DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING

2620 Grand Island Blvd. Grand Island, New York 14072 ph (716) 773-6872 /fax (716) 773-6873 www.daiglerengineering.com

October 12, 2017

David Szymanski
Project Manager
New York State Department of Environmental Conservation-Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Republic Steel/LTV/Steelfields, LTD
Marilla Street Landfill (Site ID No. 915047)
Post-Closure Monitoring and Maintenance Plan – 2017 Periodic Review Report

Dear Mr. Szymanski:

On behalf of Steelfields, LTD, please find enclosed the 2017 Periodic Review Report (PRR) for the Post-Closure Monitoring and Maintenance Plan for the Marilla Street Landfill. This report is submitted by October 12th, 2017, as required, and includes all sampling, inspection, and maintenance activities performed during the 2017 calendar year. Appendix I includes the signed Institutional Controls and/or Engineering Controls (IC/EC) Certification forms documenting that all site management requirements are being met.

The Electronic Data Deliverables (EDDs) for NYSDEC's EQuIS database will be submitted to the EQuIS Database Administrator via email. I will copy you on the email.

We trust this report satisfies the requirements for annual reporting per the Post-Closure Monitoring and Maintenance Plan. Should you have any questions or comments, please do not hesitate to contact us.

Sincerely,

DAIGLER ENGINEERING, PC

Allyson M. Zurawski, E.I.T.
Environmental Engineer

cc: Richard Palumbo, Esq.
Gary Smith

Enclosure: Post-Closure Monitoring and Maintenance Program – 2017 Period Review Report – Marilla Street Landfill

POST-CLOSURE MONITORING AND MAINTENANCE PROGRAM

2017 Periodic Review Report

MARILLA STREET LANDFILL

NYSDEC SITE ID NO. 915047

Prepared on behalf of:

Steelfields, LTD
186 Knickerbocker Road
Pittsford, New York 14534

Prepared by:

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 Grand Island Blvd.
Grand Island, New York 14072

October 2017

POST-CLOSURE MONITORING & MAINTENANCE PROGRAM

2017 Periodic Review Report

MARILLA STREET LANDFILL

NYSDEC SITE ID NO. 915047

Prepared on behalf of:

Steelfields, LTD
186 Knickerbocker Road
Pittsford, New York 14534

Prepared by:

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 Grand Island Blvd.
Grand Island, New York 14072

October 2017

POST-CLOSURE MONITORING & MAINTENANCE PROGRAM
2017 Periodic Review Report

Steelfields, LTD

TABLE OF CONTENTS

List of Figures

TABLE OF CONTENTS

List of Appendices & Tables

1 INTRODUCTION

The Marilla Street Landfill (Site ID No. 915047) is located on a 100-acre parcel of land in the City of Buffalo, Erie County, New York. The landfill itself is approximately 80 acres, situated approximately 1.5 miles east of Lake Erie, and just west of Hopkins Street. Railroad tracks run adjacent to the property along the west and north, and also divide the site into different fill areas. A location map illustrates these features and is shown in Figure 1-1.

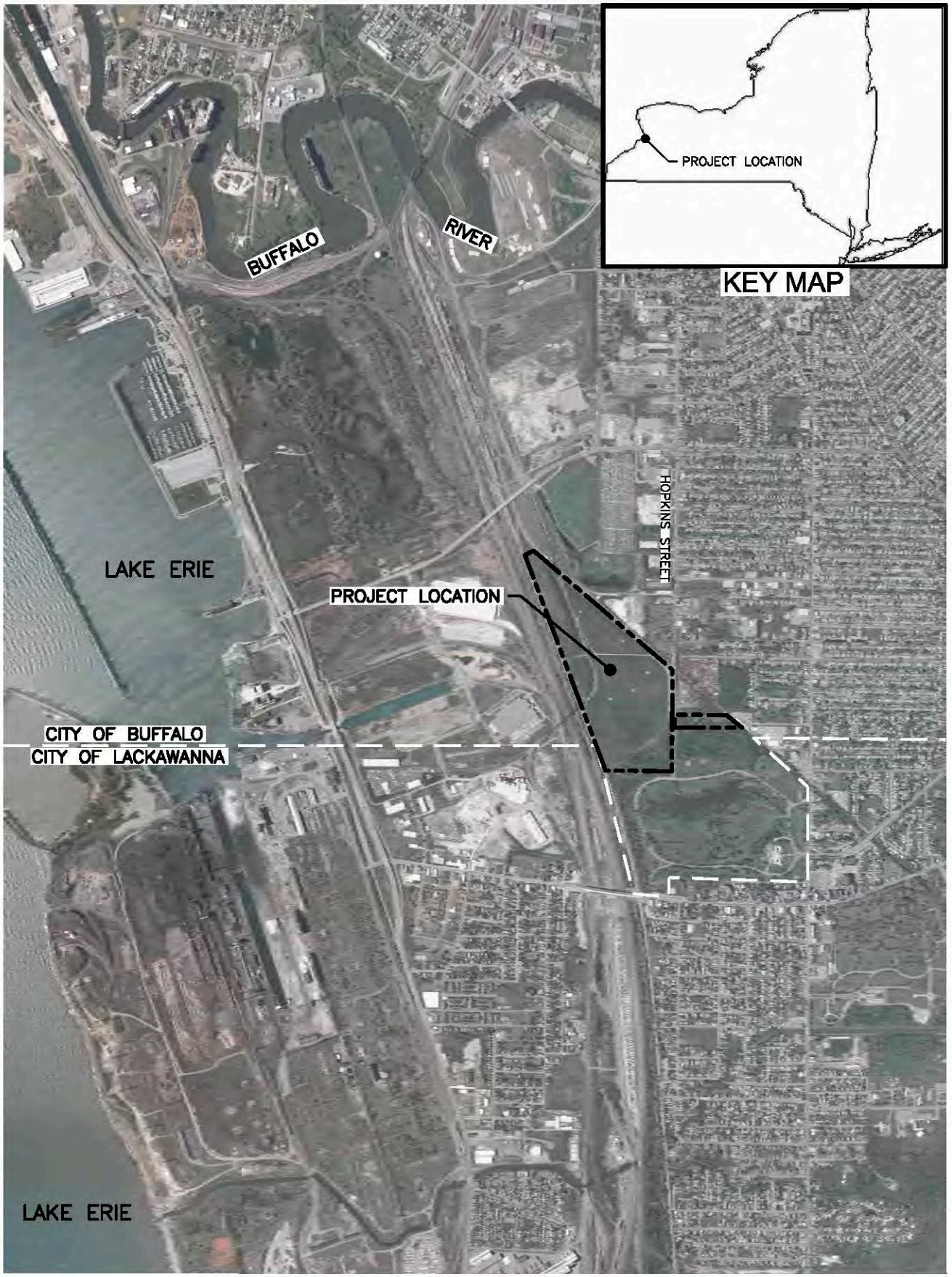
The landfill operated from 1930 through the summer of 1981 when it was owned by LTV Steel Company (formerly Republic Steel) and accepted wastes primarily produced by local steelmaking operations at the Buffalo Plant. Discarded wastes included, among others, construction and demolition debris, blast furnace and basic oxygen furnace (BOF) dust, precipitator dust, clarifier sludge from the steel plant's wastewater treatment system, and railroad ties.

The facility operated as an above-grade fill operation and the waste was divided by type. The landfill consists of the BOF Dust Area, the Clarifier Sludge Area, and several Miscellaneous Debris Areas as shown on the site plan in Figure 1-2. The Former Sediment Disposal Area is also contained within the larger Miscellaneous Debris Area west of Hopkins Street. The five-acre BOF Dust Area was capped in 1990 in accordance with 6 NYCRR Part 373. The latter two areas encompassing the remaining landfill area were capped in 1992 and 1993, respectively, under 6 NYCRR Part 360.

LTV Steel Company entered into an Order on Consent (File No. 89-57 R9-2808-89-05) with the New York State Department of Environmental Conservation (NYSDEC) in October 1992 to perform closure and post-closure maintenance and monitoring of the site. Steelfields, LTD acquired the site from LTV Steel Company and entered into a voluntary cleanup agreement with the NYSDEC in October 2002. To date, five onsite wetlands have been remediated which involved the excavation and removal of contaminated sediments, placement of clay and topsoil, and revegetation. Steelfields, LTD monitors and maintains the site in accordance with the *Post-Closure Monitoring and Maintenance Plan for Republic Steel/LTV*, Rev October 2010 (hereto referred to as the Site Management Plan (SMP)). Two recent modification requests, which are

described in Section 2.1, were accepted by the NYSDEC and are incorporated into the monitoring requirements by reference.

This report satisfies the requirement for the 2017 annual reporting and assessment of post-closure monitoring and maintenance activities at the Marilla Street Landfill as outlined in the SMP and referenced modifications. Sampling results, analysis, evaluation of the results, and a discussion of statistical trending are included herein. A summary of the post-closure site inspection and maintenance activities performed during 2017 is also provided.



Q:\Steelfields\Marilla Street Landfill\24-0117 2017 Annual Report\Report\FIG 1-1LOCATION MAP.dwg 9/29/2017 7:14 AM

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072
(716) 773-6872 (716) 773-6873 FAX

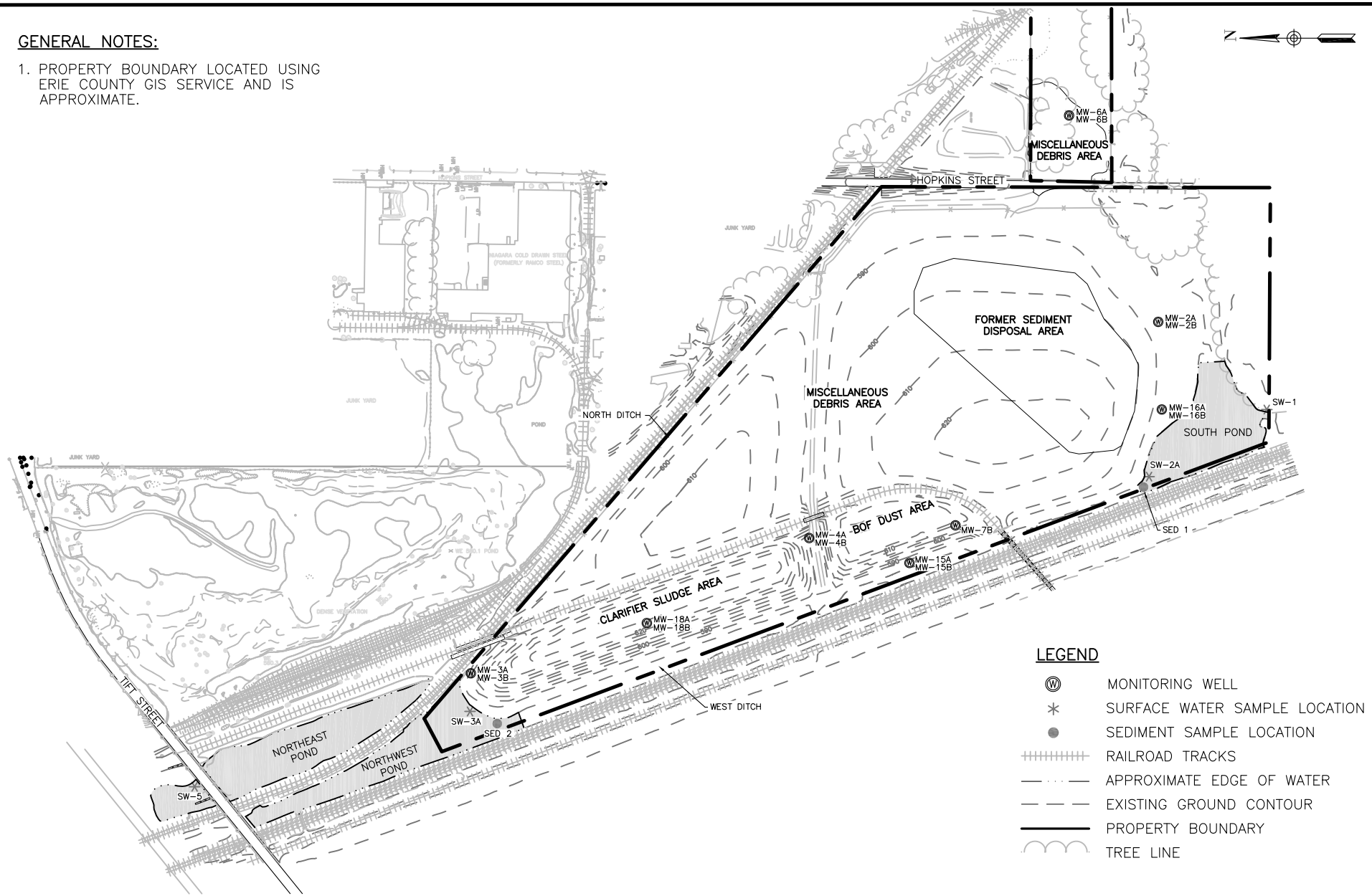
LOCATION MAP

MARILLA STREET LANDFILL PERIODIC REVIEW REPORT

STEELFIELDS, LTD			
CITY OF BUFFALO	ERIE COUNTY	NEW YORK	FIGURE 1-1
September 2017	SCALE: NOT TO SCALE	REVISION # 0	

GENERAL NOTES:

1. PROPERTY BOUNDARY LOCATED USING ERIE COUNTY GIS SERVICE AND IS APPROXIMATE.



DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072
(716) 773-6872 (716) 773-6873 FAX

STEELFIELDS, LTD		SITE PLAN			FIGURE 1-2
SCALE: 1" = 600'	REVISION # 0	MARILLA STREET LANDFILL			
September 2017		CITY OF BUFFALO	ERIE COUNTY	NEW YORK	

Q:\Steelfields\Marilla Street Landfill\ACAD\FIG 2-SITE PLAN.dwg 9/29/2017 7:23 AM

2 MONITORING AND MAINTENANCE PROGRAM

2.1 GENERAL

Monitoring and maintenance of the Marilla Street Landfill operate under the conditions specified in the SMP as modified in a petition to the NYSDEC dated July 15, 2015 (Daigler Engineering, PC). The proposed modifications were accepted by the NYSDEC in a letter dated August 21, 2015. Additionally, MW-14BR was removed from the monitoring program in a letter dated May 22, 2017 and accepted June 15, 2017 by the NYSDEC. The justification for removal and correspondence can be found in Appendix B.

The SMP and accepted reductions specify sampling locations and methodology, analytical requirements, laboratory quality assurance/quality control procedures, and reporting requirements, as well as procedures for routine inspection and maintenance activities. Monitoring of surface water and shallow overburden groundwater is to be conducted annually, in addition to an overall site and final cover inspection. Monitoring of deep overburden groundwater and pond sediments are to be conducted every third year. The next triennial sampling event occurs in 2019. The approximate sampling locations are shown on Figure 1-2.

Sampling procedures, including collection and preservation, were completed in general accordance with the SMP for the 2017 sampling event between August 28th and 29th. Where deviations from the SMP's sampling protocol occurred, these anomalies are noted herein. Decontamination of shared sampling equipment (e.g., stainless steel dipper used for surface water sample collection, and the hand pump used for filtering surface water and groundwater) was performed by washing the equipment with phosphate-free soap and 10% nitric acid with a brush, then rinsing with deionized water.

Laboratory analysis was performed by ALS Environmental (ALS) of Rochester, New York, an ELAP certified laboratory. The analytical methods used (see Table 1) deviate from those required in the SMP. The laboratory reported that the methods specified in the SMP were outdated, and the methods actually used are the most current certified methods equivalent to those in the SMP.

2.2 SURFACE WATER

Four surface water samples are to be collected annually from the remediated wetland areas and analyzed for the set of parameters listed in Table 1 of Appendix A. Should leachate seeps be identified during the site inspection, these breakouts are to be sampled for the same suite of parameters as identified in Table 1 for surface water. No seeps were identified during the current monitoring period. The four surface water samples are described as follows:

- **SW-1** – South Pond Inlet, collected from open drainage channel entering the South Pond, used to establish regional background levels;
- **SW-2A** – South Pond near cutoff wall location;
- **SW-3A** – Southern end of Northwest Pond; and,
- **SW-5** – Northern end of Northeast Pond.

Surface water samples were collected on August 28th and 29th, 2017 at the four locations as described above. A blind duplicate (SW-DUP) was collected at SW-3A. Each grab sample was analyzed in the field for temperature, pH, conductivity, and turbidity and recorded on the Field Observation forms as shown in Appendix C. Field measurements are summarized in Table 2 in Appendix A.

As per the requirements of the SMP, surface water is to be field filtered and analyzed for soluble metals if the turbidity is greater than 50 NTU. No surface water samples demonstrated turbidity readings greater than 50 NTU. However, all surface water samples were filtered in the field and analyzed for soluble metals to facilitate a comparison to increasing trends in groundwater wells as suggested in the 2013 Periodic Review Report, December 2013 (Daigler Engineering, PC). A summary of the analytical results is provided in Table 3 of Appendix A. Analytical reports and chain of custody forms are provided in Appendix D.

2.2.1 Surface Water Quality Analysis

Surface water quality analytical results were compared to NYSDEC Class D Surface Water Quality Standards and Guidance Values per 6 NYCRR Part 703 and Technical and Operational Guidance Series (TOGS) 1.1.1 as shown in Table 3 for the current calendar year. With the exception of total iron, all analytical results were below (or in the range for pH) the Class D standards. Total iron exceedances are consistent with historic sampling results. Iron levels at all

surface water locations have been greater than the Class D standard for the last six years, with the exception of SW-2A, which was less than the standard in 2015. The background surface water sampling location, SW-1, is typically high in total iron concentration and appears to be on an upward trend. The concentration this year remains elevated, approximately 1.4 times the average concentration. Downstream concentrations of total iron are also elevated this year. Despite this, total iron continues to exhibit decreasing trends at all downstream locations as can be seen in the moving average trend analyses for surface water presented in Appendix G.

Analytical results for background (SW-1) and downstream sampling locations are generally similar. This suggests that downstream water quality is characteristic of the water quality from upstream of the site. Concentrations of several parameters recorded at SW-2A were elevated this year with the second highest concentration on record in conductivity, total organic carbon, total dissolved solids, and total iron. Intra-location maxima were observed in total and dissolved manganese at this location, as well. Total dissolved solids at SW-3A and pH at SW-5 were the second and third highest concentrations on record, respectively. The increasing trend in pH at SW-5 is not paralleled by an increasing trend at the upstream surface water sampling location. All other surface water results were typical.

2.3 GROUNDWATER

In following with the 2015 and 2017 approved modifications to monitoring requirements, groundwater at the site is monitored on an annual basis for the parameters listed in Table 1 at eight monitoring wells. Every third year (2016, 2019, 2022, etc.), additional monitoring is conducted at seven deep overburden wells to detect downward leachate migration for the same set of parameters as the annual sampling event. Shallow overburden well IDs are succeeded by a "B" and deep overburden well IDs are designated with an "A". The following list identifies the monitoring wells sampled annually and those that are sampled every third year:

- **Annual** – MW-2B, MW-3B, MW-4B, MW-6B, MW-7B, MW-15B, MW-16B, MW-18B; and,
- **Triennial** –MW-2A, MW-3A, MW-4A, MW-6A, MW-15A, MW-16A, MW-18A.

Note that monitoring wells MW-6A and MW-6B represent the background wells for their respective water bearing units.

Groundwater sampling was conducted between August 28th and 29th, 2017. A photoionization detector was used to measure organic vapors from each well once the cover was unlocked and removed. All wells were recorded at zero ppm, with the exception of MW-16B which had a large wasp nest requiring the use of aerosol insecticide, skewing the volatile levels. Following static groundwater measurement at all shallow wells, the wells were purged and sampled using dedicated polyethylene bailers per the requirements in the SMP. While purging, the groundwater was field tested for temperature, pH, conductivity, and turbidity and recorded on the field observation sheets shown in Appendix C. After purging four well volumes, a sample was collected and field parameters were recorded for the sample on the field observation sheets. Field data are summarized in Table 2. Groundwater samples were preserved for analysis in laboratory provided containers.

Samples collected from two wells, MW-2B and MW-3B, measured greater than 50 NTU in turbidity. Subsequently, as mandated by the SMP, dissolved metals analyses were performed in addition to total metals for these samples. Background monitoring well MW-6B was also field filtered and tested for soluble metals for moving average trend analysis (MATA) purposes even though the turbidity reading was less than 50 NTU. A blind duplicate (GW-DUP) was collected from MW-4B and the matrix spike/matrix spike duplicate was collected from MW-18B. Analytical reports prepared by ALS and chain of custody forms are provided in Appendix D. A discussion and evaluation of the results are presented herein.

2.3.1 Groundwater Levels and Site Hydrogeology

Groundwater elevation data was gathered from all eight shallow overburden wells as summarized in Tables 4 and 5 of Appendix A. Water levels and the total depth of each well were measured from the top of casing and were recorded on the field observations logs at the time of measurement. All field observations logs are included in Appendix C.

A plot illustrating the groundwater elevations of each shallow monitoring well is presented in Figure 3. Groundwater elevations returned to more normal levels following last year's record number of intrawell minima, with nearly all wells experiencing elevations within plus or minus

one standard deviation of the mean for the data set (MW-2B was within two standard deviations of the mean).

