM

Sample Information

Client Sample ID: MW14_122116 **York Sample ID:** 16L0909-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 9:00 am	12/21/2016

Sulfate as SO4

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
14808-79-8	**Sulfate**	**59.3**		mg/L	0.172	2.00	2	EPA 300.0	12/22/2016 04:17	12/22/2016 04:17	TJM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Alkalinity, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Alkalinity, total	**380**		mg/L	2.00	2.00	1	SM 2320B	12/27/2016 10:16	12/27/2016 17:26	PAM
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Salinity

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	* Salinity	ND		parts/thousand		0.100	1	SM 2520B	12/28/2016 15:47	12/28/2016 18:05	PAM
								Certifications:			

Total Organic Carbon

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	LOD/MDL	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Organic Carbon (TOC)	**3.91**		mg/L	1.00	1.00	1	SM 5310C	12/29/2016 12:44	12/29/2016 18:25	AD
								Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP		

Sample Information

Client Sample ID: TB02_122116 **York Sample ID:** 16L0909-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 8:45 am	12/21/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:56	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:56	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:56	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/27/2016 15:41	12/28/2016 09:56	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP		

Sample Information

Client Sample ID: TB02_122116 **York Sample ID:** 16L0909-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 8:45 am	12/21/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
123-91-1	1,4-Dioxane	ND		ug/L	40	80	1	EPA 8260C Certifications:	12/27/2016 15:41 NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
67-64-1	**Acetone**	**1.4**	SCAL-E, J	ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
75-09-2	**Methylene chloride**	**2.2**		ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
91-20-3	**Naphthalene**	**1.5**	J	ug/L	1.0	2.0	1	EPA 8260C Certifications:	12/27/2016 15:41 NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 NELAC-NY10854	12/28/2016 09:56	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications:	12/27/2016 15:41 NELAC-NY10854	12/28/2016 09:56	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/27/2016 15:41 CTDOH,NELAC-NY10854,NJDEP	12/28/2016 09:56	SS

Sample Information

Client Sample ID: TB02_122116 **York Sample ID:** 16L0909-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
16L0909	170264501	Water	December 21, 2016 8:45 am	12/21/2016

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:56	SS
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:56	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:56	SS
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:56	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	12/27/2016 15:41	12/28/2016 09:56	SS
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	12/27/2016 15:41	12/28/2016 09:56	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*116 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*96.1 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*94.7 %*	*79-122*

Analytical Batch Summary

Batch ID: BL61164 **Preparation Method:** Preparation for GC Analysis **Prepared By:** RQB

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/22/16
16L0909-02	MW14_122116	12/22/16
BL61164-BLK1	Blank	12/22/16
BL61164-DUP1	Duplicate	12/22/16

Batch ID: BL61170 **Preparation Method:** EPA 3015A **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/22/16
16L0909-02	MW14_122116	12/22/16
BL61170-BLK1	Blank	12/22/16
BL61170-DUP1	Duplicate	12/22/16
BL61170-MS1	Matrix Spike	12/22/16
BL61170-SRM1	Reference	12/22/16

Batch ID: BL61192 **Preparation Method:** EPA 300 **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/22/16
16L0909-02	MW14_122116	12/22/16
BL61192-BLK1	Blank	12/21/16
BL61192-BS1	LCS	12/21/16
BL61192-SRM1	Reference	12/21/16

Batch ID: BL61248 **Preparation Method:** EPA 300 **Prepared By:** DM1

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/23/16
16L0909-02	MW14_122116	12/23/16
BL61248-BLK1	Blank	12/23/16
BL61248-BS1	LCS	12/23/16
BL61248-SRM1	Reference	12/23/16

Batch ID: BL61294 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/27/16
16L0909-02	MW14_122116	12/27/16
BL61294-SRM1	Reference	12/27/16

Batch ID: BL61301 **Preparation Method:** EPA 300 **Prepared By:** DM1

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/24/16
BL61301-BLK1	Blank	12/23/16
BL61301-BS1	LCS	12/23/16
BL61301-SRM1	Reference	12/23/16