2.3.2 Groundwater Quality Analysis

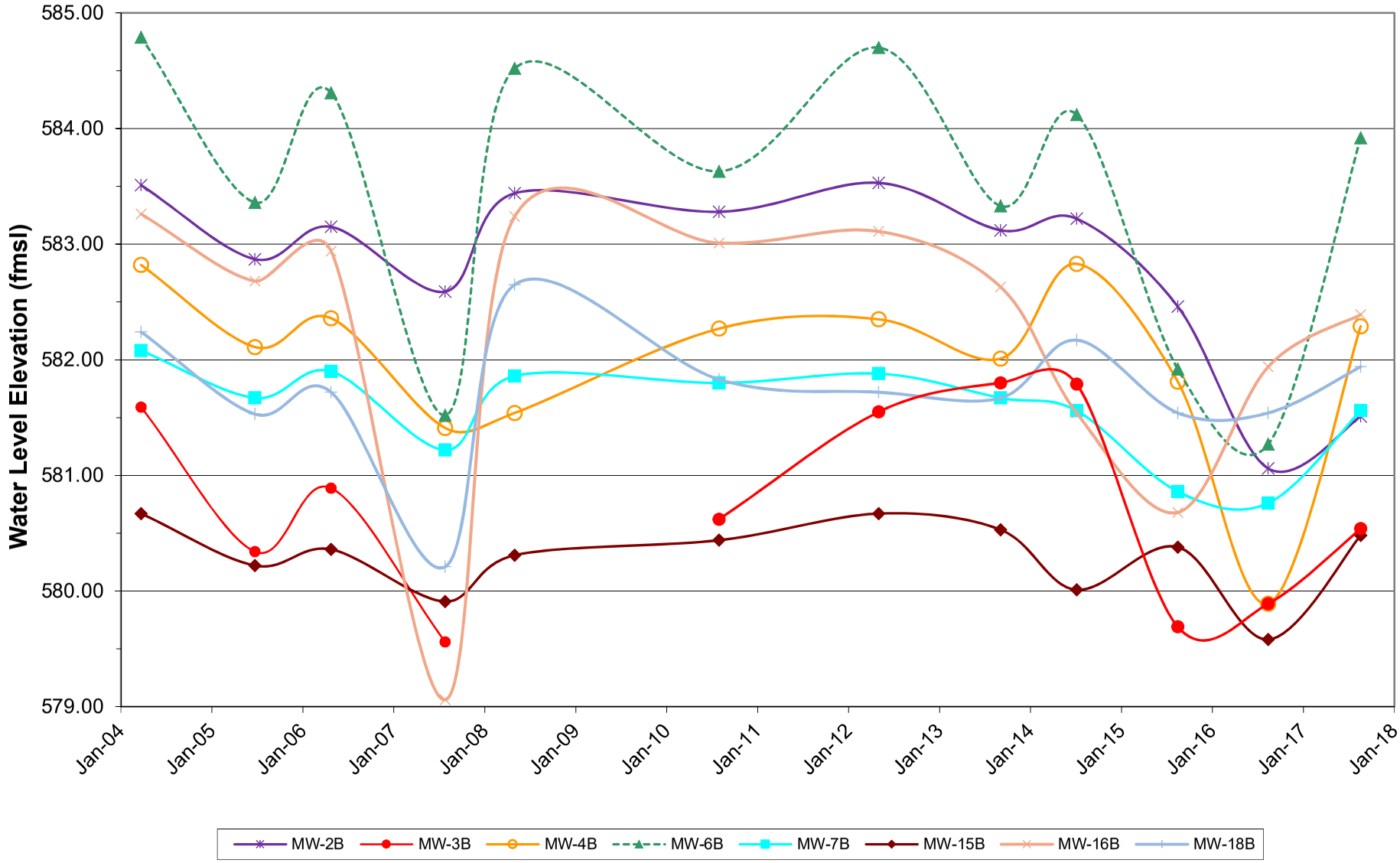
The SMP requires the comparison of groundwater results to 6 NYCRR Part 703 Class GA Standards and Guidance Values and to background water quality. According to the SMP decision tree, groundwater data which exceeds the background mean concentration (BMC) for a parameter by three standard deviations requires additional moving average trend analysis (MATA) to be performed. These evaluations are discussed herein.

2.3.2.1 Comparison of Water Quality to Standards and Guidance Values

Values from the annual samples of 2017 were compared to the 6 NYCRR Part 703 GA standards as shown in Table 6 of Appendix A for the shallow overburden wells. Green, grey, and orange shading in these tables signify exceedances of the Class GA standard; the Class GA standards (where applicable) and the BMC; and the Class GA standards (where applicable), the BMC, and the BMC plus three standard deviations (BMC+3SDs), respectively. Therefore, any shaded parameter is in exceedance of the Part 703 GA standard where one exists. Note that BMC and BMC+3SDs exceedances will be discussed in the next section.

Widespread exceedances of the Class GA standards for pH (upper limit), total dissolved solids (TDS), total iron, and total manganese occurred in wells both up and downgradient of the site. An unusually acidic pH of 3.41 was detected at MW-6B. This upgradient well is generally near neutral pH and has never been outside the Part 703 GA standard. Other wells onsite did not appear to have lower than normal pH levels, as such, this interlocation minimum measurement at MW-6B appears to be an anomaly. The standard of 1.0 ug/L for total recoverable phenolics (TRP) was also exceeded in many of the wells. It should be noted that the detection limit is greater than the standard for TRP and total lead; therefore, one or more of the wells reported as non-detect have the potential to be in exceedance of the standard for these parameters.

FIGURE 2-1
Marilla Street Landfill
August 2017 Annual Sampling Event
Summary of Historical Groundwater Elevations for Shallow Overburden Wells



Exceedances of the Class GA standard for total arsenic, total chromium, total lead, and acetone were measured at MW-3B, as is typically identified at this well. Acetone was also found in MW-15B which has only been detected in one other sampling event (2012 at 17.5 µg/L) between 2012 and 2017, however, typically the detection limits are much higher (100-200 µg/L) than were reported this year which may be the reason acetone has not been detected. Concentrations above the standards for total arsenic in MW-15B and trichloroethene in MW-16B are generally consistent with data from previous sampling events. The detection of 2-Butanone in MW-3B, albeit less than the standard, is the first ever detection of this compound in any well for the available data set (2013-2017).

2.3.2.2 Comparison of Water Quality to Background Mean Concentration

BMCs and BMC+3SDs were calculated using results from all available events for background monitoring well MW-6B as shown in Appendix E. The results were incorporated into Table 6, and compared to the results from the current monitoring period. The results shaded in orange in the tables indicate the need for MATA which are presented on an individual parameter basis in Appendix F for the shallow overburden wells.

Table 7 summarizes the tracked parameters and groundwater wells which have experienced exceedances of the BMC+3SDs. After five tracked events, trending is evaluated. Increasing linear trends in downgradient shallow wells are compared to trending in the background water quality in the upgradient monitoring well and to surface water quality. All trend analyses utilize moving average data including this sampling event's data and the three preceding sampling events. Linear trend lines were fit to the data using a least squares analysis.

Increasing trends in downgradient wells are found across the site with respect to specific conductance (MW-7B and MW-15B), TOC (MW-3B, MW-15B, and MW-16B), TDS (MW-3B and MW-15B), and total manganese (MW-3B and MW-18B). Generally, increasing trends were paralleled by an increasing trend in upgradient well MW-6B with the exception of total arsenic in MW-3B, and total arsenic and pH in MW-15B. As such, most of the water quality trends found in the downgradient wells are likely the result of changes in water quality upgradient of the site.

The trending in total arsenic in well MW-15B has been weakening over the past several years. With the addition of the 2017 data, the increasing trend is no longer statistically significant at the 95% confidence level since the slope of the linear regression includes zero and the data are poorly fit by linear regression (R^2=0.28). Regression analysis on total arsenic for well MW-3B shows that the increasing trend remains statistically significant at the 99% confidence level, as has been the case since 2012. However, the R^2 value has averaged around 0.90 over the past five years peaking in 2016 at 0.93. The R^2 value this year is 0.77, indicating the data are not as well fit by linear regression with the addition of the most recent sampling event. The total arsenic concentration in MW-6B has been lower than the detection limit since 1997, as was the case again this year. Thus, the source of arsenic does not appear to be coming from upgradient of the site. Should increasing trends for a specific parameter be observed downgradient with opposing trends upgradient, a comparison to surface water is the next step as per the SMP decision tree. A discussion of the comparison is provided in the next section.

Evaluation of trending in pH and TRP at MW-15B began last year with the fifth tracked event, however, Section 3.1 of the site's Post-Closure Monitoring and Maintenance Plan suggests that trending be evaluated with statistical analyses after a linear trend line has been plotted for *several* sampling events. Now that there are three data points to plot a linear trend line, the increasing trends were determined insignificant at the 95% confidence level. An apparent decreasing trend in pH in upgradient groundwater at MW-6B is not statistically significant. Upgradient monitoring well MW-6B shows an apparent increasing trend with respect to TRP. However, of the twenty data points only two were detections, the last one being in 2007, and the remaining variability is solely due to the variation of the detection limit. As such, the trends at MW-15B are not of concern.

Historically, MATA was not conducted for total iron, total lead, and soluble arsenic at MW-3B since a minimum of five data points are necessary to begin MATA. With the results of the 2017 sampling event, five tracked data points have been assembled for these parameters and a trend line could be constructed using the two moving averages. All three parameters exhibit decreasing trends. The trending is only based on two MATA data points and should be re-evaluated with the addition of future sampling events so that statistical analyses can be performed to determine the statistical significance of the results.

The historically decreasing trend in specific conductance at upgradient well MW-6B was reversed this year for the first time. MW-7B and MW-15B have maintained their increasing trends in specific conductance. However, none of the increasing trends are significant at the 95% confidence level and the data are poorly fit to linear regression (R^2=0.02 at MW-6B, R^2=0.0008 at MW-7B, and R^2=0.25 at MW-15B). The increasing trends in the downgradient wells are not a cause for concern at this time.

2.3.2.3 Comparison of Water Quality to Surface Water Quality

Moving average trend analysis, as described above, has been performed for all surface water sampling locations for select tracked parameters as shown by the graphs in Appendix G. The results were incorporated into Table 7, where appropriate, and trending was compared to the results from the current monitoring period.

The results at all four surface water sampling locations for total arsenic have been less than the detection limit for the available data set (since May 2012). The MATA tables presented in Appendix G for the surface water sampling locations show a lower moving average concentration for the first year it was calculated than the last two years; however, this is simply the result of a lower detection limit in May 2012 of 0.004 mg/L compared to the detection limit of 0.010 mg/L from the following five years. As such, a graph is not provided for total arsenic as trending cannot be assessed. The situation is noted in Table 7 for the surface water with respect to arsenic. It is obvious, given the lack of detectable arsenic in the surface water samples that the trending in total arsenic at MW-3B and MW-15B is not migrating to the onsite surface water at this time.

TDS at all four surface water sampling locations exhibit increasing trends based on three moving averages corresponding to increasing trends found in MW-3B and MW-15B. Trending is not significant at the 95% confidence level at MW-15B given the inclusion of zero in the 95% confidence interval around the slope of the linear regression. Trending in MW-3B with respect to TDS has been reported as insignificant in the past, however, this year significant trending at the 95% confidence level is observed for the first time. Still with a mid-range R^2 value of 0.47 the correlation is not very strong. The observed upward trending in TDS is not significant at any of the four surface water locations.

Historically, TRP has been less than the detection limit at all four surface water sampling locations. However, for the second consecutive year, TRP was detected at levels slightly greater than the detection limit of 0.005 mg/L at three of the four surface water sampling locations, namely SW-1 (0.0056 mg/L), SW-2A (0.0062 mg/L), and SW-5 (0.0056 mg/L), suggesting possible increasing trends in these surface water sampling locations should detections continue in the future. Note that the detection limit in May 2012 (0.05 mg/L) was greater than the subsequent three detection limits by an order of magnitude. As a result, the moving averages appear to decrease and any true trending cannot be assessed. Concentrations of TRP in the downgradient wells are generally one or two orders of magnitude greater than those detected in the surface water. Influence on the surface water from the shallow groundwater is not apparent.

Total organic carbon, which demonstrates increasing trends in the shallow downgradient wells MW-3B, MW-15B, and MW-16B, returned to more average levels across the site in the groundwater this year. The increasing trend at MW-3B continues to be insignificant at the 95% confidence level. Conversely, statistically significant trends are evident with 99% confidence for MW-15B and MW-16B. Corresponding increasing trends are observed at all surface water sampling locations, as identified in Table 7. The positive trends at upstream surface water location, SW-1, and the most downstream surface water location, SW-5, are not statistically significant and the R^2 values are relatively low (0.16 and 0.09, respectively) indicating a poor fit of the data to linear regression. Linear regression on the data from the more interior surface water locations showed that the upward trends observed at these two downstream surface water sampling locations (SW-2A and SW-3A) were significant at the 99% confidence level and demonstrated relatively high R^2 values (0.76 and 0.74, respectively). The actual concentrations of TOC in the downgradient groundwater wells are higher (between one and two orders of magnitude higher in some locations) than those found in the upgradient groundwater and surface water.

Total iron, which is historically elevated across the site in surface water and groundwater, is generally detected at higher concentrations in groundwater compared to surface water. Both upgradient locations, MW-6B and SW-1, are the only locations with observed increasing trends. Further, both upgradient locations have statistically significant upward trending with 95% and

99% confidence, respectively. Elevated total iron across the site is likely the result of upgradient water quality.

The observed positive trending in total manganese at MW-3B and MW-18B continued this year and is paralleled by increasing trends at upgradient locations MW-6B and SW-1. With the exception of MW-18B, all trends are at least 95% statistically significant with a relatively good linear fit of the data (R^2=0.77 for MW-3B, R^2=0.91 for MW-6B, and R^2=0.41 for SW-1). The increasing trend observed at the upstream surface water sampling location is the first time the trending is statistically significant. Conversely, the increasing trend observed at the most downstream surface water sampling point, SW-5, is insignificant with a poor linear fit of the data (R^2=0.03). Decreasing trends at the centrally located surface water sampling locations (SW-2A and SW-3A) show the linear fit of the data is very strong at SW-3A (R^2=0.70) with significant trending, but shifted from a strong fit in 2016 (R^2=0.88), to a much weaker R^2 value of 0.24 due to the intralocation maximum concentration at SW-2A. While the actual concentrations of total manganese at MW-3B are nearly double that of the upgradient groundwater and surface water, the increasing trend in this downgradient well may be supported by the increasing upgradient trend; however, the groundwater trending does not appear to be influencing surface water.

2.4 POST-CLOSURE SITE INSPECTION AND MAINTENANCE

Initial mowing of the landfill cap vegetation took place between August 29th and 31st, 2017. A post-mowing inspection was completed on September 7, 2017, revealing the west slope of the BOF Dust Area was not mowed. Final mowing was completed on September 12th. The annual post-closure site inspection was conducted on September 21, 2017.

Annual post-closure site inspections are conducted in general conformance with Section 7 of the Site Management Plan (SMP). However, Steelfields and the NYSDEC agreed in 2013 that Steelfields' primary responsibility is the maintenance and monitoring of the landfill cap, and maintenance of the fence around the site is no longer a required element of the SMP.

As documented in the September 21st Post-Closure Inspection Report and photographs included in Appendix H, the landfill cap, vegetation, and drainage features were observed to be in very good condition. Several small burrows were observed and a deeper 15-foot long slot shaped rut

was found on the north slope of the BOF Dust Area. A larger hole approximately two-feet by two-feet was found along the west slope of the BOF Dust Area. Shallow erosion rills were identified along the outside slopes of the landfill. A small pile of refuse was also found on the BOF Dust Area and was removed from the site and properly disposed. There was no other evidence of trespassing along the perimeter of the landfill area.

The September 21st inspection confirmed that mowing of the entire landfill was completed. On October 10, 2017 an independent contractor filled the small burrows, the 15-foot slot and the larger hole in the BOF Dust Area. The filled areas were seeded and mulched with hay that was present on the site from the recent mowing event. The small bare areas at the top of the BOF dust area were seeded and mulched. All work by the independent contractor was verified by a site observation conducted on October 11, 2017. The bare spot near the tracks is primary gavel surfaced and was left as-is. This ground appears to be a storage area for the railroad company's maintenance crew.

Overall, a cap appears in good repair, with a thick, vigorous, healthy vegetative cover. No major unauthorized dumping or refuse disposal was observed on the cap.

The inspection reports and photographs are provided in Appendix H. The annual Institutional Controls/Engineering Controls (IC/ECs) Certification is appended to this report in Appendix I.

2.5 LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

All samples were collected with the goal of obtaining representative samples of their respective media. A case narrative prepared by ALS was included with the laboratory report in Appendix D and identified any events, such as quality control failures, which may have occurred during analysis. All data are unqualified or usable estimates. Turbidity, pH, and conductivity meters were calibrated by Pine Environmental Services, Inc prior to sampling. All calibrations were successful and the calibration sheets are at the end of Appendix C.

Percent completeness was calculated at 100% for both groundwater and surface water.

2.6 EQuIS Database

Laboratory analysis results were provided by ALS in the appropriate electronic data deliverables (EDDs) format to input directly into the EQuIS data processor (EDP) for submission to the NYSDEC's EQuIS database. Sample_v3, TestResultsQC_v3, and Batch_v3 EDDs were provided by ALS for all sampling locations, including blind duplicates, method duplicates, and laboratory control samples. The Initial EDD section will be populated in addition to Well_v3, WaterTable_v3, WaterLevel_v3, and FieldResults_v3.

The requirements in the "Final Checklist for Submissions of EDDs to NYSDEC" will be met and the formatted EDDs will be e-mailed to the EQuIS database administrator and the NYSDEC project manager for the site. Once the data is reviewed, a confirmatory message indicating the completeness of the EDDs will be sent by the NYSDEC.

3 SUMMARY AND CONCLUSIONS

Groundwater and surface water quality for the 2017 annual sampling event appeared typical for the site. Total iron remained elevated both upgradient and downgradient in groundwater and surface water. In past years, the source of iron in the surface water has been reported from upstream of the site and downgradient groundwater monitoring wells have had lower concentrations compared to upgradient and upstream locations. This remains true again this year.

Typical exceedances of the Part 703 GA standards were consistent with historic data, with the exception of an unusually acidic pH at upgradient well MW-6B. MW-6B has never been outside the Class GA standard for pH and levels measured at other locations onsite were not unusually low, as such, this interlocation minimum appears to be an anomaly.

Several parameters at surface water location SW-2A were the second highest concentration on record, namely conductivity, TOC, TDS, and total iron, while total manganese and dissolved manganese were intralocation maxima. TDS and pH were also elevated this year at SW-3A and SW-5, respectively.

Upgradient well MW-6B demonstrated statistically significant increasing trends in TOC as did MW-15B and MW-16B and surface water locations SW-2A and SW-3A; however, the actual concentrations of TOC in the downgradient groundwater wells are higher (between one and two orders of magnitude higher in some locations) than those found in the upgradient groundwater and surface water.

Trending in TDS at MW-3B was, for the first time, statistically significant. However, MW-6B is observed with a statistically significant increasing trend indicating potential sources of TDS from upgradient of the site. TRP at MW-15B was statistically insignificant as was the increasing trend at the upgradient monitoring well. Increasing trends in total arsenic were found to be statistically significant only at MW-3B this year. Concentrations of total arsenic in upgradient well MW-6B, as well as, at all surface water locations have been below the detection limit since 1997 and 2012, respectively. The trending appears to be weakening at MW-3B with linear regression producing a shallower slope this year for the data set. Three moving averages for the surface

water locations provide limited insight. With additional data points, future results will better assess the statistical significance of the trending in surface water with respect to total arsenic, as well as, TDS and TRP.

The post-closure site inspection noted the landfill cap to be in very good condition again this year. There were no leachate seeps identified during the site investigation and the integrity of the final cover system was certified as acceptable after fixing some minor erosional features.

APPENDIX A

Summary Tables

TABLE 1
Marilla Street Landfill
August 2017 Annual Sampling Event
Groundwater and Surface Water Analytical Parameters

	Analysis Method[3]	Groundwater	Surface Water[2]
FIELD PARAMETERS			
Static Water Level	Field	**X**	NA
pH	Field	**X**	**X**
Temperature	Field	**X**	**X**
Specific Conductance	Field	**X**	**X**
Turbidity	Field	**X**	**X**
WET CHEMISTRY			
Total Organic Carbon (TOC)	SM 5310 B	**X**	**X**
Total Dissolved Solids (TDS)	SM 2540 C	**X**	**X**
Total Recoverable Phenolics (TRP)	420.4	**X**	**X**
METALS - INORGANIC PARAMETERS[1]			
Arsenic - Total and Soluble	6010C	**X**	**X**
Chromium - Total and Soluble	6010C	**X**	**X**
Cyanide - Total	335.4	**X**	**X**
Iron - Total and Soluble	6010C	**X**	**X**
Lead - Total and Soluble	6010C	**X**	**X**
Manganese - Total and Soluble	6010C	**X**	**X**
Volatile Organic Compounds (VOCs)			
TCL Method 8260B	8260C	**X**	**X**

Notes:

(1) - Groundwater and surface water samples collected for inorganic analysis are field-filtered and analyzed for soluble inorganics in addition to total inorganics only if field measured turbidity values exceed 50 NTUs.

(2) - Leachate breakouts/seeps are to be analyzed for the same parameters as Surface Water.

(3) - Represents most current laboratory certified methods equivalent to those in the Site Management Plan.

NA	Analytical parameter not applicable for the specified media
	Parameters required by the Post-Closure Maintenance and Monitoring Plan and not analyzed for during this sampling event
X	Parameters required by the Post-Closure Maintenance and Monitoring Plan and analyzed for during this sampling event

TABLE 2
Marilla Street Landfill
August 2017 Annual Sampling Event
Summary of Field Measurements

Location	Sampling Date	Sampling Time	Temperature (^{o}F)	pH (units)	Specific Conductance (Umhos/cm)	Turbidity (NTU)
MW-2B[(1)]	8/28/2017	10:05	62.2	10.38	1.65	110
MW-3B[(1)]	8/28/2017	14:45	63.0	10.71	3.14	3,168
MW-4B	8/28/2017	14:05	59.7	8.16	0.85	8.05
MW-6B[(2)]	8/29/2017	14:45	62.3	3.41	1.60	10.58
MW-7B	8/29/2017	11:45	59.1	12.01	3.37	35.0
MW-15B	8/29/2017	12:40	58.2	12.74	5.41	7.52
MW-16B	8/28/2017	11:15	58.1	9.96	2.38	5.44
MW-18B	8/29/2017	10:10	56.8	7.56	3.25	6.71
SW-1	8/28/2017	9:05	65.0	6.93	0.87	6.28
SW-2A	8/28/2017	10:45	70.2	6.81	1.45	11.44
SW-3A	8/28/2017	15:10	74.1	7.94	0.94	14.4
SW-5	8/29/2017	8:10	66.3	8.81	1.64	20.1

Notes:
(1) - Sample was field filtered for soluble metals since turbidity measured greater than 50 NTU.
(2) - Sample was field filtered for soluble metals for comparison to other filtered samples as background.

TABLE 3

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of Surface Water Analytical Results

Parameter	SW-1	SW-2A	SW-3A	SW-5	Blind Duplicate #2[3] (SW DUP)	Class "D" Standard [1][2]
WATER QUALITY (mg/L or as indicated)						
pH (units)	6.93	6.81	7.94	8.81	7.94	6.0-9.5
Specific Conductance (Umhos/cm)	0.87	1.45	0.94	1.64	0.94	-
Total Organic Carbon	9.9	9.8	7.4	6.4	7.7	-
Total Dissolved Solids	422	426	480	752	469	-
Total Recoverable Phenolics	0.0056	0.0062	0.005 U	0.0056	0.005 U	-
TOTAL METALS - INORGANIC PARAMETERS (mg/L or as indicated)						
Arsenic	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-
Chromium	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	-
Cyanide	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.022
Iron	**1.16**	**1.91**	**1.18**	**1.31**	**1.13**	0.3
Lead	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-
Manganese	0.482	0.669	0.268	0.099	0.221	-
SOLUBLE METALS - INORGANIC PARAMETERS (mg/L)						
Arsenic	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.34
Chromium	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	H
Iron	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	-
Lead	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	H
Manganese	0.464	0.534	0.067	0.01 U	0.066	-
VOLATILE ORGANIC COMPOUNDS (AQUEOUS) (µg/L)						
	All U	All U	All U	All U	All U	Variable

Notes:

(1) - Class "D" Surface Water Quality Standards/Guidance Value - 6 NYCRR Part 703; revised August 1999 and TOGS 1.1.1; last amended June 2004.

(2) - Some Class "D" Standards/Guidance Values are expressed as a function of hardness. Considering the samples were not analyzed for hardness, those guidance values that require a hardness value to calculate a guidance value are indicated with an H.

(3) - Collected Blind Duplicate #2 from SW-3A.

(4) - "U" indicates a non-detect value at the detection level listed.

Exceeds Surface Water Quality Standard/Guidance Value.

TABLE 4

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of Historical Groundwater Depths of Shallow Overburden Wells[2][5]

Well ID	MW-2B	MW-3B[4]	MW-4B	MW-6B	MW-7B	MW-15B	MW-16B	MW-18B
Riser Elevation[1]	590.86	588.29	591.89	597.92	615.76	586.78	588.09	627.04
Year[3]								
Apr-04	7.35	6.11	9.07	13.13	33.68	6.11	4.83	44.80
Jul-05	7.99	7.36	9.78	14.56	34.09	6.56	5.41	45.51
May-06	7.71	6.81	9.53	13.61	33.86	6.42	5.15	45.32
Aug-07	8.27	8.14	10.48	16.40	34.54	6.87	9.03	46.83
May-08	7.42	Note 4	10.35	13.40	33.90	6.47	4.85	44.39
Aug-10	7.58	7.67	9.62	14.29	33.96	6.34	5.08	45.21
May-12	7.33	6.74	9.54	13.22	33.88	6.11	4.98	45.32
Sep-13	7.74	6.49	9.88	14.59	34.09	6.25	5.46	45.37
Jul-14	7.64	6.50	9.06	13.80	34.20	6.77	6.55	44.87
Aug-15	8.40	8.60	10.08	16.00	34.90	6.40	7.41	45.50
Aug-16	9.80	8.40	12.00	16.65	35.00	7.20	6.15	45.50
Aug-17	9.35	7.75	9.60	14.00	34.20	6.30	5.70	45.10

Notes:

(1) - Riser elevations and depths for 2004-2006 measured by others based on information presented in the November 2006 Post-Closure Monitoring & Maintenance Program 2006 Annual report by TurnKey Environmental Restoration, LLC. Elevations and depths for 2007-2012 measured by others based on information presented in the June 2012 Post-Closure Monitoring & Maintenance Program 2012 Annual Report by EnSol, Inc.

(2) - Measured in feet below top of inner casing prior to purging/sampling.

(3) - No sampling or gauging was conducted in 2009 or 2011.

(4) - Well MW-3B damaged and not gauged in 2008. Well MW-3B was repaired with new PVC riser in August 2010. The original top of PVC casing elevation for MW-3B (587.70) was used as the reference elevation for water level measurements taken in 2004-2007. The revised top of PVC casing elevation (as shown in the table) was surveyed after the new PVC riser was installed. The revised 2010 elevation is used for all events from 2010 forward.

(5) - The NYSDEC accepted a Petition to Modify Monitoring Requirements in a letter dated August 21, 2015. This petition modified groundwater elevation measurements to only those wells being sampled beginning in 2015. Therefore, only the eight wells required for this year's sampling event are shown in this table.

TABLE 5

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of Historical Groundwater Elevations of Shallow Overburden Wells[4]

Well ID	MW-2B	MW-3B[3]	MW-4B	MW-6B	MW-7B	MW-15B	MW-16B	MW-18B
Riser Elevation[1]	590.86	588.29	591.89	597.92	615.76	586.78	588.09	627.04
Year[2]								
Apr-04	583.51	581.59	582.82	584.79	582.08	580.67	583.26	582.24
Jul-05	582.87	580.34	582.11	583.36	581.67	580.22	582.68	581.53
May-06	583.15	580.89	582.36	584.31	581.90	580.36	582.94	581.72
Aug-07	582.59	579.56	581.41	581.52	581.22	579.91	579.06	580.21
May-08	583.44	Note 3	581.54	584.52	581.86	580.31	583.24	582.65
Aug-10	583.28	580.62	582.27	583.63	581.80	580.44	583.01	581.83
May-12	583.53	581.55	582.35	584.70	581.88	580.67	583.11	581.72
Sep-13	583.12	581.80	582.01	583.33	581.67	580.53	582.63	581.67
Jul-14	583.22	581.79	582.83	584.12	581.56	580.01	581.54	582.17
Aug-15	582.46	579.69	581.81	581.92	580.86	580.38	580.68	581.54
Aug-16	581.06	579.89	579.89	581.27	580.76	579.58	581.94	581.54
Aug-17	581.51	580.54	582.29	583.92	581.56	580.48	582.39	581.94

Notes:

(1) - Riser elevations and depths for 2004-2006 measured by others based on information presented in the November 2006 Post-Closure Monitoring & Maintenance Program 2006 Annual report by TurnKey Environmental Restoration, LLC. Elevations and depths for 2007-2012 measured by others based on information presented in the June 2012 Post-Closure Monitoring & Maintenance Program 2012 Annual Report by EnSol, Inc.

(2) - No sampling or gauging was conducted in 2009 or 2011.

(3) - Well MW-3B damaged and not gauged in 2008. Well MW-3B was repaired with new PVC riser in August 2010. The original top of PVC casing elevation for MW-3B (587.70) was used as the reference elevation for water level measurements taken in 2004-2007. The revised top of PVC casing elevation (as shown in the table) was surveyed after the new PVC riser was installed. The revised 2010 elevation is used for all events from 2010 forward.

(4) - The NYSDEC accepted a Petition to Modify Monitoring Requirements in a letter dated August 21, 2015. This petition modified groundwater elevation measurements to only those wells being sampled beginning in 2015. Therefore, only the eight wells required for this year's sampling event are shown in this table.

TABLE 6

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of Shallow Groundwater Analytical Results

Parameter	MW-2B	MW-3B	MW-4B	MW-6B	MW-7B	MW-15B	MW-16B	MW-18B	Blind Duplicate #1[4] (GW-DUP)	Class "GA" Standard[1]	BMC[2]	BMC +3SDs[3]
WATER QUALITY (mg/L or as indicated)												
pH (standard units)	**10.38**	**10.71**	8.16	**3.41**	**12.01**	**12.74**	**9.96**	7.56	8.16	6.5-8.5	7.13	4.43-9.82
Specific Conductance (Umhos/cm)	**1.65**	**3.14**	0.85	**1.60**	**3.37**	**5.41**	**2.38**	**3.25**	0.85	-	1.13	2.30
Total Organic Carbon	**17.3**	**134**	6.0	6.3	**47.4**	**51**	**14.1**	**24.3**	6.1	-	6.50	14.36
Total Dissolved Solids	468	**1,740**	497	**1,030**	**832**	**1,461**	**706**	**2,710**	**512**	500	931	1,315
Total Recoverable Phenolics	**0.063**	**0.730**	0.0050 U	0.0050 U	**0.370**	**0.680**	**0.0078**	0.0050 U	0.0050 U	0.001	0.0114	0.0521
TOTAL METALS - INORGANIC PARAMETERS (mg/L)												
Arsenic	0.01 U	**0.051**	0.01 U	0.01 U	0.01 U	**0.029**	0.01 U	0.02	0.01 U	0.025	0.00789	0.0183
Chromium	0.013	**0.12**	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05	0.00838	0.0188
Cyanide	0.010 U	0.10 U	0.010 U	0.010 U	0.025	0.010 U	0.019	0.024	0.010 U	0.2	0.00970	0.013
Iron	**4.9**	**73.2**	**3.84**	**5.95**	**3.10**	0.15	0.1 U	**0.64**	**2.00**	0.3	1.642	6.405
Lead	0.005 J	**0.639**	0.05 U	0.009 J	**0.041 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.025	0.0134	0.0681
Manganese	0.277	**1.11**	**0.703**	**0.624**	0.076	0.01 U	0.01 U	**2.10**	**0.771**	0.3	0.336	1.07
SOLUBLE METALS - INORGANIC PARAMETERS (mg/L)												
Arsenic	0.01 U	**0.025**	NA	0.01 U	NA	NA	NA	NA	NA	-	0.00867	0.0174
Chromium	0.01 U	**0.02**	NA	0.01 U	NA	NA	NA	NA	NA	-	0.0103	0.0118
Iron	0.1 U	**2.78**	NA	0.11	NA	NA	NA	NA	NA	-	0.365	2.76
Lead	0.05 U	**0.047 J**	NA	0.05 U	NA	NA	NA	NA	NA	-	0.0198	0.0867
Manganese	0.01 U	0.052	NA	**0.577**	NA	NA	NA	NA	NA	-	0.262	0.940
VOLATILE ORGANIC COMPOUNDS (AQUEOUS) (ug/L)[5]												
Acetone	18	**490**	10 U	10 U	33	**83**	10 U	10 U	10 U	50	NA	NA
2-Butanone (MEK)	10 U	31	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50	NA	NA
cis-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	8.5	5.0 U	5.0 U	60	NA	NA
Trichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**31**	5.0 U	5.0 U	5	NA	NA

Notes:

(1) - Class "GA" Groundwater Quality Standards/Guidance Value - 6 NYCRR Part 703; revised August 1999 and TOGS 1.1.1; last amended June 2004.

(2) - Value represents the Background Mean Concentration of Well MW-6B.

(3) - Value represents the Background Mean plus 3 standard deviation concentrations of well MW-6B. Plus 3 and minus 3 standard deviations for pH.

(4) - Blind Duplicate #1 was collected from MW-4B.

(5) - Only those parameters detected at a minimum of one sample location are reported in this table.

(6) - "NA" indicates parameter not analyzed at this location or data is not available.

(7) - "U" indicates an analyte not detected at the given method reporting limit. "J" indicates an estimated value due to the concentration between the method detection limit and the method reporting limit.

#	Exceeds Groundwater Quality Standard/Guidance Value only.
#	Exceeds Background Mean and Groundwater Quality Standard/Guidance Value or just Background Mean if no Standard/Guidance Value exists.
#	Exceeds Background Mean plus 3 standard deviations and the Groundwater Quality Standard, where one exists, or just the Background Mean plus 3 standard deviations where no Groundwater Quality Standard is present.

TABLE 7

Marilla Street Landfill

August 2017 Annual Sampling Event

Parameter Tracking for Moving Average Trend Analysis (MATA)

Well I.D.	Tracked Parameters	Sampling Event[5]															No. of Tracked Events	Increasing Trend?[1]	Corresponding Increasing Trend?				
		Oct-01	Apr-02	Apr-03	Apr-04	Jul-05	May-06	Aug-07	May-08	Aug-10	May-12	Sep-13	Jul-14	Aug-15	Aug-16	Aug-17			Upgradient Groundwater[7]	Surface Water[2][3]			
																			MW-6B	SW-1	SW-2A	SW-3A	SW-5
Shallow Groundwater Monitoring Wells																							
MW-2B[8]	pH											X		X	X	X	4	TBD[4]					
	Total Organic Carbon											X		X	X	X	4	TBD					
	Total Recoverable Phenolics											X		X		X	3	TBD					
	Total Chromium													X			1	TBD					
	Total Iron													X	X		2	TBD					
	Total Manganese													X			1	TBD					
MW-3B[6]	pH		X	X	X	X	X	X			X	X		X		X	10	No					
	Specific Conductance	X	X	X	X	X	X	X					X			X	9	No					
	Total Cyanide			X				X									2	TBD					
	Total Dissolved Solids		X	X	X	X	X	X		X	X	X	X	X	X	X	13	Yes	Yes	Yes	Yes	Yes	Yes
	Total Organic Carbon	X	X	X	X	X	X	X		X	X	X	X	X	X	X	14	Yes	Yes	Yes	Yes	Yes	Yes
	Total Recoverable Phenolics	X	X	X	X	X	X	X		X	X	X	X	X	X	X	14	No					
	Total Arsenic	X	X	X	X	X	X	X		X	X	X	X	X	X	X	14	Yes	No	Note 9	Note 9	Note 9	Note 9
	Total Chromium											X	X		X	X	4	TBD					
	Total Iron											X	X	X	X	X	5	No					
	Total Lead											X	X	X	X	X	5	No					
	Total Manganese							X		X	X	X	X	X	X	X	8	Yes	Yes	Yes	No	No	Yes
	Soluble Arsenic											X	X	X	X	X	5	No					
	Soluble Chromium											X	X	X		X	4	TBD					
	Soluble Iron											X				X	2	TBD					
	Soluble Lead											X	X			X	3	TBD					
MW-4B	pH				X												1	TBD					
	Total Organic Carbon					X											1	TBD					
	Total Recoverable Phenolics					X				X							2	TBD					
	Total Iron					X				X					X		3	TBD					
	Total Manganese											X	X				2	TBD					
	Soluble Iron					X	X			X							3	TBD					
MW-7B	pH	X	X	X	X	X	X	X	X		X	X	X	X	X	X	14	No					
	Specific Conductance	X	X	X	X	X	X					X	X	X	X	X	11	Yes	Yes	No	No	No	Yes
	Total Dissolved Solids			X	X	X	X					X					5	No					
	Total Organic Carbon	X	X	X	X	X	X	X		X		X	X	X	X	X	13	No					
	Total Recoverable Phenolics	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15	No					
MW-15B	pH										X	X	X	X	X	X	6	Yes	No	No	No	No	Yes
	Specific Conductance	X	X	X	X	X	X					X	X	X	X	X	11	Yes	Yes	No	No	No	Yes
	Total Dissolved Solids			X	X	X	X	X	X			X	X	X	X	X	11	Yes	Yes	Yes	Yes	Yes	Yes
	Total Organic Carbon	X	X	X	X	X	X	X		X	X	X	X	X	X	X	14	Yes	Yes	Yes	Yes	Yes	Yes
	Total Recoverable Phenolics										X	X	X	X	X	X	6	Yes	Yes	Note 9	Note 9	Note 9	Note 9
	Total Arsenic					X		X	X	X	X	X	X	X	X	X	10	Yes	No	Note 9	Note 9	Note 9	Note 9
	Total Iron		X	X	X	X	X	X									6	No					
	Soluble Iron				X	X	X		X								4	TBD					
	Total Manganese	X	X	X	X	X	X	X	X								8	No					
	Soluble Manganese	X	X	X	X	X	X										6	No					

TABLE 7
Marilla Street Landfill
August 2017 Annual Sampling Event
Parameter Tracking for Moving Average Trend Analysis (MATA)

Well I.D.	Tracked Parameters	Sampling Event[5]															No. of Tracked Events	Increasing Trend?[1]	Corresponding Increasing Trend?				
		Oct-01	Apr-02	Apr-03	Apr-04	Jul-05	May-06	Aug-07	May-08	Aug-10	May-12	Sep-13	Jul-14	Aug-15	Aug-16	Aug-17			Upgradient Groundwater[7]	Surface Water[2][3]			
																			MW-6B	SW-1	SW-2A	SW-3A	SW-5
MW-16B	pH	X		X	X	X	X	X	X		X	X	X	X	X	X	13	No					
	Specific Conductance	X	X	X	X	X	X									X	7	No					
	Total Organic Carbon	X	X	X		X							X		X		6	Yes	Yes	Yes	Yes	Yes	Yes
	Total Recoverable Phenolics	X															1	TBD					
	Total Dissolved Solids								X								1	TBD					
	Total Chromium				X												1	TBD					
	Total Iron	X	X		X												3	TBD					
	Total Manganese			X	X				X								3	TBD					
MW-18B	pH				X												1	TBD					
	Specific Conductance	X	X	X	X	X	X				X	X	X	X	X	X	12	No					
	Total Dissolved Solids			X	X	X	X	X	X	X	X	X	X	X	X	X	13	No					
	Total Organic Carbon	X	X	X	X	X		X		X			X	X	X	X	11	No					
	Total Recoverable Phenolics	X															1	TBD					
	Total Iron											X					1	TBD					
	Total Manganese	X	X	X	X	X		X	X				X	X	X	X	11	Yes	Yes	Yes	No	No	Yes

Notes:
(1) - In accordance with the Statistical Decision Tree (Appendix E); calculated moving average trend evaluation tracked for 5 sampling events.
(2) - In accordance with the Statistical Decision Tree (Appendix E); corresponding increasing trend in surface water concentration for that parameter.
(3) - Surface water samples have never been analyzed for soluble metals based on turbidity measurements not exceeding 50 NTU, except SW-5 for one event, prior to July 2014. No trend determination can be made on dissolved parameters until 2018 (minimum of 5 sampling events).
(4) - "TBD" = trend to be determined on a minimum of 5 tracked sampling events.
(5) - The annual sampling event was not conducted in 2009 and 2011.
(6) - MW-3B could not be sampled during the May 2008 event. This well was repaired in August 2010.
(7) - Shallow monitoring wells (designated "B") are compared to upgradient monitoring well MW-6B.
(8) - MW-2B previously biennial, not sampled in 2014.
(9) - All data less than the detection limit or changes in the detection limit obscure true data such that trending cannot be assessed.

X	Tracked event where reported concentration exceeds Groundwater Quality Standard (GWQS) (if applicable), background mean, and background mean +3 standard deviations.
	A blank box indicates the reported concentration does not exceed GWQS, background mean, and background mean +3 standard deviations.
#	A value of 5 or greater indicates that the parameter has been tracked for 5 or more sampling events per the Statistical Decision Tree.
Yes	Indicates the parameter shows increasing trend.

APPENDIX B

MW-14BR Evaluation and NYSDEC Letter

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING

2620 Grand Island Blvd. Grand Island, New York 14072 ph (716) 773-6872 /fax (716) 773-6873 www.daiglerengineering.com

May 22, 2017

David Szymanski
Project Manager
New York State Department of Environmental Conservation-Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Republic Steel (LTV) (Marilla St. LF) Site No. 915047
Monitoring Well MW-14BR Evaluation

Dear Mr. Szymanski:

In a letter dated November 10, 2016, the NYSDEC reviewed and accepted the 2016 Periodic Review Report (PRR) and IC/EC Certification for the above referenced site. One item of note is the following:

> *Section 2.4 of the PRR reports damage to the PVC well casing in Monitoring Well 14-BR. It is cited that "Conditions in this well is discussed further in Section 2.5". This discussion was omitted from Section 2.5. As it is understood that the well is currently unusable, it is expected that during the next Certifying Period, the necessity of restoring or replacing this well will be evaluated and discussed with the Department prior to the next sampling round.*

To facilitate discussions regarding this well, Daigler Engineering, PC (DE) first contacted you via email on April 26, 2017. The information contained herein is an evaluation of well MW-14BR based on the purpose and history of the well, as well as, the intent of the site's continuing Post-Closure Monitoring and Maintenance requirements as described in the Site Management Plan (herein SMP). A recommendation regarding the future utility of the well in the monitoring program is provided.

Purpose and History of Well MW-14BR

Initiation of the Resource Conservation and Recovery Act (RCRA) Interim Status groundwater monitoring of the BOF Dust Area began in January 1987 and included three downgradient wells and one upgradient well intended to monitor the uppermost groundwater flow system in the vicinity of the BOF Dust Area as outlined under 6 NYCRR section 373-3.6. In a letter dated February 10, 1987 (attached), LTV Steel Company reported that well MW-7B was originally intended to monitor background groundwater quality of the BOF Dust Area, but was

replaced by MW-14B (installed July 1986) based on new groundwater quality information and static groundwater head measurements. LTV Steel Company went on to report that the "most recent data" appeared to indicate that MW-14B "may not be representative of background conditions". The Annual Groundwater Monitoring Report of the following year (June 1987) proposed well MW-6B as the upgradient well for the BOF Dust Area, as was/is used for monitoring upgradient/background conditions across the entire site. The BOF Dust Closure Plan (Revised January 1989) identified MW-6B as the upgradient well and MW-14B as a downgradient well, which has continued since that time. MW-14BR replaced MW-14B in October 1988 due to vandalism.

Prior to 2014, water quality data is available for MW-14BR. Between 1991 and 2000, wells MW-4B, 6B, 7B, 9B, and 14BR were monitored under 6 NYCRR Part 373 regulations, with MW-6B serving as the upgradient well. Six other wells onsite were monitored in accordance with Part 360 regulations during that time period. In 2013, a bend in the PVC casing was reported but the bailer was able to be retrieved and a sample collected. For 2014, 2015, and 2016, samples were not collected from MW-14BR and the well was deemed unusable. It was determined in 2015 that the PVC riser was broken approximately six feet below the top of the riser.

Intent of the Groundwater Monitoring Program

The current SMP, Revised October 2010, states that the NYSDEC acknowledged that BOF dust was excluded from hazardous waste regulations (i.e., RCRA), and the BOF Dust Area was subsequently removed from the RCRA program in a September 1989 determination. The current groundwater monitoring scheme for the entire facility (since 2001) is based on 6 NYCRR Part 360 regulations, only, with site-specific changes approved by the NYSDEC.

The NYSDEC reported in a Department of Environmental Remediation Record of Decision (March 1997) that part of the site's long-term operation and maintenance "will consist of regular testing of selected groundwater monitoring wells to determine the effectiveness of the landfill cover" (attached). Since the 1997 Record of Decision, groundwater, surface water and sediment sampling, analysis, and reporting has been conducted at the site in accordance with the approved SMP.

Recommendation on the Future of MW-14BR

Given the original intent for the installation of MW-14B as the upgradient monitoring well for the BOF Dust Area, its replacement with MW-6B, and the NYSDEC's removal of the BOF Dust Area from the RCRA program, MW-14BR is no longer needed. The current groundwater monitoring program does not distinguish between the discrete waste types (6 NYCRR Part 360 versus Part 373 regulations), and individual comparisons of the groundwater quality are not made with respect to the different waste types across the site.

As such, we suggest removal of MW-14BR from the monitoring program will not negatively impact the intent of the SMP and the post-closure monitoring program to determine the effectiveness of the landfill cover, or impact the ability to detect changes in shallow groundwater quality at the facility.

Should you have any questions or comments, please do not hesitate to contact me via phone at (716) 773-6872 x205 or email at jim@jadenvegr.com.

Sincerely,

DAIGLER ENGINEERING, PC

James A. Daigler, PE
NYSPE No. 061689
President

cc: Gary Smith
Rich Palumbo

Attachments:

1. February 10, 1987 letter from LTV Steel Company (L.A. Szuhay) to NYSDEC (Paul Counterman)
2. Division of Environmental Remediation Record of Decision, March 20, 1997 for Republic Steel Site (LTV/Marilla Street Landfill), page 19

LTV Steel Company

February 10, 1987

New York Department of Environmental
Conservation
Bureau of Hazardous Waste Technology
Room 401
50 Wolf Road
Albany, New York 12233

Attn: Mr. Paul Counterman, Chief

Re: LTV Steel Company, Inc.
(Republic Steel Corporation)
Marilla Street Landfill
Buffalo, NY

Dear Mr. Counterman:

Attached are the analytical data for the RCRA quarterly and Part 360 groundwater monitoring samples obtained on October 16, 1986 at the above referenced facility. An isopotential map indicating groundwater contours and general direction of groundwater flow for the shallow system is included as Plate 1. The analytical data and isopotential map represent the third quarterly RCRA monitoring and NYSDEC Part 360 routine groundwater monitoring requirements for this facility. The results appear to be generally consistent with previous monitoring events.