Batch ID: BL61309 **Preparation Method:** EPA 5030B **Prepared By:** RDS

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-02	MW14_122116	12/27/16
16L0909-03	TB02_122116	12/27/16
BL61309-BLK1	Blank	12/27/16
BL61309-BS1	LCS	12/27/16
BL61309-BSD1	LCS Dup	12/27/16

Batch ID: BL61337 **Preparation Method:** EPA 5030B **Prepared By:** OW

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/28/16
16L0909-02RE1	MW14_122116	12/28/16
BL61337-BLK1	Blank	12/28/16
BL61337-BS1	LCS	12/28/16
BL61337-BSD1	LCS Dup	12/28/16

Batch ID: BL61361 **Preparation Method:** EPA 3015A **Prepared By:** ALD

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/28/16
16L0909-02	MW14_122116	12/28/16
BL61361-BLK1	Blank	12/28/16
BL61361-SRM1	Reference	12/28/16

Batch ID: BL61373 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/28/16
16L0909-02	MW14_122116	12/28/16
BL61373-BLK1	Blank	12/28/16

Batch ID: BL61443 **Preparation Method:** Analysis Preparation **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
16L0909-01	MW07_122116	12/29/16
16L0909-02	MW14_122116	12/29/16
BL61443-BLK1	Blank	12/29/16
BL61443-BS1	LCS	12/29/16

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61309 - EPA 5030B											
Blank (BL61309-BLK1)											
Prepared: 12/27/2016 Analyzed: 12/28/2016											
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	0.50	"								
Acetone	ND	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
Naphthalene	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*12.3*		*"*	*10.0*		*123*	*69-130*				
Surrogate: Toluene-d8	*10.1*		*"*	*10.0*		*101*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.45*		*"*	*10.0*		*94.5*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61309 - EPA 5030B											
LCS (BL61309-BS1)								Prepared & Analyzed: 12/27/2016			
1,1,1-Trichloroethane	12		ug/L	10.0		120	78-136				
1,1-Dichloroethane	11		"	10.0		111	82-129				
1,1-Dichloroethylene	11		"	10.0		109	68-138				
1,2,4-Trimethylbenzene	9.4		"	10.0		93.6	82-132				
1,2-Dichlorobenzene	10		"	10.0		99.5	79-123				
1,2-Dichloroethane	14		"	10.0		142	73-132	High Bias			
1,3,5-Trimethylbenzene	8.9		"	10.0		88.7	80-131				
1,3-Dichlorobenzene	9.3		"	10.0		92.9	86-122				
1,4-Dichlorobenzene	10		"	10.0		102	85-124				
1,4-Dioxane	250		"	200		125	10-349				
2-Butanone	12		"	10.0		124	49-152				
Acetone	12		"	10.0		124	14-150				
Benzene	10		"	10.0		100	85-126				
Carbon tetrachloride	12		"	10.0		117	77-141				
Chlorobenzene	10		"	10.0		104	88-120				
Chloroform	12		"	10.0		121	82-128				
cis-1,2-Dichloroethylene	10		"	10.0		103	83-129				
Ethyl Benzene	11		"	10.0		107	80-131				
Methyl tert-butyl ether (MTBE)	14		"	10.0		142	76-135	High Bias			
Methylene chloride	11		"	10.0		110	55-137				
Naphthalene	16		"	10.0		160	70-147	High Bias			
n-Butylbenzene	9.6		"	10.0		96.4	79-132				
n-Propylbenzene	9.0		"	10.0		90.2	78-133				
o-Xylene	11		"	10.0		114	78-130				
p- & m- Xylenes	22		"	20.0		111	77-133				
sec-Butylbenzene	8.7		"	10.0		87.1	79-137				
tert-Butylbenzene	8.6		"	10.0		86.3	77-138				
Tetrachloroethylene	11		"	10.0		106	82-131				
Toluene	11		"	10.0		106	80-127				
trans-1,2-Dichloroethylene	11		"	10.0		108	80-132				
Trichloroethylene	9.7		"	10.0		96.9	82-128				
Vinyl Chloride	8.9		"	10.0		89.3	58-145				
Surrogate: 1,2-Dichloroethane-d4	*14.2*		*"*	*10.0*		*142*	*69-130*				
Surrogate: Toluene-d8	*9.77*		*"*	*10.0*		*97.7*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.07*		*"*	*10.0*		*90.7*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61309 - EPA 5030B											
LCS Dup (BL61309-BSD1)									Prepared: 12/27/2016 Analyzed: 12/28/2016		
1,1,1-Trichloroethane	11		ug/L	10.0		110	78-136		8.95	30	
1,1-Dichloroethane	11		"	10.0		105	82-129		5.27	30	
1,1-Dichloroethylene	9.9		"	10.0		98.9	68-138		9.90	30	
1,2,4-Trimethylbenzene	9.2		"	10.0		92.4	82-132		1.29	30	
1,2-Dichlorobenzene	9.7		"	10.0		97.4	79-123		2.13	30	
1,2-Dichloroethane	13		"	10.0		129	73-132		9.24	30	
1,3,5-Trimethylbenzene	8.6		"	10.0		85.7	80-131		3.44	30	
1,3-Dichlorobenzene	9.4		"	10.0		93.6	86-122		0.751	30	
1,4-Dichlorobenzene	9.8		"	10.0		98.4	85-124		3.30	30	
1,4-Dioxane	280		"	200		138	10-349		10.4	30	
2-Butanone	11		"	10.0		112	49-152		9.89	30	
Acetone	9.1		"	10.0		90.8	14-150		31.3	30	Non-dir.
Benzene	9.7		"	10.0		97.4	85-126		2.73	30	
Carbon tetrachloride	10		"	10.0		104	77-141		11.9	30	
Chlorobenzene	10		"	10.0		102	88-120		2.24	30	
Chloroform	12		"	10.0		116	82-128		4.29	30	
cis-1,2-Dichloroethylene	9.8		"	10.0		97.9	83-129		5.37	30	
Ethyl Benzene	10		"	10.0		104	80-131		3.14	30	
Methyl tert-butyl ether (MTBE)	14		"	10.0		135	76-135		5.27	30	
Methylene chloride	10		"	10.0		102	55-137		7.73	30	
Naphthalene	17		"	10.0		170	70-147	High Bias	6.36	30	
n-Butylbenzene	9.2		"	10.0		92.1	79-132		4.56	30	
n-Propylbenzene	8.7		"	10.0		87.3	78-133		3.27	30	
o-Xylene	11		"	10.0		109	78-130		4.65	30	
p- & m- Xylenes	22		"	20.0		108	77-133		3.24	30	
sec-Butylbenzene	8.4		"	10.0		83.7	79-137		3.98	30	
tert-Butylbenzene	8.5		"	10.0		85.1	77-138		1.40	30	
Tetrachloroethylene	10		"	10.0		100	82-131		5.61	30	
Toluene	10		"	10.0		102	80-127		4.33	30	
trans-1,2-Dichloroethylene	9.8		"	10.0		97.9	80-132		9.35	30	
Trichloroethylene	9.5		"	10.0		94.7	82-128		2.30	30	
Vinyl Chloride	7.8		"	10.0		77.6	58-145		14.0	30	
Surrogate: 1,2-Dichloroethane-d4	*13.0*		*"*	*10.0*		*130*	*69-130*				
Surrogate: Toluene-d8	*9.56*		*"*	*10.0*		*95.6*	*81-117*				
Surrogate: p-Bromofluorobenzene	*9.16*		*"*	*10.0*		*91.6*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61337 - EPA 5030B											
Blank (BL61337-BLK1)											
Prepared & Analyzed: 12/28/2016											