Groundwater samples were taken and analyzed following the procedures detailed in "Marilla Street Landfill Groundwater Sampling and Analysis Plan," August 1985.

Since earlier data indicated the Well 7B was not representative of background water quality, LTV Steel installed Well 14B which, based on groundwater contours, was believed to be upgradient of the BOF dust area. Most recent data, however, appears to indicate new Well 14B also may not be representative of background conditions due possibly to a local hydrological condition. This situation will be further evaluated with future monitoring data.

Should you have any questions or require additional information, please contact John M. Potwora at 216/429-6536.

Sincerely,

L. A. Szuhay
Manager-Solid and Hazardous Waste
Environmental Control

LAS/JMP/fh
Attachment
cc: (next page)

LTV STEEL COMPANY • CORPORATE ENVIRONMENTAL CONTROL DEPARTMENT • 3100 EAST 45TH STREET • CLEVELAND, OHIO 44127 • TELEPHONE (216) 429-6471

tracks and in between Hopkins Street and the RR tracks. These samples confirmed that surface water and groundwater flow towards the south or west i.e. away from the residential area. Based upon this information, it was concluded that contaminants are not moving towards the residential area and no further sampling was done in the residential area.

Q10. When will the project be completed ?
A. It is anticipated that construction will begin in 1997 and completed in 1998.

Q11. What is the Long Term Operation and Maintenance (O & M)?
A. The Long Term O & M for this site will consist of regular 1) Inspection and maintenance of the landfill cover; 2) Testing of selected groundwater monitoring wells to determine the effectiveness of the landfill cover; 3) Testing of wetland sediments and surface water to ascertain that wetlands are not being recontaminated; and 4) Maintenance of the remediated wetlands. The 30 year O & M plan will be re-evaluated periodically and may be extended after that time period.

B.NYSDOH RESPONSE

Q 12. What is the landfill's current potential to impact public health ?
A. In order for hazardous waste in the landfill to have the potential to cause illness, people must be exposed to (come into contact with) the waste. It is unlikely that people are exposed to waste at the Republic Steel site. Local residents do not drink contaminated groundwater because homes are served by public water obtained from a distant source. The existing landfill cover prevents contact with buried waste and contaminated soil on-site. Although there are few signs of trespassing on-site, it is possible for people wading in the ponds and trenches around the landfill to come into contact with contaminated surface water and sediments. However, contaminant concentrations in these media are not likely to cause health effects in people who only occasional visit the site. The proposed remedy will further reduce the potential for exposure to contaminants in sediment and surface water.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, NY 14203-2915
P: (716) 851-7220 I F: (716) 851-7226
www.dec.ny.gov

June 15, 2017

Brown & Palumbo, PLLC
Richard A. Palumbo
186 Knickerbocker Road
Suite 100
Pittsford, NY 14534

Dear Mr. Palumbo:

Monitoring Well MW-14BR Evaluation
Republic Steel (LTV) (Marilla St. LF), Buffalo
Erie County, Site No.: 915047

The Department has reviewed your Consultant's (Daigler Engineering, PC's) evaluation of the damaged monitoring well MW-14BR, and concurs with their recommendation to remove it from the current groundwater monitoring program. If this well is to be decommissioned, please provide the Department with the appropriate Decommissioning Log found in the NYSDEC Commissioner's Policy CP-43, which can be found at this web link:
http://www.dec.ny.gov/docs/remediation_hudson_pdf/cp43mwdecomm.pdf

If you have any questions or comments, please contact me at 716-851-7220 or e-mail: David.Szymanski@dec.ny.gov

Sincerely,

David Szymanski
Environmental Program Specialist - 1

DS/tm

ec: Chad Staniszewski – NYSDEC
Gary Smith – Steelfields, LTD (C/O James Goehrig)
James Daigler – Daigler Engineering, PC
Allyson Zurawski – Daigler Engineering, PC

APPENDIX C

Field Observation Sheets

FIELD OBSERVATIONS

Facility: Morrilla Street Landfill Sample Point ID: MW-2B

Field Personnel: S.D. Sample Matrix: GROUNDWATER

MONITORTING WELL INSPECTION:

Date/Time 8/28/17 | 10:00 am Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: 3.1' Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: 0.5'

Gas Meter (Calibration/ Reading): % Gas: 1 % LEL: 1

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) 10.0

PURGE INFORMATION:

Date / Time Initiated: 8/28/17 @ 10:05 AM Date / Time Completed: 8/28/17 10:15 AM

Surf. Meas. Pt: (X) Prot. Casing ( ) Riser Riser Diameter, Inches: 2"

Initial Water Level, Feet: 9.35' Elevation. G/W MSL: ____

Well Total Depth, Feet: 12.90' Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 0.58 Dedicated: (Y) / N

Total Volume Purged, Gal: 1.00 gal. Purged To Dryness (Y) / N

Purge Observations: SAND IN WELL Start 10:05 am Finish 10:15 AM

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
10:05		0	61.4	9.37	0.64	3.16		
10:10		0.5	61.2	11.22	0.54	623 AU	BROWNISH TINT	
10:15		1.00	61.9	11.22	0.87	3489 AU	SAND	IN WELL
						[illegible]		
* 1:15		—	62.2	10.38	1.65	110 NTU		
SAMPLE								

(12.9 - 9.35) x 0.163 =

0.58 gal. x 4 = 2.346 gal.

FIELD OBSERVATIONS

Facility: Morilla Street Landfill | Sample Point ID: MW-3B

Field Personnel: S.D. | Sample Matrix: GROUNDWATER

MONITORTING WELL INSPECTION:

Date/Time 8/28/17 1 2:40pm | Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____%

Prot. Casing/riser height: 2.4' | Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: +0.2'

Gas Meter (Calibration/ Reading): % Gas: 1 | % LEL: 1

Vol. Organic Meter (Calibration/Reading): | Volatiles (ppm): 10.0

PURGE INFORMATION:

Date / Time Initiated: 8/28/17 2:45pm | Date / Time Completed: 8/28/17 1 2:55pm

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser | Riser Diameter, Inches: 2"

Initial Water Level, Feet: 7.75 | Elevation. G/W MSL: ____

Well Total Depth, Feet: 12.45 | Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 0.77 | Dedicated: (Y) N

Total Volume Purged, Gal: 2 1.5 | Purged To Dryness (Y) N

Purge Observations: YELLOW/BROWN TINT | Start 2:45pm Finish 2:55pm

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
2:45pm		0					YELLOW TINT	
2:50pm		~1.00	66.0	5.32	2.16	3031 AU	YELLOW/BROWN TINT	
2:55pm		~1.50	65.1	5.36	2.22	OVERRANGE		DRY
4:00pm * SAMPLE			63.0	10.71	3.14	3168 AU	BROWN	

(12.45 - 7.75) x 0.163 = 0.77 x 4 = 3.1

(DUP)

FIELD OBSERVATIONS

Facility: Morrilla Street Landfill Sample Point ID: MW-43

Field Personnel: S.D. Sample Matrix: GROUNDWATER

MONITORTING WELL INSPECTION:

Date/Time 8/28/12 12:00pm Cond of seal: ( ) Good ( ) Cracked ____ %
(X) None ( ) Buried

Prot. Casing/riser height: 3.3' Cond of prot. Casing/riser: ( ) Unlocked (X) Good *
( ) Loose ( ) Flush Mount
( ) Damaged ____ NO TOP

If prot.casing; depth to riser below: 0.4'

Gas Meter (Calibration/ Reading): % Gas: 1 % LEL: 1

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) 10.0

PURGE INFORMATION:

Date / Time Initiated: 8/28 2:05pm Date / Time Completed: 8/28 12:20pm

Surf. Meas. Pt: (X) Prot. Casing ( ) Riser Riser Diameter, Inches: ____

Initial Water Level, Feet: 9.6' Elevation. G/W MSL: ____

Well Total Depth, Feet: 19.4' Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 1.6 gal. Dedicated: (Y) / N

Total Volume Purged, Gal: ~2.5 Purged To Dryness (Y) / N

Purge Observations: LARGE AMOUNTS OF ANTS IN WELL Start 2:05pm Finish 2:20pm

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/hr)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
2:05pm		0	65.4	6.40	0.94	29.8		
2:20pm		~2.5	61.2	5.64	0.87	35.6	DRY	
9:05a			59.7	8.16	0.85	8.05		

3/29 * SAMPLE

(19.4 - 9.6) x 0.163 = 1.6 x 4 = 6.4

FIELD OBSERVATIONS

Facility: Morilla Street Landfill Sample Point ID: MW-6D

Field Personnel: S.D. Sample Matrix: GROUNDWATER

MONITORTING WELL INSPECTION:

Date/Time 8/29/17 12:35pm Cond of seal: ( ) Good ( ) Cracked ____ %
(X) None ( ) Buried

Prot. Casing/riser height: 3.73' Cond of prot. Casing/riser: ( ) Unlocked (X) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: 0.3'

Gas Meter (Calibration/ Reading): % Gas: / % LEL: /

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) 10.0

PURGE INFORMATION:

Date / Time Initiated: 8/29/17 / 2:45pm Date / Time Completed: 8/29 /

Surf. Meas. Pt: (X) Prot. Casing ( ) Riser Riser Diameter, Inches: 2"

Initial Water Level, Feet: 14.0' Elevation. G/W MSL: ____

Well Total Depth, Feet: 19.2' Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 0.85 Dedicated: (Y) N

Total Volume Purged, Gal: 1.25 Purged To Dryness (Y) N

Purge Observations: SULFUR ODOR Start 2:45pm Finish 2:55pm

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
2:45pm		0	62.3	3.16	1.49	4.92		
2:50pm		~1.0	59.4	2.65	1.58	7.80		
* 3:15pm			62.3	3.41	1.60	10.08		
SAMPLE								

(19.2 - 14.0) × 0.163 = 0.85 × 4 = 3.4

FIELD OBSERVATIONS

Facility: Marilla Street landfill Sample Point ID: MW-7B

Field Personnel: S.D. Sample Matrix: GROUNDWATER

MONITORTING WELL INSPECTION:

Date/Time 8-29-17 11:40AM Cond of seal: ( ) Good ( ) Cracked ____ %
(X) None ( ) Buried

Prot. Casing/riser height: 2.9' Cond of prot. Casing/riser: ( ) Unlocked (X) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: 0.85'

Gas Meter (Calibration/ Reading): % Gas: 1 % LEL: 1

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) 10.0

PURGE INFORMATION:

Date / Time Initiated: 8-29-17 11:45AM Date / Time Completed: 8-29-17 12:06

Surf. Meas. Pt: (X) Prot. Casing ( ) Riser Riser Diameter, Inches: 2"

Initial Water Level, Feet: 34.2' Elevation. G/W MSL: ____

Well Total Depth, Feet: 41.3' Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 1.16 gal Dedicated: (Y) N

Total Volume Purged, Gal: ~1.5 Purged To Dryness (Y) N

Purge Observations: SLIGHT BROWN TINT Start 11:45AM Finish 12:06PM

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
11:45AM		0	58.6	9.41	0.52	7.69		
12:06		~1.5	61.5	11.26	2.41	~~35~~		
1:30PM		—	59.1	12.01	3.37	35.0		
SAMPLE								

(41.3 - 34.2) x 0.163 = 1.16

*4 = 4.6

FIELD OBSERVATIONS

Facility: Morrilla Street Landfill

Sample Point ID: MW-15B

Field Personnel: S.D.

Sample Matrix: GROUNDWATER

MONITORTING WELL INSPECTION:

Date/Time 8-29-17 / 12:30pm

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: 0.85'

Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: 0.10'

Gas Meter (Calibration/ Reading): % Gas: 1 % LEL: 1

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) 10.0

PURGE INFORMATION:

Date / Time Initiated: 8-29-17 / 12:40pm

Date / Time Completed: 8/29/17 / 12:55pm

Surf. Meas. Pt: (X) Prot. Casing ( ) Riser

Riser Diameter, Inches: 2"

Initial Water Level, Feet: 6.3'

Elevation. G/W MSL: ____

Well Total Depth, Feet: 13.5'

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 1.2 gal

Dedicated: (Y) N

Total Volume Purged, Gal: 5.0

Purged To Dryness Y / (N)

Purge Observations: SLIGHT AMMONIA ODOR

Start ____ Finish ____

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
12:40p		0	64.4°F	8.93	2.01	5.05		
12:45p		2.5	59.2°F	12.13	5.45	8.58		
* 12:55pm		5.0	58.2°F	12.74	5.41	7.52		
SAMPLE								

(13.5' - 6.3') x 0.163 = 1.2 gal

X4 = 4.7

FIELD OBSERVATIONS

Facility: Morilla Street landfill Sample Point ID: MW-16B

Field Personnel: S.D. Sample Matrix: GROUNDWATER

MONITORTING WELL INSPECTION:

Date/Time 8/28/17 | 11:15AM Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____%

Prot. Casing/riser height: 1.74' Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged____

If prot.casing; depth to riser below: 0.75'

Gas Meter (Calibration/ Reading): % Gas: 1 % LEL: 1

Vol. Organic Meter (Calibration/Reading): * Volatiles (ppm) 1

LARGE WASP NEST, HAD TO USE BEE SPRAY, VOL ORGANIC SKEWED

PURGE INFORMATION:

Date / Time Initiated: 8/28/17 11:15AM Date / Time Completed: 8/28/17 | 12:45pm

Surf. Meas. Pt: (X) Prot. Casing ( ) Riser Riser Diameter, Inches: 2"

Initial Water Level, Feet: 5.7 Elevation. G/W MSL: ____

Well Total Depth, Feet: 15.4 Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 6.1 Dedicated: (Y) N

Total Volume Purged, Gal: ____ Purged To Dryness Y (N)

Purge Observations: SAND IN WELL Start 11:15AM Finish 12:45pm

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
11:15am		0	64.7°F	10.48	1.04	2.05		
11:35		~5.0	59.7°	10.45	2.02	12.76		
11:55am		~10.0	59.6°	9.51	2.24	8.41		
12:10pm		~15.0	59.5°	9.95	2.27	7.66		
12:30pm		~20.0	60.7°	10.79	2.35	7.34		
12:45pm		~25.0	58.1°	9.96	2.38	5.44		

* SAMPLE (15.4 - 5.7) x .163 = 6.1 PAGE 1

X 4 = 24.4

Field Form Revision 0 03/14/02

MS/MSD

FIELD OBSERVATIONS

Facility: Morrilla Street Landfill Sample Point ID: MW-18B

Field Personnel: SJD Sample Matrix: GROUNDWATER

MONITORTING WELL INSPECTION:

Date/Time 8/29/17 : 10:05 Cond of seal: (✓) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: 1.4' Cond of prot. Casing/riser: ( ) Unlocked (✓) Good ( ) Loose ( ) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: 0.04'

Gas Meter (Calibration/ Reading): % Gas: 1 % LEL: 1

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) 10.0

PURGE INFORMATION:

Date / Time Initiated: 8/29/17 10:10AM Date / Time Completed: 8/29/17, 10:35AM

Surf. Meas. Pt: (✓) Prot. Casing ( ) Riser Riser Diameter, Inches: 2"

Initial Water Level, Feet: 45.1 Elevation. G/W MSL: ____

Well Total Depth, Feet: 52.7 Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 1.24 Dedicated: (Y) N

Total Volume Purged, Gal: ~5.0 Purged To Dryness Y / (N)

Purge Observations: CLEAR Start 10:10AM Finish 10:35AM

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
10:15AM	—	0	56.8	7.32	2.66	1.93		
10:25AM		~2.5	57.1	7.67	3.29	5.24		
* 10:35AM		~5.0	56.8	7.56	3.25	6.71		
SAMPLE								

(52.7 - 45.1) x 0.163 = 1.24 x 4 = 4.96

FIELD OBSERVATIONS

Facility: Marilla Street landfill

Sample Point ID: SW-1

Field Personnel: SJD

Sample Matrix: SURFACE WATER

MONITORTING WELL INSPECTION:

Date/Time 8/28/17 9:05 am

Cond of seal: ( ) Good ( ) Cracked ( ) None ( ) Buried —%

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose ( ) Flush Mount ( ) Damaged —

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: —/— % LEL: —/—

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) —/—

PURGE INFORMATION:

Date / Time Initiated: —

Date / Time Completed: —/—

Surf. Meas. Pt: ( ) Prot. Casing ( ) Riser

Riser Diameter, Inches:

Initial Water Level, Feet:

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge:

One (1) Riser Volume, Gal:

Dedicated: Y / N

Total Volume Purged, Gal:

Purged To Dryness Y / N

Purge Observations:

Start Finish

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
9:45am	—	—	65°F	6.93	0.87	6.28		

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW-2A

Field Personnel: S.D.

Sample Matrix: SURFACE WATER

MONITORTING WELL INSPECTION:

Date/Time 8/20/19 1045

Cond of seal: ( ) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: ____

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose ( ) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: ____

Gas Meter (Calibration/ Reading): % Gas: / % LEL: /

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): /

PURGE INFORMATION:

Date / Time Initiated: ____

Date / Time Completed: /

Surf. Meas. Pt: ( ) Prot. Casing ( ) Riser

Riser Diameter, Inches: ____

Initial Water Level, Feet: ____

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: ____

One (1) Riser Volume, Gal: ____

Dedicated: Y / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / N

Purge Observations: ____

Start ____ Finish ____

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
1045			70.2°F	6.01	1.45	11.44		

(DUP)

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: ~~MW-~~ SW-3A

Field Personnel: S.D.

Sample Matrix: SURFACE WATER

MONITORTING WELL INSPECTION:

Date/Time 8/28/17 1310pm

Cond of seal: ( ) Good ( ) Cracked ( ) None ( ) Buried —%

Prot. Casing/riser height: _____

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose ( ) Flush Mount ( ) Damaged _____

If prot.casing; depth to riser below: _____

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: _____

Date / Time Completed: — / —

Surf. Meas. Pt: ( ) Prot. Casing ( ) Riser

Riser Diameter, Inches: _____

Initial Water Level, Feet: _____

Elevation. G/W MSL: _____

Well Total Depth, Feet: _____

Method of Well Purge: _____

One (1) Riser Volume, Gal: _____

Dedicated: Y / N

Total Volume Purged, Gal: _____

Purged To Dryness Y / N

Purge Observations: _____

Start _____ Finish _____

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
3:10pm	-	—	14.1	~~6.88~~	0.94	14.4		
				7.94				

INSTRUMENT QC/ PACKING LIST

Description	Hanna HI 991301 pH/ Cond./ TDS/ Temp.
Instrument ID	30290
Date Calibrated	8/22/17

PINE
www.pine-environmental.com

Standard Items	**Prepared**	**QC check**	**Received by customer**	**Returned to Pine**
Hanna HI 991301 w/ hard case	✓	✓		
Manual/ Quick Reference card	✓	✓		
Calibration kit (pH 7, pH 4, **12.88 mS/cm**)	✓			
pH / conductivity probe	✓	✓		
Probe cover	✓	✓		
(4) Extra AAA batteries	1	✓		
ProCal calibration sheet	✓			
Optional Items				
Extra cal. solution_____				

Prepared by: AG
QC checked by: _____
Date: _____

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC.

INSTRUMENT QC/ PACKING LIST

Description	RAE Systems MiniRAE 3000
Instrument ID	18714
Date Calibrated	8-23-17

PINE
www.pine-environmental.com

Standard Items	**Prepared**	**QC check**	**Received by customer**	**Returned to Pine**
MiniRAE 3000 w/ 10.6 eV lamp and carry case	✓	✓		
Protective rubber boot	✓	✓		
Manual	✓	✓		
Quick reference card	✓	✓		
Probe tip	✓	✓		
Charger/ adapter, or charger and cradle	✓	✓		
(2) Hydrophobic filters	✓	✓		
Alkaline battery adapter	✓	✓		
(4) AA Alkaline batteries	✓	✓		
ProCal calibration sheet	✓	✓		
Supporting Items				
100 ppm isobutylene calibration gas	NO	NO		
100 ppm Isobutylene SDS				
✓ *Must match cylinder with setup*				
Gas regulator				
Tedlar bag				
Datalogging software				
Communications cable				

Prepared by: NP
QC checked by:
Date: 8-23

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
1057 East Henrietta Rd.
Rochester NY 14623
Phone: 585-424-2140

Pine Environmental Services, Inc.

Instrument ID 23234
Description LaMotte 2020we
Calibrated 8/24/2017 2:06:36PM

Manufacturer
Model Number 2020WE
Serial Number/ Lot Number 3104-1413
Location Rochester, NY
Department

State Certified
Status Pass
Temp °C 23.6
Humidity % 51

Calibration Specifications

Group # 1
Group Name Turbidity
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
1.00 / 1.00	NTU	1.00	NTU	1.00	1.00	0.00%	Pass
10.00 / 10.00	NTU	10.00	NTU	10.00	10.00	0.00%	Pass

Test Instruments Used During the Calibration

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	(As Of Cal Entry Date) Last Cal Date/ Opened Date	(As Of Cal Entry Date) Next Cal Date / Expiration Date
ROC - 1 NTU C688017	ROC TURB 1 NTU	Pine Environmental Services, Inc.	8577	C688017		8/31/2017
ROC - 10 NTU C689840	10 NTU TURBIDITY STANDARD	GFS	C689840			12/31/2017

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Michele Pagano

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

INSTRUMENT QC/ PACKING LIST

Description	LaMotte 2020we
Instrument ID	23234
Date Calibrated	8-24-17

PINE
www.pine-environmental.com

Standard Items	**Prepared**	**QC check**	**Received by customer**	**Returned to Pine**
LaMotte 2020we w/ hard case	✓	✓		
Manual	✓	✓		
Lint-free lens papers (KimWipes)	✓	✓		
0 NTU vial	✓	✓		
1 NTU vial	✓	✓		
10 NTU vial	✓	✓		
(2) sample vials	✓	✓		
Plastic water sample bottle with spout	✓	✓		
Charger and cord	✓	✓		
ProCal calibration report	✓	✓		
Optional Items				
Extra sample vials ___	N/A			

Prepared by: MP
QC checked by: ✓
Date: 8-2

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC.