1,1,1-Trichloroethane	ND	0.50	ug/L								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	80	"								
2-Butanone	ND	0.50	"								
Acetone	ND	2.0	"								
Benzene	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroform	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylene chloride	ND	2.0	"								
Naphthalene	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								
n-Propylbenzene	ND	0.50	"								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
sec-Butylbenzene	ND	0.50	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								
Surrogate: 1,2-Dichloroethane-d4	*10.0*		*"*	*10.0*		*100*	*69-130*				
Surrogate: Toluene-d8	*10.1*		*"*	*10.0*		*101*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.2*		*"*	*10.0*		*102*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61337 - EPA 5030B											
LCS (BL61337-BS1)							Prepared & Analyzed: 12/28/2016				
1,1,1-Trichloroethane	10		ug/L	10.0		105	78-136				
1,1-Dichloroethane	10		"	10.0		101	82-129				
1,1-Dichloroethylene	9.8		"	10.0		97.7	68-138				
1,2,4-Trimethylbenzene	9.5		"	10.0		95.1	82-132				
1,2-Dichlorobenzene	9.4		"	10.0		94.0	79-123				
1,2-Dichloroethane	10		"	10.0		104	73-132				
1,3,5-Trimethylbenzene	9.6		"	10.0		96.1	80-131				
1,3-Dichlorobenzene	9.4		"	10.0		94.0	86-122				
1,4-Dichlorobenzene	9.4		"	10.0		94.0	85-124				
1,4-Dioxane	210		"	200		106	10-349				
2-Butanone	11		"	10.0		106	49-152				
Acetone	7.0		"	10.0		69.5	14-150				
Benzene	9.5		"	10.0		95.4	85-126				
Carbon tetrachloride	10		"	10.0		102	77-141				
Chlorobenzene	9.8		"	10.0		97.8	88-120				
Chloroform	10		"	10.0		103	82-128				
cis-1,2-Dichloroethylene	10		"	10.0		100	83-129				
Ethyl Benzene	10		"	10.0		99.9	80-131				
Methyl tert-butyl ether (MTBE)	11		"	10.0		108	76-135				
Methylene chloride	9.3		"	10.0		92.7	55-137				
Naphthalene	12		"	10.0		117	70-147				
n-Butylbenzene	9.6		"	10.0		95.8	79-132				
n-Propylbenzene	9.9		"	10.0		99.1	78-133				
o-Xylene	10		"	10.0		100	78-130				
p- & m- Xylenes	20		"	20.0		102	77-133				
sec-Butylbenzene	9.5		"	10.0		94.7	79-137				
tert-Butylbenzene	9.4		"	10.0		94.5	77-138				
Tetrachloroethylene	8.6		"	10.0		85.6	82-131				
Toluene	10		"	10.0		102	80-127				
trans-1,2-Dichloroethylene	9.8		"	10.0		98.5	80-132				
Trichloroethylene	9.4		"	10.0		94.2	82-128				
Vinyl Chloride	8.1		"	10.0		80.8	58-145				
Surrogate: 1,2-Dichloroethane-d4	*10.6*		*"*	*10.0*		*106*	*69-130*				
Surrogate: Toluene-d8	*10.0*		*"*	*10.0*		*100*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.1*		*"*	*10.0*		*101*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61337 - EPA 5030B											
LCS Dup (BL61337-BSD1)								Prepared & Analyzed: 12/28/2016			
1,1,1-Trichloroethane	11		ug/L	10.0		113	78-136		7.44	30	
1,1-Dichloroethane	10		"	10.0		105	82-129		3.49	30	
1,1-Dichloroethylene	10		"	10.0		102	68-138		4.60	30	
1,2,4-Trimethylbenzene	10		"	10.0		104	82-132		8.94	30	
1,2-Dichlorobenzene	10		"	10.0		100	79-123		6.29	30	
1,2-Dichloroethane	10		"	10.0		104	73-132		0.768	30	
1,3,5-Trimethylbenzene	11		"	10.0		106	80-131		9.51	30	
1,3-Dichlorobenzene	10		"	10.0		99.9	86-122		6.09	30	
1,4-Dichlorobenzene	10		"	10.0		104	85-124		9.72	30	
1,4-Dioxane	200		"	200		98.9	10-349		6.54	30	
2-Butanone	9.4		"	10.0		93.6	49-152		12.1	30	
Acetone	8.2		"	10.0		82.3	14-150		16.9	30	
Benzene	9.9		"	10.0		99.2	85-126		3.91	30	
Carbon tetrachloride	11		"	10.0		106	77-141		4.53	30	
Chlorobenzene	11		"	10.0		105	88-120		7.29	30	
Chloroform	11		"	10.0		106	82-128		2.67	30	
cis-1,2-Dichloroethylene	11		"	10.0		106	83-129		4.95	30	
Ethyl Benzene	11		"	10.0		108	80-131		7.61	30	
Methyl tert-butyl ether (MTBE)	11		"	10.0		106	76-135		1.31	30	
Methylene chloride	9.3		"	10.0		93.2	55-137		0.538	30	
Naphthalene	11		"	10.0		106	70-147		9.42	30	
n-Butylbenzene	11		"	10.0		106	79-132		9.64	30	
n-Propylbenzene	11		"	10.0		107	78-133		7.76	30	
o-Xylene	11		"	10.0		107	78-130		6.28	30	
p- & m- Xylenes	22		"	20.0		110	77-133		7.77	30	
sec-Butylbenzene	11		"	10.0		105	79-137		10.5	30	
tert-Butylbenzene	10		"	10.0		103	77-138		8.99	30	
Tetrachloroethylene	9.5		"	10.0		95.3	82-131		10.7	30	
Toluene	11		"	10.0		109	80-127		6.91	30	
trans-1,2-Dichloroethylene	10		"	10.0		102	80-132		3.88	30	
Trichloroethylene	11		"	10.0		106	82-128		11.3	30	
Vinyl Chloride	8.8		"	10.0		87.6	58-145		8.08	30	
Surrogate: 1,2-Dichloroethane-d4	*10.0*		*"*	*10.0*		*100*	*69-130*				
Surrogate: Toluene-d8	*10.3*		*"*	*10.0*		*103*	*81-117*				
Surrogate: p-Bromofluorobenzene	*10.6*		*"*	*10.0*		*106*	*79-122*				

Gas Chromatography/Flame Ionization Detector - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61164 - Preparation for GC Analysis											
Blank (BL61164-BLK1)									Prepared & Analyzed: 12/22/2016		
Methane	ND	10	ug/L								
Ethane	ND	10	"								
Ethylene (Ethene)	ND	10	"								
Duplicate (BL61164-DUP1)	*Source sample: 16L0909-01 (MW07_122116)								Prepared & Analyzed: 12/22/2016		
Methane	ND	10	ug/L		ND					30	
Ethane	ND	10	"		ND					30	
Ethylene (Ethene)	ND	10	"		ND					30	

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61170 - EPA 3015A											
Blank (BL61170-BLK1)								Prepared & Analyzed: 12/22/2016			
Iron	ND	0.0200	mg/L								
Duplicate (BL61170-DUP1)	*Source sample: 16L0909-02 (MW14_122116)							Prepared & Analyzed: 12/22/2016			
Iron	0.639	0.0222	mg/L		0.627				1.94	20	
Matrix Spike (BL61170-MS1)	*Source sample: 16L0909-02 (MW14_122116)							Prepared: 12/22/2016 Analyzed: 12/23/2016			
Iron	1.72	0.0222	mg/L	1.11	0.627	98.5	75-125				
Reference (BL61170-SRM1)								Prepared & Analyzed: 12/22/2016			
Iron	1.23		ug/mL	1.10		111	85-115				
Batch BL61361 - EPA 3015A											
Blank (BL61361-BLK1)								Prepared & Analyzed: 12/28/2016			
Iron - Dissolved	ND	0.0200	mg/L								
Reference (BL61361-SRM1)								Prepared & Analyzed: 12/28/2016			
Iron - Dissolved	1.23		ug/mL	1.10		111	85-115				