APPENDIX D

Laboratory Reports and Chain of Custody Forms

September 12, 2017 Service Request No:R1708082

Ms. Allyson Zurawski
Daigler Engineering
2620 Grand Island Blvd.
Grand Island, NY 14072

Laboratory Results for: Marilla Street LF

Dear Ms.Zurawski,

Enclosed are the results of the sample(s) submitted to our laboratory August 30, 2017
For your reference, these analyses have been assigned our service request number **R1708082.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Brady Kalkman
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

1565 Jefferson Rd, Building 300, Rochester, NY 14623 | 585-288-5380 | www.alsglobal.com

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request:R1708082
Date Received:8/30/17

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt

Fourteen water samples were received for analysis at ALS Environmental on 08/30/2017. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Volatile Organic Analyses:

Method 8260, 9/1/17: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Metals Analyses:

No significant anomalies were noted with this analysis.

General Chemistry Analyses:

Method 335.4/Cyanide, R1708082-003: The Method Reporting Limit (MRL) was elevated due to reactivity of sample.

Approved by _____ Date 9/12/2017

SAMPLE DETECTION SUMMARY

CLIENT ID: MW-2B	Lab ID: R1708082-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	17.3		0.05	1.0	mg/L	SM 5310 C-
Phenolics, Total Recoverable	0.063		0.002	0.010	mg/L	420.4
Solids, Total Dissolved (TDS)	468		8	20	mg/L	SM 2540 C-
Chromium, Total	13		3	10	ug/L	6010C
Iron, Total	4900		80	100	ug/L	6010C
Lead, Total	5	J	4	50	ug/L	6010C
Manganese, Total	277		5	10	ug/L	6010C
Acetone	18		1.3	10	ug/L	8260C

CLIENT ID: MW-3B	Lab ID: R1708082-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	134		0.5	10	mg/L	SM 5310 C-
Phenolics, Total Recoverable	0.73		0.02	0.10	mg/L	420.4
Solids, Total Dissolved (TDS)	1740		18	50	mg/L	SM 2540 C-
Arsenic, Total	51		4	10	ug/L	6010C
Chromium, Total	120		3	10	ug/L	6010C
Iron, Total	73200		800	1000	ug/L	6010C
Lead, Total	639		4	50	ug/L	6010C
Manganese, Total	1110		5	10	ug/L	6010C
2-Butanone (MEK)	31		0.81	10	ug/L	8260C
Acetone	490	D	6.2	50	ug/L	8260C

CLIENT ID: MW-3B Diss	Lab ID: R1708082-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Arsenic, Dissolved	25		4	10	ug/L	6010C
Chromium, Dissolved	20		3	10	ug/L	6010C
Iron, Dissolved	2780		80	100	ug/L	6010C
Lead, Dissolved	47	J	4	50	ug/L	6010C
Manganese, Dissolved	52		5	10	ug/L	6010C

CLIENT ID: MW-4B	Lab ID: R1708082-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	6.0		0.05	1.0	mg/L	SM 5310 C-
Solids, Total Dissolved (TDS)	497		4	10	mg/L	SM 2540 C-
Iron, Total	3840		80	100	ug/L	6010C
Manganese, Total	703		5	10	ug/L	6010C

CLIENT ID: MW-6B	Lab ID: R1708082-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	6.3		0.05	1.0	mg/L	SM 5310 C-
Solids, Total Dissolved (TDS)	1030		8	20	mg/L	SM 2540 C-
Iron, Total	5950		80	100	ug/L	6010C
Lead, Total	9	J	4	50	ug/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: MW-6B	Lab ID: R1708082-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Manganese, Total	624		5	10	ug/L	6010C

CLIENT ID: MW-6B Diss	Lab ID: R1708082-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Iron, Dissolved	110		80	100	ug/L	6010C
Manganese, Dissolved	577		5	10	ug/L	6010C

CLIENT ID: MW-7B	Lab ID: R1708082-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	47.4		0.09	2.0	mg/L	SM 5310 C-
Cyanide, Total	0.025		0.002	0.010	mg/L	335.4
Phenolics, Total Recoverable	0.37		0.02	0.10	mg/L	420.4
Solids, Total Dissolved (TDS)	832		15	40	mg/L	SM 2540 C-
Iron, Total	3100		80	100	ug/L	6010C
Lead, Total	41	J	4	50	ug/L	6010C
Manganese, Total	76		5	10	ug/L	6010C
Acetone	33		1.3	10	ug/L	8260C

CLIENT ID: MW-15B	Lab ID: R1708082-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	50.7		0.2	4.0	mg/L	SM 5310 C-
Phenolics, Total Recoverable	0.56		0.02	0.10	mg/L	420.4
Solids, Total Dissolved (TDS)	1460		21	59	mg/L	SM 2540 C-
Arsenic, Total	29		4	10	ug/L	6010C
Iron, Total	150		80	100	ug/L	6010C
Acetone	83		1.3	10	ug/L	8260C

CLIENT ID: MW-16B	Lab ID: R1708082-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	14.1		0.05	1.0	mg/L	SM 5310 C-
Cyanide, Total	0.019		0.002	0.010	mg/L	335.4
Phenolics, Total Recoverable	0.0078		0.0010	0.0050	mg/L	420.4
Solids, Total Dissolved (TDS)	706		8	20	mg/L	SM 2540 C-
Trichloroethene (TCE)	31		0.22	5.0	ug/L	8260C
cis-1,2-Dichloroethene	8.5		0.30	5.0	ug/L	8260C

CLIENT ID: MW-18B	Lab ID: R1708082-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	24.3		0.2	3.0	mg/L	SM 5310 C-
Cyanide, Total	0.024		0.002	0.010	mg/L	335.4
Solids, Total Dissolved (TDS)	2710		8	20	mg/L	SM 2540 C-
Arsenic, Total	20		4	10	ug/L	6010C
Iron, Total	640		80	100	ug/L	6010C
Manganese, Total	2100		5	10	ug/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: MW-18B	Lab ID: R1708082-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**

CLIENT ID: GW-DUP	Lab ID: R1708082-012					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	6.1		0.05	1.0	mg/L	SM 5310 C-
Solids, Total Dissolved (TDS)	512		4	10	mg/L	SM 2540 C-
Iron, Total	2000		80	100	ug/L	6010C
Manganese, Total	771		5	10	ug/L	6010C

CLIENT ID: SW-1	Lab ID: R1708082-013					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	9.9		0.05	1.0	mg/L	SM 5310 C-
Phenolics, Total Recoverable	0.0056		0.0010	0.0050	mg/L	420.4
Solids, Total Dissolved (TDS)	422		4	10	mg/L	SM 2540 C-
Iron, Total	1160		80	100	ug/L	6010C
Manganese, Total	482		5	10	ug/L	6010C

CLIENT ID: SW-1 Diss	Lab ID: R1708082-014					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Manganese, Dissolved	464		5	10	ug/L	6010C

CLIENT ID: SW-2A	Lab ID: R1708082-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	9.8		0.05	1.0	mg/L	SM 5310 C-
Phenolics, Total Recoverable	0.0062		0.0010	0.0050	mg/L	420.4
Solids, Total Dissolved (TDS)	426		4	10	mg/L	SM 2540 C-
Iron, Total	1910		80	100	ug/L	6010C
Manganese, Total	669		5	10	ug/L	6010C

CLIENT ID: SW-2A Diss	Lab ID: R1708082-016					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Manganese, Dissolved	534		5	10	ug/L	6010C

CLIENT ID: SW-3A	Lab ID: R1708082-017					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	7.4		0.05	1.0	mg/L	SM 5310 C-
Solids, Total Dissolved (TDS)	480		4	10	mg/L	SM 2540 C-
Iron, Total	1180		80	100	ug/L	6010C
Manganese, Total	268		5	10	ug/L	6010C

CLIENT ID: SW-3A Diss	Lab ID: R1708082-018					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Manganese, Dissolved	67		5	10	ug/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: SW-5	Lab ID: R1708082-019					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	6.4		0.05	1.0	mg/L	SM 5310 C-
Phenolics, Total Recoverable	0.0056		0.0010	0.0050	mg/L	420.4
Solids, Total Dissolved (TDS)	752		8	20	mg/L	SM 2540 C-
Iron, Total	1310		80	100	ug/L	6010C
Manganese, Total	99		5	10	ug/L	6010C

CLIENT ID: SW-DUP	Lab ID: R1708082-021					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Carbon, Total Organic (TOC)	7.7		0.05	1.0	mg/L	SM 5310 C-
Solids, Total Dissolved (TDS)	469		4	10	mg/L	SM 2540 C-
Iron, Total	1130		80	100	ug/L	6010C
Manganese, Total	221		5	10	ug/L	6010C

CLIENT ID: SW-DUP Diss	Lab ID: R1708082-022					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Manganese, Dissolved	66		5	10	ug/L	6010C

Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Daigler Engineering **Service Request:**R1708082
Project: Marilla Street LF

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1708082-001	MW-2B	8/28/2017	1315
R1708082-002	MW-2B Diss	8/28/2017	1315
R1708082-003	MW-3B	8/28/2017	1600
R1708082-004	MW-3B Diss	8/28/2017	1600
R1708082-005	MW-4B	8/29/2017	0910
R1708082-006	MW-6B	8/29/2017	1515
R1708082-007	MW-6B Diss	8/29/2017	1515
R1708082-008	MW-7B	8/29/2017	1330
R1708082-009	MW-15B	8/29/2017	1300
R1708082-010	MW-16B	8/28/2017	1245
R1708082-011	MW-18B	8/29/2017	1045
R1708082-012	GW-DUP	8/29/2017	
R1708082-013	SW-1	8/28/2017	0915
R1708082-014	SW-1 Diss	8/28/2017	0915
R1708082-015	SW-2A	8/28/2017	1045
R1708082-016	SW-2A Diss	8/28/2017	1045
R1708082-017	SW-3A	8/28/2017	1510
R1708082-018	SW-3A Diss	8/28/2017	1510
R1708082-019	SW-5	8/29/2017	0815
R1708082-020	SW-5 Diss	8/29/2017	0815
R1708082-021	SW-DUP	8/29/2017	
R1708082-022	SW-DUP Diss	8/29/2017	

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

46552

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name	Project Number
Project Manager ALLYSON ZURAWSKI	**Report CC**
Company/Address DAIGLER ENGINEERING, P.C. 2620 GRAND ISLAND BLVD GRAND ISLAND, NY 14072	
Phone # 716 773 6872 x202	**Email** ALLYSON@DAIGENVEGR.COM
Sampler's Signature	**Sampler's Printed Name** SAM DAIGLER

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	CN	TDS	TOC, PHENOL				
PRESERVATIVE						1					Z	Z	4	0	3				
MW-2B		8-28-17	1:15pm	GROUND WATER	8	X					X	X	X	X	X				
MW-3B		8-28-17	4:00pm	GROUND WATER	8	X					X	X	X	X	X				
MW-4B		8-29-17	9:10AM	GROUND WATER	7	X					X		X	X	X				
MW-6B		8-29-17	3:15pm	GROUND WATER	8	X					X	X	X	X	X				
MW-7B		8-29-17	1:30pm	GROUND WATER	7	X					X		X	X	X				
MW-15B		8-29-17	1:00pm	GROUND WATER	7	X					X		X	X	X				
MW-16B		8-28-17	12:45pm	GROUND WATER	7	X					X		X	X	X				
MW-18B		8-29-17	10:45AM	GROUND WATER	7	X					X		X	X	X				
MW-18B (MS)		8-29-17	10:45AM	GROUND WATER	5	X					X		X						
MW-18B (MSD)		8-29-17	10:45AM	GROUND WATER	5	X					X		X						
GW-DUP				GROUND WATER	7	X					X		X	X	X				

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS
Metals
As, Cr, Fe, Pb, Mn

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata X Yes ____ No

INVOICE INFORMATION
PO #
BILL TO:

STATE WHERE SAMPLES WERE COLLECTED

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY
Signature	Signature	Signature	Signature	Signature
Printed Name SAM DAIGLER	Printed Name	Printed Name	Printed Name Daniel Ward	Printed Name
Firm D.E	Firm ALS	Firm ALS	Firm ALS	Firm
Date/Time 8/30/17 10:45AM	Date/Time 8/30/17 1045	Date/Time 8/30/17	Date/Time 8/30/17 1305	Date/Time

R1708082 5
Daigler Engineering
Marilla Street LF

Distribution: White - Lab Copy; Yellow - Return to Originator

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

46553

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: MARILLA STREET LF	Project Number:
Project Manager: ALLYSON ZURAWSKI	Report CC:
Company/Address: DAIGLER ENGINEERING, P.C. 2620 GRAND ISLAND BLVD GRAND ISLAND, NY 14072	
Phone #: (716) 773-6822	Email: SAM@JADENVEGR.COM
Sampler's Signature:	Sampler's Printed Name: SAM DAIGLER

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 | 2 | 2 | 4 | 0 | 3

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	CN	TDS	TOC, PHENOL					REMARKS/ ALTERNATE DESCRIPTION
SW-1		8-28-17	9:15AM	SURFACE WATER	8	X					X	X	X	X	X					
SW-2A		8-28-17	10:45AM	SURFACE WATER	8	X					X	X	X	X	X					
SW-3A		8-28-17	3:10PM	SURFACE WATER	8	X					X	X	X	X	X					
SW-5		8-29-17	8:15AM	SURFACE WATER	8	X					X	X	X	X	X					
SW-DUP				SURFACE WATER	8	X					X	X	X	X	X					

Preservative Key
0. NONE
1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals
As, Cr, Fe, Pb, Mn

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE _____

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata X Yes ____ No

INVOICE INFORMATION
PO #
BILL TO:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	
Printed Name: SAM DAIGLER	Printed Name:	Printed Name:	Printed Name: Daniel Wade	Printed Name	
Firm: D.E	Firm: ALS	Firm: ALS	Firm: ALS	Firm	
Date/Time: 8/30/17 10:45AM	Date/Time: 8/30/17 1045	Date/Time: 8/30/17	Date/Time: 8/30/17 1305	Date/Time	Date/Time

R1708082 5
Daigler Engineering
Marilla Street LF

Distribution: White - Lab Copy; Yellow - Return to Originator

Cooler Receipt and Preservation Check Form

R1708082 5
Daigler Engineering
Marilla Street LF

Project/Client DAIGLER Engineering P.C. Folder Number R17-8082

Cooler received on 8/30/17 by: SC

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y)	N
2	**Custody papers** properly completed (ink, signed)?	(Y)	N
3	Did all bottles arrive in good **condition** (unbroken)?	(Y)	N
4	Circle: **Wet Ice** **Dry Ice** **Gel packs** present?	(Y)	N

5a	**Perchlorate** samples have required headspace?	Y	N	(NA)
5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y	(N)	NA
6	Where did the bottles originate?	ALS/ROC	CLIENT	
7	Soil VOA received as:	Bulk	Encore	5035set (NA)

8. Temperature Readings Date: 8/30/17 Time: 1:30 ID: ~~IR#7~~ (IR#8) From: Temp Blank ~~Sample Bottle~~

Observed Temp (°C)	0.3	3.1					
Correction Factor (°C)	+0.5	+0.9					
Corrected Temp (°C)	0.8	4.0					
Temp from:Type of bottle	250mL Plast	Coal tub					
Within 0-6°C?	(Y) N	(Y) N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by SC on 8/30/17 at 1325
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown: Date: 8/30/17 Time: 1925 by: SW

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	20817	NaOH	✓		181658	7/19				
≤2	↓	HNO_3	✓		30826 1585	6/18				
≤2		H_2SO_4	✓		181970	7/18				
<4		$NaHSO_4$								
Residual Chlorine (-)		For CN Phenol and 522	✓		If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
		$Na_2S_2O_3$	-	-						
		ZnAcetate	-	-						
		HCl	**	**	4115022					

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: CO-VAS-001, 061717-1BMC, 071717-2AAO

Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: _____

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% (25% for CLP) difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Accredited	Nebraska Accredited	
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047	North Carolina #676	Virginia #460167

[1] Analyses were performed according to our laboratoryôs NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Daigler Engineering **Service Request:** R1708082
Project: Marilla Street LF

Sample Name: MW-2B **Date Collected:** 08/28/17
Lab Code: R1708082-001 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		KRUEST
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Sample Name: MW-2B Diss **Date Collected:** 08/28/17
Lab Code: R1708082-002 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN

Sample Name: MW-3B **Date Collected:** 08/28/17
Lab Code: R1708082-003 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
8260C		KRUEST
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF		

Sample Name:	MW-3B Diss	**Date Collected:**	08/28/17
Lab Code:	R1708082-004	**Date Received:**	08/30/17
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN

Sample Name:	MW-4B	**Date Collected:**	08/29/17
Lab Code:	R1708082-005	**Date Received:**	08/30/17
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Sample Name:	MW-6B	**Date Collected:**	08/29/17
Lab Code:	R1708082-006	**Date Received:**	08/30/17
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Client: Daigler Engineering **Service Request:** R1708082
Project: Marilla Street LF

Sample Name: MW-6B Diss **Date Collected:** 08/29/17
Lab Code: R1708082-007 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN

Sample Name: MW-7B **Date Collected:** 08/29/17
Lab Code: R1708082-008 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Sample Name: MW-15B **Date Collected:** 08/29/17
Lab Code: R1708082-009 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Client: Daigler Engineering **Service Request:** R1708082
Project: Marilla Street LF

Sample Name: MW-16B **Date Collected:** 08/28/17
Lab Code: R1708082-010 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Sample Name: MW-18B **Date Collected:** 08/29/17
Lab Code: R1708082-011 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Sample Name: GW-DUP **Date Collected:** 08/29/17
Lab Code: R1708082-012 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Client: Daigler Engineering **Service Request:** R1708082
Project: Marilla Street LF

Sample Name: SW-1 **Date Collected:** 08/28/17
Lab Code: R1708082-013 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Sample Name: SW-1 Diss **Date Collected:** 08/28/17
Lab Code: R1708082-014 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN

Sample Name: SW-2A **Date Collected:** 08/28/17
Lab Code: R1708082-015 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Client: Daigler Engineering **Service Request:** R1708082
Project: Marilla Street LF

Sample Name: SW-2A Diss **Date Collected:** 08/28/17
Lab Code: R1708082-016 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN

Sample Name: SW-3A **Date Collected:** 08/28/17
Lab Code: R1708082-017 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Sample Name: SW-3A Diss **Date Collected:** 08/28/17
Lab Code: R1708082-018 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN

Sample Name: SW-5 **Date Collected:** 08/29/17
Lab Code: R1708082-019 **Date Received:** 08/30/17
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF		

Sample Name:	SW-5	**Date Collected:**	08/29/17
Lab Code:	R1708082-019	**Date Received:**	08/30/17
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
SM 5310 C-2000(2011)		CWOODS

Sample Name:	SW-5 Diss	**Date Collected:**	08/29/17
Lab Code:	R1708082-020	**Date Received:**	08/30/17
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN

Sample Name:	SW-DUP	**Date Collected:**	08/29/17
Lab Code:	R1708082-021	**Date Received:**	08/30/17
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
335.4	MROGERSON	GNITAJOUPPI
420.4		BBOWE
6010C	KMCLAEN	NMANSEN
8260C		BALLGEIER
SM 2540 C-1997(2011)		KWONG
SM 5310 C-2000(2011)		CWOODS