Anions by Ion Chromatography - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61192 - EPA 300											
Blank (BL61192-BLK1)								Prepared & Analyzed: 12/21/2016			
Nitrite as N	ND	0.0500	mg/L								
Sulfate	ND	1.00	"								
LCS (BL61192-BS1)								Prepared & Analyzed: 12/21/2016			
Nitrite as N	10.1	0.0500	mg/L	10.0		101	90-110				
Sulfate	10.6	1.00	"	10.0		106	85-115				
Reference (BL61192-SRM1)								Prepared & Analyzed: 12/21/2016			
Nitrite as N	3.94		mg/L	4.00		98.5	90-110				
Sulfate	7.02		"	6.95		101	90-110				
Batch BL61248 - EPA 300											
Blank (BL61248-BLK1)								Prepared & Analyzed: 12/23/2016			
Chloride	ND	0.500	mg/L								
Sulfate	ND	1.00	"								
LCS (BL61248-BS1)								Prepared & Analyzed: 12/23/2016			
Chloride	10.9	0.500	mg/L	10.0		109	85-115				
Sulfate	10.6	1.00	"	10.0		106	85-115				
Reference (BL61248-SRM1)								Prepared & Analyzed: 12/23/2016			
Chloride	12.5		mg/L	11.3		111	90-110	High Bias			
Sulfate	7.44		"	6.95		107	90-110				
Batch BL61301 - EPA 300											
Blank (BL61301-BLK1)								Prepared & Analyzed: 12/23/2016			
Chloride	ND	0.500	mg/L								

Anions by Ion Chromatography - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61301 - EPA 300											
LCS (BL61301-BS1)								Prepared & Analyzed: 12/23/2016			
Chloride	10.8	0.500	mg/L	10.0		108	85-115				
Reference (BL61301-SRM1)								Prepared & Analyzed: 12/23/2016			
Chloride	12.4		mg/L	11.3		110	90-110				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL61294 - Analysis Preparation											
Reference (BL61294-SRM1)								Prepared & Analyzed: 12/27/2016			
Alkalinity, total	160	2.00	mg/L	160		100	90.6-111				
Batch BL61373 - Analysis Preparation											
Blank (BL61373-BLK1)								Prepared & Analyzed: 12/28/2016			
Salinity	ND	0.100	parts/thousand								
Batch BL61443 - Analysis Preparation											
Blank (BL61443-BLK1)								Prepared & Analyzed: 12/29/2016			
Total Organic Carbon (TOC)	ND	1.00	mg/L								
LCS (BL61443-BS1)								Prepared & Analyzed: 12/29/2016			
Total Organic Carbon (TOC)	80.5	1.00	mg/L	78.3		103	79.5-125.1				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
16L0909-01	MW07_122116	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0909-02	MW14_122116	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16L0909-03	TB02_122116	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Notes and Definitions

SCAL-E	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%).
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
CCV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).

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*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 16L0909

YOUR Information

Company: Langan
Address: 360 West 31st St NY, NY 10001
Phone No: 212-479-5400
Contact Person: Brian Bachmann
E-Mail Address: bbachmann@langan.com

Report To:

Company: Same
Address:
Phone No:
Attention:
E-Mail Address:

Invoice To:

Company: Same
Address:
Phone No:
Attention:
E-Mail Address:

YOUR Project ID

170264501

Purchase Order No.

170264501

Samples from: CT _ NY ✓ NJ _

Turn-Around Time

- RUSH - Same Day
- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard(5-7 Days) ✓

Report Type

- Summary Report
- Summary w/ QA Summary ✓
- CT RCP Package
- CTRCP DQA DUE Pkg
- NY ASP A Package
- NY ASP B Package ✓
- NJDEP Red. Deliv.

Electronic Data Deliverables (EDD)

- Simple Excel
- NYSDEC EQuIS ✓
- EQuIS (std)
- EZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS KEY (std)
- Other
- **York Regulatory Comparison Excel Spreadsheet** Compare to the following Regs. (please list):

TOGS

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

Elizabeth Johns
Name (printed)

Matrix Codes

S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT 15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App.IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360/Reactive	Hetero.trophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360/Reactive	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360/Organic	BTU 2b
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360/Organic	Aquatic Tox.
Halog. only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sec. 19	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sec. 19	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
MW07-122116	12/21/16 0945	GW	①	10
MW14-122116	12/21/16 0900	GW	①	10
TB02-122116	12/21/16 0815	DI Water	VOCs	2