Sample Name:	SW-DUP Diss	**Date Collected:**	08/29/17
Lab Code:	R1708082-022	**Date Received:**	08/30/17
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 13:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-2B	**Units:**	ug/L
Lab Code:	R1708082-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/05/17 14:06	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/05/17 14:06	
1,1,2-Trichloroethane	ND U	5.0	1	09/05/17 14:06	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/05/17 14:06	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/05/17 14:06	
1,2-Dichloroethane	ND U	5.0	1	09/05/17 14:06	
1,2-Dichloropropane	ND U	5.0	1	09/05/17 14:06	
2-Butanone (MEK)	ND U	10	1	09/05/17 14:06	
2-Hexanone	ND U	10	1	09/05/17 14:06	
4-Methyl-2-pentanone	ND U	10	1	09/05/17 14:06	
Acetone	**18**	10	1	09/05/17 14:06	
Benzene	ND U	5.0	1	09/05/17 14:06	
Bromodichloromethane	ND U	5.0	1	09/05/17 14:06	
Bromoform	ND U	5.0	1	09/05/17 14:06	
Bromomethane	ND U	5.0	1	09/05/17 14:06	
Carbon Disulfide	ND U	10	1	09/05/17 14:06	
Carbon Tetrachloride	ND U	5.0	1	09/05/17 14:06	
Chlorobenzene	ND U	5.0	1	09/05/17 14:06	
Chloroethane	ND U	5.0	1	09/05/17 14:06	
Chloroform	ND U	5.0	1	09/05/17 14:06	
Chloromethane	ND U	5.0	1	09/05/17 14:06	
Dibromochloromethane	ND U	5.0	1	09/05/17 14:06	
Dichloromethane	ND U	5.0	1	09/05/17 14:06	
Ethylbenzene	ND U	5.0	1	09/05/17 14:06	
Styrene	ND U	5.0	1	09/05/17 14:06	
Tetrachloroethene (PCE)	ND U	5.0	1	09/05/17 14:06	
Toluene	ND U	5.0	1	09/05/17 14:06	
Trichloroethene (TCE)	ND U	5.0	1	09/05/17 14:06	
Vinyl Chloride	ND U	5.0	1	09/05/17 14:06	
cis-1,2-Dichloroethene	ND U	5.0	1	09/05/17 14:06	
cis-1,3-Dichloropropene	ND U	5.0	1	09/05/17 14:06	
m,p-Xylenes	ND U	5.0	1	09/05/17 14:06	
o-Xylene	ND U	5.0	1	09/05/17 14:06	
trans-1,2-Dichloroethene	ND U	5.0	1	09/05/17 14:06	
trans-1,3-Dichloropropene	ND U	5.0	1	09/05/17 14:06	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 13:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-2B	**Units:**	ug/L
Lab Code:	R1708082-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	09/05/17 14:06	
Dibromofluoromethane	103	89 - 119	09/05/17 14:06	
Toluene-d8	101	87 - 121	09/05/17 14:06	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 16:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-3B	**Units:**	ug/L
Lab Code:	R1708082-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/02/17 20:46	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/02/17 20:46	
1,1,2-Trichloroethane	ND U	5.0	1	09/02/17 20:46	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/02/17 20:46	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/02/17 20:46	
1,2-Dichloroethane	ND U	5.0	1	09/02/17 20:46	
1,2-Dichloropropane	ND U	5.0	1	09/02/17 20:46	
2-Butanone (MEK)	**31**	10	1	09/02/17 20:46	
2-Hexanone	ND U	10	1	09/02/17 20:46	
4-Methyl-2-pentanone	ND U	10	1	09/02/17 20:46	
Acetone	**490 D**	50	5	09/05/17 14:28	
Benzene	ND U	5.0	1	09/02/17 20:46	
Bromodichloromethane	ND U	5.0	1	09/02/17 20:46	
Bromoform	ND U	5.0	1	09/02/17 20:46	
Bromomethane	ND U	5.0	1	09/02/17 20:46	
Carbon Disulfide	ND U	10	1	09/02/17 20:46	
Carbon Tetrachloride	ND U	5.0	1	09/02/17 20:46	
Chlorobenzene	ND U	5.0	1	09/02/17 20:46	
Chloroethane	ND U	5.0	1	09/02/17 20:46	
Chloroform	ND U	5.0	1	09/02/17 20:46	
Chloromethane	ND U	5.0	1	09/02/17 20:46	
Dibromochloromethane	ND U	5.0	1	09/02/17 20:46	
Dichloromethane	ND U	5.0	1	09/02/17 20:46	
Ethylbenzene	ND U	5.0	1	09/02/17 20:46	
Styrene	ND U	5.0	1	09/02/17 20:46	
Tetrachloroethene (PCE)	ND U	5.0	1	09/02/17 20:46	
Toluene	ND U	5.0	1	09/02/17 20:46	
Trichloroethene (TCE)	ND U	5.0	1	09/02/17 20:46	
Vinyl Chloride	ND U	5.0	1	09/02/17 20:46	
cis-1,2-Dichloroethene	ND U	5.0	1	09/02/17 20:46	
cis-1,3-Dichloropropene	ND U	5.0	1	09/02/17 20:46	
m,p-Xylenes	ND U	5.0	1	09/02/17 20:46	
o-Xylene	ND U	5.0	1	09/02/17 20:46	
trans-1,2-Dichloroethene	ND U	5.0	1	09/02/17 20:46	
trans-1,3-Dichloropropene	ND U	5.0	1	09/02/17 20:46	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 16:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-3B	**Units:**	ug/L
Lab Code:	R1708082-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	85 - 122	09/02/17 20:46	
Dibromofluoromethane	100	89 - 119	09/02/17 20:46	
Toluene-d8	98	87 - 121	09/02/17 20:46	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 09:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-4B	**Units:**	ug/L
Lab Code:	R1708082-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 17:14	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 17:14	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 17:14	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 17:14	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 17:14	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 17:14	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 17:14	
2-Butanone (MEK)	ND U	10	1	09/01/17 17:14	
2-Hexanone	ND U	10	1	09/01/17 17:14	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 17:14	
Acetone	ND U	10	1	09/01/17 17:14	
Benzene	ND U	5.0	1	09/01/17 17:14	
Bromodichloromethane	ND U	5.0	1	09/01/17 17:14	
Bromoform	ND U	5.0	1	09/01/17 17:14	
Bromomethane	ND U	5.0	1	09/01/17 17:14	
Carbon Disulfide	ND U	10	1	09/01/17 17:14	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 17:14	
Chlorobenzene	ND U	5.0	1	09/01/17 17:14	
Chloroethane	ND U	5.0	1	09/01/17 17:14	
Chloroform	ND U	5.0	1	09/01/17 17:14	
Chloromethane	ND U	5.0	1	09/01/17 17:14	
Dibromochloromethane	ND U	5.0	1	09/01/17 17:14	
Dichloromethane	ND U	5.0	1	09/01/17 17:14	
Ethylbenzene	ND U	5.0	1	09/01/17 17:14	
Styrene	ND U	5.0	1	09/01/17 17:14	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 17:14	
Toluene	ND U	5.0	1	09/01/17 17:14	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 17:14	
Vinyl Chloride	ND U	5.0	1	09/01/17 17:14	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 17:14	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 17:14	
m,p-Xylenes	ND U	5.0	1	09/01/17 17:14	
o-Xylene	ND U	5.0	1	09/01/17 17:14	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 17:14	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 17:14	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 09:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-4B	**Units:**	ug/L
Lab Code:	R1708082-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	09/01/17 17:14	
Dibromofluoromethane	101	89 - 119	09/01/17 17:14	
Toluene-d8	100	87 - 121	09/01/17 17:14	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 15:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-6B	**Units:**	ug/L
Lab Code:	R1708082-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 17:36	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 17:36	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 17:36	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 17:36	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 17:36	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 17:36	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 17:36	
2-Butanone (MEK)	ND U	10	1	09/01/17 17:36	
2-Hexanone	ND U	10	1	09/01/17 17:36	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 17:36	
Acetone	ND U	10	1	09/01/17 17:36	
Benzene	ND U	5.0	1	09/01/17 17:36	
Bromodichloromethane	ND U	5.0	1	09/01/17 17:36	
Bromoform	ND U	5.0	1	09/01/17 17:36	
Bromomethane	ND U	5.0	1	09/01/17 17:36	
Carbon Disulfide	ND U	10	1	09/01/17 17:36	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 17:36	
Chlorobenzene	ND U	5.0	1	09/01/17 17:36	
Chloroethane	ND U	5.0	1	09/01/17 17:36	
Chloroform	ND U	5.0	1	09/01/17 17:36	
Chloromethane	ND U	5.0	1	09/01/17 17:36	
Dibromochloromethane	ND U	5.0	1	09/01/17 17:36	
Dichloromethane	ND U	5.0	1	09/01/17 17:36	
Ethylbenzene	ND U	5.0	1	09/01/17 17:36	
Styrene	ND U	5.0	1	09/01/17 17:36	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 17:36	
Toluene	ND U	5.0	1	09/01/17 17:36	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 17:36	
Vinyl Chloride	ND U	5.0	1	09/01/17 17:36	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 17:36	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 17:36	
m,p-Xylenes	ND U	5.0	1	09/01/17 17:36	
o-Xylene	ND U	5.0	1	09/01/17 17:36	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 17:36	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 17:36	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 15:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-6B	**Units:**	ug/L
Lab Code:	R1708082-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85 - 122	09/01/17 17:36	
Dibromofluoromethane	109	89 - 119	09/01/17 17:36	
Toluene-d8	103	87 - 121	09/01/17 17:36	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 13:30
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-7B	**Units:**	ug/L
Lab Code:	R1708082-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/02/17 21:08	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/02/17 21:08	
1,1,2-Trichloroethane	ND U	5.0	1	09/02/17 21:08	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/02/17 21:08	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/02/17 21:08	
1,2-Dichloroethane	ND U	5.0	1	09/02/17 21:08	
1,2-Dichloropropane	ND U	5.0	1	09/02/17 21:08	
2-Butanone (MEK)	ND U	10	1	09/02/17 21:08	
2-Hexanone	ND U	10	1	09/02/17 21:08	
4-Methyl-2-pentanone	ND U	10	1	09/02/17 21:08	
Acetone	**33**	10	1	09/02/17 21:08	
Benzene	ND U	5.0	1	09/02/17 21:08	
Bromodichloromethane	ND U	5.0	1	09/02/17 21:08	
Bromoform	ND U	5.0	1	09/02/17 21:08	
Bromomethane	ND U	5.0	1	09/02/17 21:08	
Carbon Disulfide	ND U	10	1	09/02/17 21:08	
Carbon Tetrachloride	ND U	5.0	1	09/02/17 21:08	
Chlorobenzene	ND U	5.0	1	09/02/17 21:08	
Chloroethane	ND U	5.0	1	09/02/17 21:08	
Chloroform	ND U	5.0	1	09/02/17 21:08	
Chloromethane	ND U	5.0	1	09/02/17 21:08	
Dibromochloromethane	ND U	5.0	1	09/02/17 21:08	
Dichloromethane	ND U	5.0	1	09/02/17 21:08	
Ethylbenzene	ND U	5.0	1	09/02/17 21:08	
Styrene	ND U	5.0	1	09/02/17 21:08	
Tetrachloroethene (PCE)	ND U	5.0	1	09/02/17 21:08	
Toluene	ND U	5.0	1	09/02/17 21:08	
Trichloroethene (TCE)	ND U	5.0	1	09/02/17 21:08	
Vinyl Chloride	ND U	5.0	1	09/02/17 21:08	
cis-1,2-Dichloroethene	ND U	5.0	1	09/02/17 21:08	
cis-1,3-Dichloropropene	ND U	5.0	1	09/02/17 21:08	
m,p-Xylenes	ND U	5.0	1	09/02/17 21:08	
o-Xylene	ND U	5.0	1	09/02/17 21:08	
trans-1,2-Dichloroethene	ND U	5.0	1	09/02/17 21:08	
trans-1,3-Dichloropropene	ND U	5.0	1	09/02/17 21:08	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 13:30
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-7B	**Units:**	ug/L
Lab Code:	R1708082-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85 - 122	09/02/17 21:08	
Dibromofluoromethane	102	89 - 119	09/02/17 21:08	
Toluene-d8	102	87 - 121	09/02/17 21:08	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 13:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-15B	**Units:**	ug/L
Lab Code:	R1708082-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/02/17 21:30	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/02/17 21:30	
1,1,2-Trichloroethane	ND U	5.0	1	09/02/17 21:30	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/02/17 21:30	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/02/17 21:30	
1,2-Dichloroethane	ND U	5.0	1	09/02/17 21:30	
1,2-Dichloropropane	ND U	5.0	1	09/02/17 21:30	
2-Butanone (MEK)	ND U	10	1	09/02/17 21:30	
2-Hexanone	ND U	10	1	09/02/17 21:30	
4-Methyl-2-pentanone	ND U	10	1	09/02/17 21:30	
Acetone	**83**	10	1	09/02/17 21:30	
Benzene	ND U	5.0	1	09/02/17 21:30	
Bromodichloromethane	ND U	5.0	1	09/02/17 21:30	
Bromoform	ND U	5.0	1	09/02/17 21:30	
Bromomethane	ND U	5.0	1	09/02/17 21:30	
Carbon Disulfide	ND U	10	1	09/02/17 21:30	
Carbon Tetrachloride	ND U	5.0	1	09/02/17 21:30	
Chlorobenzene	ND U	5.0	1	09/02/17 21:30	
Chloroethane	ND U	5.0	1	09/02/17 21:30	
Chloroform	ND U	5.0	1	09/02/17 21:30	
Chloromethane	ND U	5.0	1	09/02/17 21:30	
Dibromochloromethane	ND U	5.0	1	09/02/17 21:30	
Dichloromethane	ND U	5.0	1	09/02/17 21:30	
Ethylbenzene	ND U	5.0	1	09/02/17 21:30	
Styrene	ND U	5.0	1	09/02/17 21:30	
Tetrachloroethene (PCE)	ND U	5.0	1	09/02/17 21:30	
Toluene	ND U	5.0	1	09/02/17 21:30	
Trichloroethene (TCE)	ND U	5.0	1	09/02/17 21:30	
Vinyl Chloride	ND U	5.0	1	09/02/17 21:30	
cis-1,2-Dichloroethene	ND U	5.0	1	09/02/17 21:30	
cis-1,3-Dichloropropene	ND U	5.0	1	09/02/17 21:30	
m,p-Xylenes	ND U	5.0	1	09/02/17 21:30	
o-Xylene	ND U	5.0	1	09/02/17 21:30	
trans-1,2-Dichloroethene	ND U	5.0	1	09/02/17 21:30	
trans-1,3-Dichloropropene	ND U	5.0	1	09/02/17 21:30	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 13:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-15B	**Units:**	ug/L
Lab Code:	R1708082-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85 - 122	09/02/17 21:30	
Dibromofluoromethane	105	89 - 119	09/02/17 21:30	
Toluene-d8	103	87 - 121	09/02/17 21:30	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 12:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-16B	**Units:**	ug/L
Lab Code:	R1708082-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/02/17 21:52	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/02/17 21:52	
1,1,2-Trichloroethane	ND U	5.0	1	09/02/17 21:52	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/02/17 21:52	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/02/17 21:52	
1,2-Dichloroethane	ND U	5.0	1	09/02/17 21:52	
1,2-Dichloropropane	ND U	5.0	1	09/02/17 21:52	
2-Butanone (MEK)	ND U	10	1	09/02/17 21:52	
2-Hexanone	ND U	10	1	09/02/17 21:52	
4-Methyl-2-pentanone	ND U	10	1	09/02/17 21:52	
Acetone	ND U	10	1	09/02/17 21:52	
Benzene	ND U	5.0	1	09/02/17 21:52	
Bromodichloromethane	ND U	5.0	1	09/02/17 21:52	
Bromoform	ND U	5.0	1	09/02/17 21:52	
Bromomethane	ND U	5.0	1	09/02/17 21:52	
Carbon Disulfide	ND U	10	1	09/02/17 21:52	
Carbon Tetrachloride	ND U	5.0	1	09/02/17 21:52	
Chlorobenzene	ND U	5.0	1	09/02/17 21:52	
Chloroethane	ND U	5.0	1	09/02/17 21:52	
Chloroform	ND U	5.0	1	09/02/17 21:52	
Chloromethane	ND U	5.0	1	09/02/17 21:52	
Dibromochloromethane	ND U	5.0	1	09/02/17 21:52	
Dichloromethane	ND U	5.0	1	09/02/17 21:52	
Ethylbenzene	ND U	5.0	1	09/02/17 21:52	
Styrene	ND U	5.0	1	09/02/17 21:52	
Tetrachloroethene (PCE)	ND U	5.0	1	09/02/17 21:52	
Toluene	ND U	5.0	1	09/02/17 21:52	
Trichloroethene (TCE)	**31**	5.0	1	09/02/17 21:52	
Vinyl Chloride	ND U	5.0	1	09/02/17 21:52	
cis-1,2-Dichloroethene	**8.5**	5.0	1	09/02/17 21:52	
cis-1,3-Dichloropropene	ND U	5.0	1	09/02/17 21:52	
m,p-Xylenes	ND U	5.0	1	09/02/17 21:52	
o-Xylene	ND U	5.0	1	09/02/17 21:52	
trans-1,2-Dichloroethene	ND U	5.0	1	09/02/17 21:52	
trans-1,3-Dichloropropene	ND U	5.0	1	09/02/17 21:52	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 12:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-16B	**Units:**	ug/L
Lab Code:	R1708082-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	85 - 122	09/02/17 21:52	
Dibromofluoromethane	104	89 - 119	09/02/17 21:52	
Toluene-d8	99	87 - 121	09/02/17 21:52	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-18B	**Units:**	ug/L
Lab Code:	R1708082-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 19:04	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 19:04	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 19:04	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 19:04	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 19:04	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 19:04	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 19:04	
2-Butanone (MEK)	ND U	10	1	09/01/17 19:04	
2-Hexanone	ND U	10	1	09/01/17 19:04	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 19:04	
Acetone	ND U	10	1	09/01/17 19:04	
Benzene	ND U	5.0	1	09/01/17 19:04	
Bromodichloromethane	ND U	5.0	1	09/01/17 19:04	
Bromoform	ND U	5.0	1	09/01/17 19:04	
Bromomethane	ND U	5.0	1	09/01/17 19:04	
Carbon Disulfide	ND U	10	1	09/01/17 19:04	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 19:04	
Chlorobenzene	ND U	5.0	1	09/01/17 19:04	
Chloroethane	ND U	5.0	1	09/01/17 19:04	
Chloroform	ND U	5.0	1	09/01/17 19:04	
Chloromethane	ND U	5.0	1	09/01/17 19:04	
Dibromochloromethane	ND U	5.0	1	09/01/17 19:04	
Dichloromethane	ND U	5.0	1	09/01/17 19:04	
Ethylbenzene	ND U	5.0	1	09/01/17 19:04	
Styrene	ND U	5.0	1	09/01/17 19:04	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 19:04	
Toluene	ND U	5.0	1	09/01/17 19:04	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 19:04	
Vinyl Chloride	ND U	5.0	1	09/01/17 19:04	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 19:04	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 19:04	
m,p-Xylenes	ND U	5.0	1	09/01/17 19:04	
o-Xylene	ND U	5.0	1	09/01/17 19:04	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 19:04	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 19:04	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-18B	**Units:**	ug/L
Lab Code:	R1708082-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	85 - 122	09/01/17 19:04	
Dibromofluoromethane	105	89 - 119	09/01/17 19:04	
Toluene-d8	103	87 - 121	09/01/17 19:04	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	GW-DUP	**Units:**	ug/L
Lab Code:	R1708082-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 19:25	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 19:25	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 19:25	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 19:25	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 19:25	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 19:25	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 19:25	
2-Butanone (MEK)	ND U	10	1	09/01/17 19:25	
2-Hexanone	ND U	10	1	09/01/17 19:25	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 19:25	
Acetone	ND U	10	1	09/01/17 19:25	
Benzene	ND U	5.0	1	09/01/17 19:25	
Bromodichloromethane	ND U	5.0	1	09/01/17 19:25	
Bromoform	ND U	5.0	1	09/01/17 19:25	
Bromomethane	ND U	5.0	1	09/01/17 19:25	
Carbon Disulfide	ND U	10	1	09/01/17 19:25	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 19:25	
Chlorobenzene	ND U	5.0	1	09/01/17 19:25	
Chloroethane	ND U	5.0	1	09/01/17 19:25	
Chloroform	ND U	5.0	1	09/01/17 19:25	
Chloromethane	ND U	5.0	1	09/01/17 19:25	
Dibromochloromethane	ND U	5.0	1	09/01/17 19:25	
Dichloromethane	ND U	5.0	1	09/01/17 19:25	
Ethylbenzene	ND U	5.0	1	09/01/17 19:25	
Styrene	ND U	5.0	1	09/01/17 19:25	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 19:25	
Toluene	ND U	5.0	1	09/01/17 19:25	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 19:25	
Vinyl Chloride	ND U	5.0	1	09/01/17 19:25	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 19:25	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 19:25	
m,p-Xylenes	ND U	5.0	1	09/01/17 19:25	
o-Xylene	ND U	5.0	1	09/01/17 19:25	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 19:25	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 19:25	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	GW-DUP	**Units:**	ug/L
Lab Code:	R1708082-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85 - 122	09/01/17 19:25	
Dibromofluoromethane	102	89 - 119	09/01/17 19:25	
Toluene-d8	101	87 - 121	09/01/17 19:25	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 09:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-1	**Units:**	ug/L
Lab Code:	R1708082-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 19:47	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 19:47	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 19:47	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 19:47	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 19:47	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 19:47	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 19:47	
2-Butanone (MEK)	ND U	10	1	09/01/17 19:47	
2-Hexanone	ND U	10	1	09/01/17 19:47	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 19:47	
Acetone	ND U	10	1	09/01/17 19:47	
Benzene	ND U	5.0	1	09/01/17 19:47	
Bromodichloromethane	ND U	5.0	1	09/01/17 19:47	
Bromoform	ND U	5.0	1	09/01/17 19:47	
Bromomethane	ND U	5.0	1	09/01/17 19:47	
Carbon Disulfide	ND U	10	1	09/01/17 19:47	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 19:47	
Chlorobenzene	ND U	5.0	1	09/01/17 19:47	
Chloroethane	ND U	5.0	1	09/01/17 19:47	
Chloroform	ND U	5.0	1	09/01/17 19:47	
Chloromethane	ND U	5.0	1	09/01/17 19:47	
Dibromochloromethane	ND U	5.0	1	09/01/17 19:47	
Dichloromethane	ND U	5.0	1	09/01/17 19:47	
Ethylbenzene	ND U	5.0	1	09/01/17 19:47	
Styrene	ND U	5.0	1	09/01/17 19:47	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 19:47	
Toluene	ND U	5.0	1	09/01/17 19:47	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 19:47	
Vinyl Chloride	ND U	5.0	1	09/01/17 19:47	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 19:47	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 19:47	
m,p-Xylenes	ND U	5.0	1	09/01/17 19:47	
o-Xylene	ND U	5.0	1	09/01/17 19:47	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 19:47	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 19:47	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 09:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-1	**Units:**	ug/L
Lab Code:	R1708082-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	85 - 122	09/01/17 19:47	
Dibromofluoromethane	103	89 - 119	09/01/17 19:47	
Toluene-d8	102	87 - 121	09/01/17 19:47	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-2A	**Units:**	ug/L
Lab Code:	R1708082-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 20:09	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 20:09	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 20:09	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 20:09	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 20:09	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 20:09	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 20:09	
2-Butanone (MEK)	ND U	10	1	09/01/17 20:09	
2-Hexanone	ND U	10	1	09/01/17 20:09	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 20:09	
Acetone	ND U	10	1	09/01/17 20:09	
Benzene	ND U	5.0	1	09/01/17 20:09	
Bromodichloromethane	ND U	5.0	1	09/01/17 20:09	
Bromoform	ND U	5.0	1	09/01/17 20:09	
Bromomethane	ND U	5.0	1	09/01/17 20:09	
Carbon Disulfide	ND U	10	1	09/01/17 20:09	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 20:09	
Chlorobenzene	ND U	5.0	1	09/01/17 20:09	
Chloroethane	ND U	5.0	1	09/01/17 20:09	
Chloroform	ND U	5.0	1	09/01/17 20:09	
Chloromethane	ND U	5.0	1	09/01/17 20:09	
Dibromochloromethane	ND U	5.0	1	09/01/17 20:09	
Dichloromethane	ND U	5.0	1	09/01/17 20:09	
Ethylbenzene	ND U	5.0	1	09/01/17 20:09	
Styrene	ND U	5.0	1	09/01/17 20:09	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 20:09	
Toluene	ND U	5.0	1	09/01/17 20:09	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 20:09	
Vinyl Chloride	ND U	5.0	1	09/01/17 20:09	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 20:09	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 20:09	
m,p-Xylenes	ND U	5.0	1	09/01/17 20:09	
o-Xylene	ND U	5.0	1	09/01/17 20:09	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 20:09	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 20:09	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-2A	**Units:**	ug/L
Lab Code:	R1708082-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	09/01/17 20:09	
Dibromofluoromethane	100	89 - 119	09/01/17 20:09	
Toluene-d8	101	87 - 121	09/01/17 20:09	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 15:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-3A	**Units:**	ug/L
Lab Code:	R1708082-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 20:31	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 20:31	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 20:31	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 20:31	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 20:31	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 20:31	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 20:31	
2-Butanone (MEK)	ND U	10	1	09/01/17 20:31	
2-Hexanone	ND U	10	1	09/01/17 20:31	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 20:31	
Acetone	ND U	10	1	09/01/17 20:31	
Benzene	ND U	5.0	1	09/01/17 20:31	
Bromodichloromethane	ND U	5.0	1	09/01/17 20:31	
Bromoform	ND U	5.0	1	09/01/17 20:31	
Bromomethane	ND U	5.0	1	09/01/17 20:31	
Carbon Disulfide	ND U	10	1	09/01/17 20:31	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 20:31	
Chlorobenzene	ND U	5.0	1	09/01/17 20:31	
Chloroethane	ND U	5.0	1	09/01/17 20:31	
Chloroform	ND U	5.0	1	09/01/17 20:31	
Chloromethane	ND U	5.0	1	09/01/17 20:31	
Dibromochloromethane	ND U	5.0	1	09/01/17 20:31	
Dichloromethane	ND U	5.0	1	09/01/17 20:31	
Ethylbenzene	ND U	5.0	1	09/01/17 20:31	
Styrene	ND U	5.0	1	09/01/17 20:31	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 20:31	
Toluene	ND U	5.0	1	09/01/17 20:31	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 20:31	
Vinyl Chloride	ND U	5.0	1	09/01/17 20:31	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 20:31	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 20:31	
m,p-Xylenes	ND U	5.0	1	09/01/17 20:31	
o-Xylene	ND U	5.0	1	09/01/17 20:31	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 20:31	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 20:31	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 15:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-3A	**Units:**	ug/L
Lab Code:	R1708082-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	09/01/17 20:31	
Dibromofluoromethane	101	89 - 119	09/01/17 20:31	
Toluene-d8	101	87 - 121	09/01/17 20:31	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 08:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-5	**Units:**	ug/L
Lab Code:	R1708082-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 20:53	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 20:53	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 20:53	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 20:53	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 20:53	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 20:53	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 20:53	
2-Butanone (MEK)	ND U	10	1	09/01/17 20:53	
2-Hexanone	ND U	10	1	09/01/17 20:53	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 20:53	
Acetone	ND U	10	1	09/01/17 20:53	
Benzene	ND U	5.0	1	09/01/17 20:53	
Bromodichloromethane	ND U	5.0	1	09/01/17 20:53	
Bromoform	ND U	5.0	1	09/01/17 20:53	
Bromomethane	ND U	5.0	1	09/01/17 20:53	
Carbon Disulfide	ND U	10	1	09/01/17 20:53	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 20:53	
Chlorobenzene	ND U	5.0	1	09/01/17 20:53	
Chloroethane	ND U	5.0	1	09/01/17 20:53	
Chloroform	ND U	5.0	1	09/01/17 20:53	
Chloromethane	ND U	5.0	1	09/01/17 20:53	
Dibromochloromethane	ND U	5.0	1	09/01/17 20:53	
Dichloromethane	ND U	5.0	1	09/01/17 20:53	
Ethylbenzene	ND U	5.0	1	09/01/17 20:53	
Styrene	ND U	5.0	1	09/01/17 20:53	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 20:53	
Toluene	ND U	5.0	1	09/01/17 20:53	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 20:53	
Vinyl Chloride	ND U	5.0	1	09/01/17 20:53	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 20:53	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 20:53	
m,p-Xylenes	ND U	5.0	1	09/01/17 20:53	
o-Xylene	ND U	5.0	1	09/01/17 20:53	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 20:53	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 20:53	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 08:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-5	**Units:**	ug/L
Lab Code:	R1708082-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85 - 122	09/01/17 20:53	
Dibromofluoromethane	101	89 - 119	09/01/17 20:53	
Toluene-d8	104	87 - 121	09/01/17 20:53	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-DUP	**Units:**	ug/L
Lab Code:	R1708082-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 21:15	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 21:15	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 21:15	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 21:15	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 21:15	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 21:15	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 21:15	
2-Butanone (MEK)	ND U	10	1	09/01/17 21:15	
2-Hexanone	ND U	10	1	09/01/17 21:15	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 21:15	
Acetone	ND U	10	1	09/01/17 21:15	
Benzene	ND U	5.0	1	09/01/17 21:15	
Bromodichloromethane	ND U	5.0	1	09/01/17 21:15	
Bromoform	ND U	5.0	1	09/01/17 21:15	
Bromomethane	ND U	5.0	1	09/01/17 21:15	
Carbon Disulfide	ND U	10	1	09/01/17 21:15	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 21:15	
Chlorobenzene	ND U	5.0	1	09/01/17 21:15	
Chloroethane	ND U	5.0	1	09/01/17 21:15	
Chloroform	ND U	5.0	1	09/01/17 21:15	
Chloromethane	ND U	5.0	1	09/01/17 21:15	
Dibromochloromethane	ND U	5.0	1	09/01/17 21:15	
Dichloromethane	ND U	5.0	1	09/01/17 21:15	
Ethylbenzene	ND U	5.0	1	09/01/17 21:15	
Styrene	ND U	5.0	1	09/01/17 21:15	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 21:15	
Toluene	ND U	5.0	1	09/01/17 21:15	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 21:15	
Vinyl Chloride	ND U	5.0	1	09/01/17 21:15	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 21:15	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 21:15	
m,p-Xylenes	ND U	5.0	1	09/01/17 21:15	
o-Xylene	ND U	5.0	1	09/01/17 21:15	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 21:15	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 21:15	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-DUP	**Units:**	ug/L
Lab Code:	R1708082-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	09/01/17 21:15	
Dibromofluoromethane	99	89 - 119	09/01/17 21:15	
Toluene-d8	100	87 - 121	09/01/17 21:15	

Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 13:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-2B	**Basis:**	NA
Lab Code:	R1708082-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 21:10	09/05/17	
Chromium, Total	6010C	**13**	ug/L	10	3	1	09/07/17 21:10	09/05/17	
Iron, Total	6010C	**4900**	ug/L	100	80	1	09/07/17 21:10	09/05/17	
Lead, Total	6010C	**5 J**	ug/L	50	4	1	09/07/17 21:10	09/05/17	
Manganese, Total	6010C	**277**	ug/L	10	5	1	09/07/17 21:10	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 13:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-2B Diss	**Basis:**	NA
Lab Code:	R1708082-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 21:13	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 21:13	09/05/17	
Iron, Dissolved	6010C	ND U	ug/L	100	80	1	09/07/17 21:13	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 21:13	09/05/17	
Manganese, Dissolved	6010C	ND U	ug/L	10	5	1	09/07/17 21:13	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 16:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-3B	**Basis:**	NA
Lab Code:	R1708082-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**51**	ug/L	10	4	1	09/07/17 21:16	09/05/17	
Chromium, Total	6010C	**120**	ug/L	10	3	1	09/07/17 21:16	09/05/17	
Iron, Total	6010C	**73200**	ug/L	1000	800	10	09/08/17 19:33	09/05/17	
Lead, Total	6010C	**639**	ug/L	50	4	1	09/07/17 21:16	09/05/17	
Manganese, Total	6010C	**1110**	ug/L	10	5	1	09/07/17 21:16	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 16:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-3B Diss	**Basis:**	NA
Lab Code:	R1708082-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	**25**	ug/L	10	4	1	09/07/17 21:20	09/05/17	
Chromium, Dissolved	6010C	**20**	ug/L	10	3	1	09/07/17 21:20	09/05/17	
Iron, Dissolved	6010C	**2780**	ug/L	100	80	1	09/07/17 21:20	09/05/17	
Lead, Dissolved	6010C	**47 J**	ug/L	50	4	1	09/07/17 21:20	09/05/17	
Manganese, Dissolved	6010C	**52**	ug/L	10	5	1	09/07/17 21:20	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 09:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-4B	**Basis:**	NA
Lab Code:	R1708082-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 21:23	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 21:23	09/05/17	
Iron, Total	6010C	**3840**	ug/L	100	80	1	09/07/17 21:23	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 21:23	09/05/17	
Manganese, Total	6010C	**703**	ug/L	10	5	1	09/07/17 21:23	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 15:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-6B	**Basis:**	NA
Lab Code:	R1708082-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 21:26	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 21:26	09/05/17	
Iron, Total	6010C	**5950**	ug/L	100	80	1	09/07/17 21:26	09/05/17	
Lead, Total	6010C	**9 J**	ug/L	50	4	1	09/07/17 21:26	09/05/17	
Manganese, Total	6010C	**624**	ug/L	10	5	1	09/07/17 21:26	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 15:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-6B Diss	**Basis:**	NA
Lab Code:	R1708082-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 21:30	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 21:30	09/05/17	
Iron, Dissolved	6010C	**110**	ug/L	100	80	1	09/07/17 21:30	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 21:30	09/05/17	
Manganese, Dissolved	6010C	**577**	ug/L	10	5	1	09/07/17 21:30	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 13:30
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-7B	**Basis:**	NA
Lab Code:	R1708082-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 21:33	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 21:33	09/05/17	
Iron, Total	6010C	**3100**	ug/L	100	80	1	09/07/17 21:33	09/05/17	
Lead, Total	6010C	**41 J**	ug/L	50	4	1	09/07/17 21:33	09/05/17	
Manganese, Total	6010C	**76**	ug/L	10	5	1	09/07/17 21:33	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 13:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-15B	**Basis:**	NA
Lab Code:	R1708082-009		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**29**	ug/L	10	4	1	09/07/17 21:43	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 21:43	09/05/17	
Iron, Total	6010C	**150**	ug/L	100	80	1	09/07/17 21:43	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 21:43	09/05/17	
Manganese, Total	6010C	ND U	ug/L	10	5	1	09/07/17 21:43	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 12:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-16B	**Basis:**	NA
Lab Code:	R1708082-010		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 21:46	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 21:46	09/05/17	
Iron, Total	6010C	ND U	ug/L	100	80	1	09/07/17 21:46	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 21:46	09/05/17	
Manganese, Total	6010C	ND U	ug/L	10	5	1	09/07/17 21:46	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-18B	**Basis:**	NA
Lab Code:	R1708082-011		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**20**	ug/L	10	4	1	09/07/17 21:50	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 21:50	09/05/17	
Iron, Total	6010C	**640**	ug/L	100	80	1	09/07/17 21:50	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 21:50	09/05/17	
Manganese, Total	6010C	**2100**	ug/L	10	5	1	09/07/17 21:50	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	GW-DUP	**Basis:**	NA
Lab Code:	R1708082-012		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 22:06	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 22:06	09/05/17	
Iron, Total	6010C	**2000**	ug/L	100	80	1	09/07/17 22:06	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 22:06	09/05/17	
Manganese, Total	6010C	**771**	ug/L	10	5	1	09/07/17 22:06	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 09:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-1	**Basis:**	NA
Lab Code:	R1708082-013		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 22:09	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 22:09	09/05/17	
Iron, Total	6010C	**1160**	ug/L	100	80	1	09/07/17 22:09	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 22:09	09/05/17	
Manganese, Total	6010C	**482**	ug/L	10	5	1	09/07/17 22:09	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 09:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-1 Diss	**Basis:**	NA
Lab Code:	R1708082-014		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 22:13	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 22:13	09/05/17	
Iron, Dissolved	6010C	ND U	ug/L	100	80	1	09/07/17 22:13	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 22:13	09/05/17	
Manganese, Dissolved	6010C	**464**	ug/L	10	5	1	09/07/17 22:13	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-2A	**Basis:**	NA
Lab Code:	R1708082-015		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 22:23	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 22:23	09/05/17	
Iron, Total	6010C	**1910**	ug/L	100	80	1	09/07/17 22:23	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 22:23	09/05/17	
Manganese, Total	6010C	**669**	ug/L	10	5	1	09/07/17 22:23	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-2A Diss	**Basis:**	NA
Lab Code:	R1708082-016		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 22:26	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 22:26	09/05/17	
Iron, Dissolved	6010C	ND U	ug/L	100	80	1	09/07/17 22:26	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 22:26	09/05/17	
Manganese, Dissolved	6010C	**534**	ug/L	10	5	1	09/07/17 22:26	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 15:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-3A	**Basis:**	NA
Lab Code:	R1708082-017		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 22:29	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 22:29	09/05/17	
Iron, Total	6010C	**1180**	ug/L	100	80	1	09/07/17 22:29	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 22:29	09/05/17	
Manganese, Total	6010C	**268**	ug/L	10	5	1	09/07/17 22:29	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 15:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-3A Diss	**Basis:**	NA
Lab Code:	R1708082-018		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 22:33	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 22:33	09/05/17	
Iron, Dissolved	6010C	ND U	ug/L	100	80	1	09/07/17 22:33	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 22:33	09/05/17	
Manganese, Dissolved	6010C	**67**	ug/L	10	5	1	09/07/17 22:33	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 08:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-5	**Basis:**	NA
Lab Code:	R1708082-019		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 22:36	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 22:36	09/05/17	
Iron, Total	6010C	**1310**	ug/L	100	80	1	09/07/17 22:36	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 22:36	09/05/17	
Manganese, Total	6010C	**99**	ug/L	10	5	1	09/07/17 22:36	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 08:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-5 Diss	**Basis:**	NA
Lab Code:	R1708082-020		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 22:39	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 22:39	09/05/17	
Iron, Dissolved	6010C	ND U	ug/L	100	80	1	09/07/17 22:39	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 22:39	09/05/17	
Manganese, Dissolved	6010C	ND U	ug/L	10	5	1	09/07/17 22:39	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-DUP	**Basis:**	NA
Lab Code:	R1708082-021		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 20:13	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 20:13	09/05/17	
Iron, Total	6010C	**1130**	ug/L	100	80	1	09/07/17 20:13	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 20:13	09/05/17	
Manganese, Total	6010C	**221**	ug/L	10	5	1	09/07/17 20:13	09/05/17	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-DUP Diss	**Basis:**	NA
Lab Code:	R1708082-022		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 20:17	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 20:17	09/05/17	
Iron, Dissolved	6010C	ND U	ug/L	100	80	1	09/07/17 20:17	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 20:17	09/05/17	
Manganese, Dissolved	6010C	**66**	ug/L	10	5	1	09/07/17 20:17	09/05/17	

General Chemistry

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 13:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-2B	**Basis:**	NA
Lab Code:	R1708082-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**17.3**	mg/L	1.0	1	09/07/17 19:25	NA	
Cyanide, Total	335.4	ND U	mg/L	0.010	1	09/07/17 12:13	09/01/17	
Phenolics, Total Recoverable	420.4	**0.063**	mg/L	0.010	2	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**468**	mg/L	20	1	09/04/17 17:30	NA	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 16:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-3B	**Basis:**	NA
Lab Code:	R1708082-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**134**	mg/L	10	10	09/07/17 19:45	NA	
Cyanide, Total	335.4	ND U	mg/L	0.060	1	09/07/17 12:15	09/01/17	
Phenolics, Total Recoverable	420.4	**0.73**	mg/L	0.10	20	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**1740**	mg/L	50	1	09/04/17 17:30	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 09:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-4B	**Basis:**	NA
Lab Code:	R1708082-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**6.0**	mg/L	1.0	1	09/07/17 20:06	NA	
Cyanide, Total	335.4	ND U	mg/L	0.010	1	09/07/17 12:16	09/01/17	
Phenolics, Total Recoverable	420.4	ND U	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**497**	mg/L	10	1	09/05/17 17:55	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 15:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-6B	**Basis:**	NA
Lab Code:	R1708082-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**6.3**		mg/L	1.0	1	09/07/17 20:27	NA	
Cyanide, Total	335.4	ND	U	mg/L	0.010	1	09/07/17 12:17	09/01/17	
Phenolics, Total Recoverable	420.4	ND	U	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**1030**		mg/L	20	1	09/05/17 17:55	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 13:30
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-7B	**Basis:**	NA
Lab Code:	R1708082-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**47.4**	mg/L	2.0	2	09/07/17 20:48	NA	
Cyanide, Total	335.4	**0.025**	mg/L	0.010	1	09/07/17 12:18	09/01/17	
Phenolics, Total Recoverable	420.4	**0.37**	mg/L	0.10	20	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**832**	mg/L	40	1	09/05/17 17:55	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 13:00
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-15B	**Basis:**	NA
Lab Code:	R1708082-009		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**50.7**	mg/L	4.0	4	09/08/17 14:23	NA	
Cyanide, Total	335.4	ND U	mg/L	0.010	1	09/07/17 12:19	09/01/17	
Phenolics, Total Recoverable	420.4	**0.56**	mg/L	0.10	20	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**1460**	mg/L	59	1	09/05/17 17:55	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 12:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-16B	**Basis:**	NA
Lab Code:	R1708082-010		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**14.1**	mg/L	1.0	1	09/07/17 22:32	NA	
Cyanide, Total	335.4	**0.019**	mg/L	0.010	1	09/07/17 12:38	09/01/17	
Phenolics, Total Recoverable	420.4	**0.0078**	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**706**	mg/L	20	1	09/04/17 17:30	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	MW-18B	**Basis:**	NA
Lab Code:	R1708082-011		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**24.3**	mg/L	3.0	3	09/08/17 14:44	NA	
Cyanide, Total	335.4	**0.024**	mg/L	0.010	1	09/07/17 12:39	09/01/17	
Phenolics, Total Recoverable	420.4	ND U	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**2710**	mg/L	20	1	09/04/17 17:30	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	GW-DUP	**Basis:**	NA
Lab Code:	R1708082-012		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**6.1**	mg/L	1.0	1	09/07/17 23:56	NA	
Cyanide, Total	335.4	ND U	mg/L	0.010	1	09/07/17 12:41	09/01/17	
Phenolics, Total Recoverable	420.4	ND U	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**512**	mg/L	10	1	09/04/17 17:30	NA	

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 09:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-1	**Basis:**	NA
Lab Code:	R1708082-013		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**9.9**	mg/L	1.0	1	09/08/17 00:17	NA	
Cyanide, Total	335.4	ND U	mg/L	0.010	1	09/07/17 12:42	09/01/17	
Phenolics, Total Recoverable	420.4	**0.0056**	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**422**	mg/L	10	1	09/04/17 17:30	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 10:45
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-2A	**Basis:**	NA
Lab Code:	R1708082-015		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**9.8**	mg/L	1.0	1	09/08/17 00:38	NA	
Cyanide, Total	335.4	ND U	mg/L	0.010	1	09/07/17 12:43	09/01/17	
Phenolics, Total Recoverable	420.4	**0.0062**	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**426**	mg/L	10	1	09/04/17 17:30	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17 15:10
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-3A	**Basis:**	NA
Lab Code:	R1708082-017		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**7.4**	mg/L	1.0	1	09/08/17 00:59	NA	
Cyanide, Total	335.4	ND U	mg/L	0.010	1	09/07/17 12:47	09/01/17	
Phenolics, Total Recoverable	420.4	ND U	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**480**	mg/L	10	1	09/04/17 17:30	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17 08:15
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-5	**Basis:**	NA
Lab Code:	R1708082-019		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**6.4**	mg/L	1.0	1	09/08/17 02:01	NA	
Cyanide, Total	335.4	ND U	mg/L	0.010	1	09/07/17 12:48	09/01/17	
Phenolics, Total Recoverable	420.4	**0.0056**	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**752**	mg/L	20	1	09/05/17 17:55	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17 13:05
Sample Name:	SW-DUP	**Basis:**	NA
Lab Code:	R1708082-021		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**7.7**		mg/L	1.0	1	09/08/17 02:22	NA	
Cyanide, Total	335.4	ND	U	mg/L	0.010	1	09/07/17 12:49	09/01/17	
Phenolics, Total Recoverable	420.4	ND	U	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	**469**		mg/L	10	1	09/05/17 17:55	NA	

QC Summary Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: Daigler Engineering **Service Request:** R1708082
Project: Marilla Street LF
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene 85 - 122	Dibromofluoromethane 89 - 119	Toluene-d8 87 - 121
MW-2B	R1708082-001	100	103	101
MW-3B	R1708082-003	95	100	98
MW-4B	R1708082-005	100	101	100
MW-6B	R1708082-006	103	109	103
MW-7B	R1708082-008	103	102	102
MW-15B	R1708082-009	103	105	103
MW-16B	R1708082-010	96	104	99
MW-18B	R1708082-011	106	105	103
GW-DUP	R1708082-012	102	102	101
SW-1	R1708082-013	105	103	102
SW-2A	R1708082-015	100	100	101
SW-3A	R1708082-017	100	101	101
SW-5	R1708082-019	103	101	104
SW-DUP	R1708082-021	99	99	100
Lab Control Sample	RQ1708791-03	102	103	100
Method Blank	RQ1708791-04	100	100	103
Method Blank	RQ1708818-03	103	101	104
Lab Control Sample	RQ1708818-04	105	103	103
MW-18B MS	RQ1708818-07	106	105	104
MW-18B DMS	RQ1708818-08	103	105	104
Lab Control Sample	RQ1708887-03	100	103	101
Method Blank	RQ1708887-04	102	99	102

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17
		Date Analyzed:	09/3/17
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name:	MW-18B	**Units:**	ug/L
Lab Code:	R1708082-011	**Basis:**	NA
Analysis Method:	8260C		
Prep Method:	EPA 5021		