Comments

① VOCs, Total + dissolved Iron (Lab filtered), total organic carbon, sulfate, nitrate, chloride, dissolved gases, salinity, alkalinity

Preservation Check those Applicable

Special Instructions
Field Filtered
Lab to Filter ✓

4°C ✓ Frozen ___ HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other on ice

Samples Relinquished By	Date/Time 1611 12/21/16	Samples Received By	Date/Time 12/21/16 1711
Samples Relinquished By	Date/Time	Samples Received in LAB by	Date/Time 12-21-16 1918

Temperature on Receipt 3.1 °C

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Brian Gochenaur
Langan Engineering & Environmental Services
360 West 31st Street
New York, NY 10001

Phone:

Fax:

Identifier: 032NI **Date Rec:** 09/09/2016 **Report Date:** 09/12/2016

Client Project #: 170264501 **Client Project Name:** 535 4th Ave

Purchase Order #: 170264501

Analysis Requested: CENSUS

Reviewed By:

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Langan Engineering & Environmental Servic**
Project: 535 4th Ave

MI Project Number: **032NI**
Date Received: 09/09/2016

Sample Information

Client Sample ID:		**MW16_090816**	**MW14_090816**	**MW13_090816**	**DUP01_090816**	**MW12_090916**
Sample Date:		09/08/2016	09/08/2016	09/08/2016	09/08/2016	09/09/2016
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst:		JS	JS	JS	JS	JS
Dechlorinating Bacteria						
Dehalococcoides	*DHC*	**3.43E+02**	**4.00E-01 (J)**	**4.68E+05**	**3.24E+02**	**6.00E+02**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Langan Engineering & Environmental Servic**
Project: 535 4th Ave

MI Project Number: **032NI**
Date Received: 09/09/2016

Sample Information

Client Sample ID:		**MW15_090916**	**MW07_090916**
Sample Date:		09/09/2016	09/09/2016
Units:		cells/mL	cells/mL
Analyst:		JS	JS
Dechlorinating Bacteria			
Dehalococcoides	*DHC*	<5.00E-01	**5.87E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **9/9/2016**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	09/09/2016	09/12/2016	3 °C	114%	non-detect	non-detect

Samples Received **9/10/2016**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	09/10/2016	09/12/2016	2 °C	114%	non-detect	non-detect

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Brian Gochenaur
Langan Engineering & Environmental Services
360 West 31st Street
New York, NY 10001

Phone:

Fax:

Identifier: 078NL **Date Rec:** 12/21/2016 **Report Date:** 12/23/2016

Client Project #: 170264501 **Client Project Name:** 535 4th Ave

Purchase Order #: 170264501

Analysis Requested: CENSUS

Reviewed By:

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Langan Engineering & Environmental Servic**
Project: 535 4th Ave

MI Project Number: **078NL**
Date Received: 12/21/2016

Sample Information

Client Sample ID:		**MW16_122016**	**MW15_122016**	**MW12_122016**	**MW13_122016**	**DUP01_122016**
Sample Date:		12/20/2016	12/20/2016	12/20/2016	12/20/2016	12/20/2016
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst:		JS	JS	JS	JS	JS
Dechlorinating Bacteria						
Dehalococcoides	*DHC*	**3.53E+01**	<3.20E+00	**6.81E+04**	**3.98E+06**	**5.72E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Langan Engineering & Environmental Servic**
Project: 535 4th Ave

MI Project Number: **078NL**
Date Received: 12/21/2016

Sample Information

Client Sample ID:		**MW05_122016**	**MW07_122116**	**MW14_122116**
Sample Date:		12/20/2016	12/21/2016	12/21/2016
Units:		cells/mL	cells/mL	cells/mL
Analyst:		JS	JS	JS
Dechlorinating Bacteria				
Dehalococcoides	*DHC*	<9.10E+00	**7.00E-01**	**1.26E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **12/21/2016**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/21/2016	12/23/2016	5 °C	104%	non-detect	non-detect

Samples Received **12/22/2016**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/22/2016	12/23/2016	5 °C	101%	non-detect	non-detect