		Matrix Spike RQ1708818-07			Duplicate Matrix Spike RQ1708818-08					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	ND U	60.4	50.0	121	58.7	50.0	117	74-127	3	30
1,1,2,2-Tetrachloroethane	ND U	60.8	50.0	122	61.6	50.0	123 *	72-122	1	30
1,1,2-Trichloroethane	ND U	55.6	50.0	111	54.7	50.0	109	79-119	2	30
1,1-Dichloroethane (1,1-DCA)	ND U	57.0	50.0	114	57.4	50.0	115	74-132	<1	30
1,1-Dichloroethene (1,1-DCE)	ND U	52.5	50.0	105	52.9	50.0	106	74-139	<1	30
1,2-Dichloroethane	ND U	54.0	50.0	108	54.8	50.0	110	68-130	1	30
1,2-Dichloropropane	ND U	55.5	50.0	111	55.2	50.0	110	79-124	<1	30
2-Butanone (MEK)	ND U	55.9	50.0	112	54.1	50.0	108	46-141	3	30
2-Hexanone	ND U	59.6	50.0	119	57.5	50.0	115	56-132	4	30
4-Methyl-2-pentanone	ND U	59.8	50.0	120	57.2	50.0	114	60-141	4	30
Acetone	ND U	54.1	50.0	108	49.5	50.0	99	29-151	9	30
Benzene	ND U	55.7	50.0	111	54.6	50.0	109	76-129	2	30
Bromodichloromethane	ND U	58.6	50.0	117	58.7	50.0	117	76-127	<1	30
Bromoform	ND U	60.1	50.0	120	62.2	50.0	124	58-133	4	30
Bromomethane	ND U	55.9	50.0	112	52.1	50.0	104	10-162	7	30
Carbon Disulfide	ND U	58.2	50.0	116	57.3	50.0	115	34-162	1	30
Carbon Tetrachloride	ND U	58.8	50.0	118	60.4	50.0	121	65-135	3	30
Chlorobenzene	ND U	54.5	50.0	109	53.3	50.0	107	76-125	2	30
Chloroethane	ND U	58.5	50.0	117	57.5	50.0	115	70-140	2	30
Chloroform	ND U	57.0	50.0	114	55.7	50.0	111	75-130	2	30
Chloromethane	ND U	51.8	50.0	104	49.8	50.0	100	55-160	4	30
Dibromochloromethane	ND U	54.7	50.0	109	54.7	50.0	109	72-128	<1	30
Dichloromethane	ND U	55.7	50.0	111	54.3	50.0	109	75-121	2	30
Ethylbenzene	ND U	58.7	50.0	117	56.9	50.0	114	72-134	3	30
Styrene	ND U	59.4	50.0	119	58.0	50.0	116	34-156	2	30
Tetrachloroethene (PCE)	ND U	53.8	50.0	108	51.4	50.0	103	67-137	5	30
Toluene	ND U	56.6	50.0	113	56.5	50.0	113	79-125	<1	30
Trichloroethene (TCE)	ND U	54.5	50.0	109	54.9	50.0	110	62-142	<1	30
Vinyl Chloride	ND U	63.7	50.0	127	62.7	50.0	125	60-157	2	30
cis-1,2-Dichloroethene	ND U	54.8	50.0	110	52.1	50.0	104	72-133	5	30
cis-1,3-Dichloropropene	ND U	56.0	50.0	112	56.3	50.0	113	52-134	<1	30
m,p-Xylenes	ND U	114	100	114	114	100	114	68-138	<1	30
o-Xylene	ND U	56.5	50.0	113	55.5	50.0	111	68-134	2	30
trans-1,2-Dichloroethene	ND U	54.8	50.0	110	53.5	50.0	107	77-125	2	30
trans-1,3-Dichloropropene	ND U	56.3	50.0	113	55.7	50.0	111	50-142	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1708791-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/01/17 15:40	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/01/17 15:40	
1,1,2-Trichloroethane	ND U	5.0	1	09/01/17 15:40	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/01/17 15:40	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/01/17 15:40	
1,2-Dichloroethane	ND U	5.0	1	09/01/17 15:40	
1,2-Dichloropropane	ND U	5.0	1	09/01/17 15:40	
2-Butanone (MEK)	ND U	10	1	09/01/17 15:40	
2-Hexanone	ND U	10	1	09/01/17 15:40	
4-Methyl-2-pentanone	ND U	10	1	09/01/17 15:40	
Acetone	ND U	10	1	09/01/17 15:40	
Benzene	ND U	5.0	1	09/01/17 15:40	
Bromodichloromethane	ND U	5.0	1	09/01/17 15:40	
Bromoform	ND U	5.0	1	09/01/17 15:40	
Bromomethane	ND U	5.0	1	09/01/17 15:40	
Carbon Disulfide	ND U	10	1	09/01/17 15:40	
Carbon Tetrachloride	ND U	5.0	1	09/01/17 15:40	
Chlorobenzene	ND U	5.0	1	09/01/17 15:40	
Chloroethane	ND U	5.0	1	09/01/17 15:40	
Chloroform	ND U	5.0	1	09/01/17 15:40	
Chloromethane	ND U	5.0	1	09/01/17 15:40	
Dibromochloromethane	ND U	5.0	1	09/01/17 15:40	
Dichloromethane	ND U	5.0	1	09/01/17 15:40	
Ethylbenzene	ND U	5.0	1	09/01/17 15:40	
Styrene	ND U	5.0	1	09/01/17 15:40	
Tetrachloroethene (PCE)	ND U	5.0	1	09/01/17 15:40	
Toluene	ND U	5.0	1	09/01/17 15:40	
Trichloroethene (TCE)	ND U	5.0	1	09/01/17 15:40	
Vinyl Chloride	ND U	5.0	1	09/01/17 15:40	
cis-1,2-Dichloroethene	ND U	5.0	1	09/01/17 15:40	
cis-1,3-Dichloropropene	ND U	5.0	1	09/01/17 15:40	
m,p-Xylenes	ND U	5.0	1	09/01/17 15:40	
o-Xylene	ND U	5.0	1	09/01/17 15:40	
trans-1,2-Dichloroethene	ND U	5.0	1	09/01/17 15:40	
trans-1,3-Dichloropropene	ND U	5.0	1	09/01/17 15:40	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1708791-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	09/01/17 15:40	
Dibromofluoromethane	100	89 - 119	09/01/17 15:40	
Toluene-d8	103	87 - 121	09/01/17 15:40	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1708818-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/02/17 18:56	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/02/17 18:56	
1,1,2-Trichloroethane	ND U	5.0	1	09/02/17 18:56	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/02/17 18:56	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/02/17 18:56	
1,2-Dichloroethane	ND U	5.0	1	09/02/17 18:56	
1,2-Dichloropropane	ND U	5.0	1	09/02/17 18:56	
2-Butanone (MEK)	ND U	10	1	09/02/17 18:56	
2-Hexanone	ND U	10	1	09/02/17 18:56	
4-Methyl-2-pentanone	ND U	10	1	09/02/17 18:56	
Acetone	ND U	10	1	09/02/17 18:56	
Benzene	ND U	5.0	1	09/02/17 18:56	
Bromodichloromethane	ND U	5.0	1	09/02/17 18:56	
Bromoform	ND U	5.0	1	09/02/17 18:56	
Bromomethane	ND U	5.0	1	09/02/17 18:56	
Carbon Disulfide	ND U	10	1	09/02/17 18:56	
Carbon Tetrachloride	ND U	5.0	1	09/02/17 18:56	
Chlorobenzene	ND U	5.0	1	09/02/17 18:56	
Chloroethane	ND U	5.0	1	09/02/17 18:56	
Chloroform	ND U	5.0	1	09/02/17 18:56	
Chloromethane	ND U	5.0	1	09/02/17 18:56	
Dibromochloromethane	ND U	5.0	1	09/02/17 18:56	
Dichloromethane	ND U	5.0	1	09/02/17 18:56	
Ethylbenzene	ND U	5.0	1	09/02/17 18:56	
Styrene	ND U	5.0	1	09/02/17 18:56	
Tetrachloroethene (PCE)	ND U	5.0	1	09/02/17 18:56	
Toluene	ND U	5.0	1	09/02/17 18:56	
Trichloroethene (TCE)	ND U	5.0	1	09/02/17 18:56	
Vinyl Chloride	ND U	5.0	1	09/02/17 18:56	
cis-1,2-Dichloroethene	ND U	5.0	1	09/02/17 18:56	
cis-1,3-Dichloropropene	ND U	5.0	1	09/02/17 18:56	
m,p-Xylenes	ND U	5.0	1	09/02/17 18:56	
o-Xylene	ND U	5.0	1	09/02/17 18:56	
trans-1,2-Dichloroethene	ND U	5.0	1	09/02/17 18:56	
trans-1,3-Dichloropropene	ND U	5.0	1	09/02/17 18:56	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1708818-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5021

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85 - 122	09/02/17 18:56	
Dibromofluoromethane	101	89 - 119	09/02/17 18:56	
Toluene-d8	104	87 - 121	09/02/17 18:56	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1708887-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	ND U	5.0	1	09/05/17 13:03	
1,1,2,2-Tetrachloroethane	ND U	5.0	1	09/05/17 13:03	
1,1,2-Trichloroethane	ND U	5.0	1	09/05/17 13:03	
1,1-Dichloroethane (1,1-DCA)	ND U	5.0	1	09/05/17 13:03	
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	09/05/17 13:03	
1,2-Dichloroethane	ND U	5.0	1	09/05/17 13:03	
1,2-Dichloropropane	ND U	5.0	1	09/05/17 13:03	
2-Butanone (MEK)	ND U	10	1	09/05/17 13:03	
2-Hexanone	ND U	10	1	09/05/17 13:03	
4-Methyl-2-pentanone	ND U	10	1	09/05/17 13:03	
Acetone	ND U	10	1	09/05/17 13:03	
Benzene	ND U	5.0	1	09/05/17 13:03	
Bromodichloromethane	ND U	5.0	1	09/05/17 13:03	
Bromoform	ND U	5.0	1	09/05/17 13:03	
Bromomethane	ND U	5.0	1	09/05/17 13:03	
Carbon Disulfide	ND U	10	1	09/05/17 13:03	
Carbon Tetrachloride	ND U	5.0	1	09/05/17 13:03	
Chlorobenzene	ND U	5.0	1	09/05/17 13:03	
Chloroethane	ND U	5.0	1	09/05/17 13:03	
Chloroform	ND U	5.0	1	09/05/17 13:03	
Chloromethane	ND U	5.0	1	09/05/17 13:03	
Dibromochloromethane	ND U	5.0	1	09/05/17 13:03	
Dichloromethane	ND U	5.0	1	09/05/17 13:03	
Ethylbenzene	ND U	5.0	1	09/05/17 13:03	
Styrene	ND U	5.0	1	09/05/17 13:03	
Tetrachloroethene (PCE)	ND U	5.0	1	09/05/17 13:03	
Toluene	ND U	5.0	1	09/05/17 13:03	
Trichloroethene (TCE)	ND U	5.0	1	09/05/17 13:03	
Vinyl Chloride	ND U	5.0	1	09/05/17 13:03	
cis-1,2-Dichloroethene	ND U	5.0	1	09/05/17 13:03	
cis-1,3-Dichloropropene	ND U	5.0	1	09/05/17 13:03	
m,p-Xylenes	ND U	5.0	1	09/05/17 13:03	
o-Xylene	ND U	5.0	1	09/05/17 13:03	
trans-1,2-Dichloroethene	ND U	5.0	1	09/05/17 13:03	
trans-1,3-Dichloropropene	ND U	5.0	1	09/05/17 13:03	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1708887-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85 - 122	09/05/17 13:03	
Dibromofluoromethane	99	89 - 119	09/05/17 13:03	
Toluene-d8	102	87 - 121	09/05/17 13:03	

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/01/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ1708791-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	20.2	20.0	101	74-120
1,1,2,2-Tetrachloroethane	8260C	19.3	20.0	96	78-122
1,1,2-Trichloroethane	8260C	18.7	20.0	94	82-118
1,1-Dichloroethane (1,1-DCA)	8260C	19.1	20.0	96	78-117
1,1-Dichloroethene (1,1-DCE)	8260C	17.9	20.0	90	74-135
1,2-Dichloroethane	8260C	18.2	20.0	91	71-127
1,2-Dichloropropane	8260C	19.0	20.0	95	80-119
2-Butanone (MEK)	8260C	15.7	20.0	79	61-137
2-Hexanone	8260C	14.8	20.0	74	63-124
4-Methyl-2-pentanone	8260C	15.5	20.0	78	66-124
Acetone	8260C	15.3	20.0	77	40-161
Benzene	8260C	18.4	20.0	92	76-118
Bromodichloromethane	8260C	20.4	20.0	102	78-126
Bromoform	8260C	21.5	20.0	108	71-136
Bromomethane	8260C	17.8	20.0	89	42-166
Carbon Disulfide	8260C	16.8	20.0	84	65-127
Carbon Tetrachloride	8260C	19.6	20.0	98	68-125
Chlorobenzene	8260C	18.6	20.0	93	80-121
Chloroethane	8260C	20.1	20.0	100	70-127
Chloroform	8260C	19.1	20.0	96	76-120
Chloromethane	8260C	18.8	20.0	94	69-145
Dibromochloromethane	8260C	17.8	20.0	89	77-128
Dichloromethane	8260C	18.3	20.0	92	73-122
Ethylbenzene	8260C	19.4	20.0	97	76-120
Styrene	8260C	19.6	20.0	98	80-124
Tetrachloroethene (PCE)	8260C	18.8	20.0	94	78-124
Toluene	8260C	19.1	20.0	95	77-120
Trichloroethene (TCE)	8260C	19.0	20.0	95	78-123
Vinyl Chloride	8260C	22.5	20.0	113	69-133
cis-1,2-Dichloroethene	8260C	18.8	20.0	94	80-121
cis-1,3-Dichloropropene	8260C	18.9	20.0	95	74-126
m,p-Xylenes	8260C	38.4	40.0	96	78-123
o-Xylene	8260C	19.0	20.0	95	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/01/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ1708791-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	8260C	18.5	20.0	93	80-120
trans-1,3-Dichloropropene	8260C	19.7	20.0	98	67-135

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/02/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ1708818-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	18.8	20.0	94	74-120
1,1,2,2-Tetrachloroethane	8260C	21.1	20.0	105	78-122
1,1,2-Trichloroethane	8260C	19.3	20.0	97	82-118
1,1-Dichloroethane (1,1-DCA)	8260C	18.9	20.0	95	78-117
1,1-Dichloroethene (1,1-DCE)	8260C	16.7	20.0	84	74-135
1,2-Dichloroethane	8260C	19.8	20.0	99	71-127
1,2-Dichloropropane	8260C	18.8	20.0	94	80-119
2-Butanone (MEK)	8260C	19.0	20.0	95	61-137
2-Hexanone	8260C	18.2	20.0	91	63-124
4-Methyl-2-pentanone	8260C	17.8	20.0	89	66-124
Acetone	8260C	19.2	20.0	96	40-161
Benzene	8260C	18.1	20.0	91	76-118
Bromodichloromethane	8260C	20.8	20.0	104	78-126
Bromoform	8260C	21.9	20.0	110	71-136
Bromomethane	8260C	16.2	20.0	81	42-166
Carbon Disulfide	8260C	17.3	20.0	87	65-127
Carbon Tetrachloride	8260C	16.7	20.0	84	68-125
Chlorobenzene	8260C	19.3	20.0	96	80-121
Chloroethane	8260C	17.0	20.0	85	70-127
Chloroform	8260C	18.9	20.0	95	76-120
Chloromethane	8260C	16.0	20.0	80	69-145
Dibromochloromethane	8260C	19.3	20.0	97	77-128
Dichloromethane	8260C	20.1	20.0	101	73-122
Ethylbenzene	8260C	18.8	20.0	94	76-120
Styrene	8260C	19.8	20.0	99	80-124
Tetrachloroethene (PCE)	8260C	16.9	20.0	85	78-124
Toluene	8260C	18.6	20.0	93	77-120
Trichloroethene (TCE)	8260C	17.7	20.0	88	78-123
Vinyl Chloride	8260C	20.0	20.0	100	69-133
cis-1,2-Dichloroethene	8260C	18.0	20.0	90	80-121
cis-1,3-Dichloropropene	8260C	20.1	20.0	100	74-126
m,p-Xylenes	8260C	38.7	40.0	97	78-123
o-Xylene	8260C	18.8	20.0	94	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/02/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ1708818-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	8260C	18.3	20.0	92	80-120
trans-1,3-Dichloropropene	8260C	20.6	20.0	103	67-135

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/05/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ1708887-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	21.7	20.0	109	74-120
1,1,2,2-Tetrachloroethane	8260C	20.5	20.0	103	78-122
1,1,2-Trichloroethane	8260C	20.2	20.0	101	82-118
1,1-Dichloroethane (1,1-DCA)	8260C	20.5	20.0	103	78-117
1,1-Dichloroethene (1,1-DCE)	8260C	19.0	20.0	95	74-135
1,2-Dichloroethane	8260C	19.5	20.0	98	71-127
1,2-Dichloropropane	8260C	19.7	20.0	98	80-119
2-Butanone (MEK)	8260C	19.8	20.0	99	61-137
2-Hexanone	8260C	19.2	20.0	96	63-124
4-Methyl-2-pentanone	8260C	19.0	20.0	95	66-124
Acetone	8260C	19.8	20.0	99	40-161
Benzene	8260C	19.7	20.0	98	76-118
Bromodichloromethane	8260C	21.1	20.0	105	78-126
Bromoform	8260C	22.8	20.0	114	71-136
Bromomethane	8260C	16.7	20.0	84	42-166
Carbon Disulfide	8260C	22.0	20.0	110	65-127
Carbon Tetrachloride	8260C	21.7	20.0	108	68-125
Chlorobenzene	8260C	20.3	20.0	101	80-121
Chloroethane	8260C	21.6	20.0	108	70-127
Chloroform	8260C	21.2	20.0	106	76-120
Chloromethane	8260C	18.6	20.0	93	69-145
Dibromochloromethane	8260C	20.7	20.0	104	77-128
Dichloromethane	8260C	20.6	20.0	103	73-122
Ethylbenzene	8260C	21.8	20.0	109	76-120
Styrene	8260C	21.4	20.0	107	80-124
Tetrachloroethene (PCE)	8260C	20.3	20.0	102	78-124
Toluene	8260C	20.6	20.0	103	77-120
Trichloroethene (TCE)	8260C	19.9	20.0	99	78-123
Vinyl Chloride	8260C	24.4	20.0	122	69-133
cis-1,2-Dichloroethene	8260C	20.3	20.0	101	80-121
cis-1,3-Dichloropropene	8260C	20.5	20.0	102	74-126
m,p-Xylenes	8260C	43.0	40.0	108	78-123
o-Xylene	8260C	21.4	20.0	107	80-120

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/05/17

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ1708887-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	8260C	19.8	20.0	99	80-120
trans-1,3-Dichloropropene	8260C	21.3	20.0	107	67-135

Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	R1708082-MB1		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 21:03	09/05/17	
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 21:03	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 21:03	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 21:03	09/05/17	
Iron, Dissolved	6010C	ND U	ug/L	100	80	1	09/07/17 21:03	09/05/17	
Iron, Total	6010C	ND U	ug/L	100	80	1	09/07/17 21:03	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 21:03	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 21:03	09/05/17	
Manganese, Dissolved	6010C	ND U	ug/L	10	5	1	09/07/17 21:03	09/05/17	
Manganese, Total	6010C	ND U	ug/L	10	5	1	09/07/17 21:03	09/05/17	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	R1708082-MB2		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	ND U	ug/L	10	4	1	09/07/17 18:50	09/05/17	
Arsenic, Total	6010C	ND U	ug/L	10	4	1	09/07/17 18:50	09/05/17	
Chromium, Dissolved	6010C	ND U	ug/L	10	3	1	09/07/17 18:50	09/05/17	
Chromium, Total	6010C	ND U	ug/L	10	3	1	09/07/17 18:50	09/05/17	
Iron, Dissolved	6010C	ND U	ug/L	100	80	1	09/07/17 18:50	09/05/17	
Iron, Total	6010C	ND U	ug/L	100	80	1	09/07/17 18:50	09/05/17	
Lead, Dissolved	6010C	ND U	ug/L	50	4	1	09/07/17 18:50	09/05/17	
Lead, Total	6010C	ND U	ug/L	50	4	1	09/07/17 18:50	09/05/17	
Manganese, Dissolved	6010C	ND U	ug/L	10	5	1	09/07/17 18:50	09/05/17	
Manganese, Total	6010C	ND U	ug/L	10	5	1	09/07/17 18:50	09/05/17	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request:R1708082
Date Collected:08/29/17
Date Received:08/30/17
Date Analyzed:9/7/17

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name: MW-18B
Lab Code: R1708082-011

Units:ug/L
Basis:NA

			Matrix Spike R1708082-011MS			Duplicate Matrix Spike R1708082-011DMS					
Analyte Name	**Method**	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Arsenic, Total	6010C	20	68	40	121	64	40	111	75-125	6	20
Chromium, Total	6010C	ND U	205	200	102	204	200	102	75-125	<1	20
Iron, Total	6010C	640	1590	1000	96	1590	1000	95	75-125	<1	20
Lead, Total	6010C	ND U	504	500	101	506	500	101	75-125	<1	20
Manganese, Total	6010C	2100	2580	500	97 #	2590	500	100 #	75-125	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/07/17

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R1708082-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Dissolved	6010C	43	40	108	80-120
Arsenic, Total	6010C	43	40	108	80-120
Chromium, Dissolved	6010C	209	200	104	80-120
Chromium, Total	6010C	209	200	104	80-120
Iron, Dissolved	6010C	980	1000	98	80-120
Iron, Total	6010C	980	1000	98	80-120
Lead, Dissolved	6010C	529	500	106	80-120
Lead, Total	6010C	529	500	106	80-120
Manganese, Dissolved	6010C	510	500	102	80-120
Manganese, Total	6010C	510	500	102	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/07/17

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R1708082-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Dissolved	6010C	38	40	96	80-120
Arsenic, Total	6010C	38	40	96	80-120
Chromium, Dissolved	6010C	206	200	103	80-120
Chromium, Total	6010C	206	200	103	80-120
Iron, Dissolved	6010C	980	1000	98	80-120
Iron, Total	6010C	980	1000	98	80-120
Lead, Dissolved	6010C	523	500	105	80-120
Lead, Total	6010C	523	500	105	80-120
Manganese, Dissolved	6010C	507	500	101	80-120
Manganese, Total	6010C	507	500	101	80-120

General Chemistry

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	R1708082-MB1		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	ND	U	mg/L	1.0	1	09/07/17 12:27	NA	
Cyanide, Total	335.4	ND	U	mg/L	0.010	1	09/07/17 12:02	09/01/17	
Phenolics, Total Recoverable	420.4	ND	U	mg/L	0.0050	1	09/05/17 10:50	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	ND	U	mg/L	10	1	09/04/17 17:30	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	R1708082-MB2		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	ND	U	mg/L	1.0	1	09/07/17 21:30	NA	
Cyanide, Total	335.4	ND	U	mg/L	0.010	1	09/07/17 12:44	09/01/17	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	ND	U	mg/L	10	1	09/05/17 17:55	NA	

Analytical Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	R1708082-MB3		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	ND U	mg/L	1.0	1	09/08/17 13:16	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	ND U	mg/L	10	1	09/05/17 17:55	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/28/17
Sample Matrix:	Water	**Date Received:**	08/30/17
		Date Analyzed:	09/7/17
		Date Extracted:	09/1/17

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	MW-2B	**Units:**	mg/L
Lab Code:	R1708082-001	**Basis:**	NA
Analysis Method:	335.4		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		R1708082-001MS			R1708082-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	0.096	0.100	96	0.096	0.100	96	90-110	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request:R1708082
Date Collected:08/29/17
Date Received:08/30/17
Date Analyzed:09/05/17 - 09/08/17

Duplicate Matrix Spike Summary
General Chemistry Parameters

Sample Name: MW-18B
Lab Code: R1708082-011

Units:mg/L
Basis:NA

			Matrix Spike				Duplicate Matrix Spike				
			R1708082-011MS				R1708082-011DMS				
Analyte Name	**Method**	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	335.4	0.024	0.122	0.100	98	0.122	0.100	98	90-110	<1	20
Phenolics, Total Recoverable	420.4	ND U	0.0381	0.0400	95	0.0378	0.0400	94	90-110	<1	20
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	24.3	57.5	30.0	111	57.7	30.0	111	48-135	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project:	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17
		Date Analyzed:	09/7/17
		Date Extracted:	09/1/17

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	SW-DUP	**Units:**	mg/L
Lab Code:	R1708082-021	**Basis:**	NA
Analysis Method:	335.4		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		R1708082-021MS			R1708082-021DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	0.10	0.100	100	0.099	0.100	99	90-110	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17
		Date Analyzed:	09/05/17

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	MW-15B	**Units:**	mg/L
Lab Code:	R1708082-009	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample R1708082-009DUP Result	Average	RPD	RPD Limit
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	59	1460	1460	1460	<1	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Daigler Engineering	**Service Request:**	R1708082
Project	Marilla Street LF	**Date Collected:**	08/29/17
Sample Matrix:	Water	**Date Received:**	08/30/17
		Date Analyzed:	09/04/17

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	MW-18B	**Units:**	mg/L
Lab Code:	R1708082-011	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample R1708082-011DUP Result	Average	RPD	RPD Limit
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	20	2710	2710	2710	<1	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/04/17 - 09/07/17

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R1708082-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	10.2	10.0	102	81-118
Cyanide, Total	335.4	0.098	0.100	98	90-110
Phenolics, Total Recoverable	420.4	0.0383	0.0400	96	90-110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	880	914	96	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/05/17 - 09/07/17

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R1708082-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	10.6	10.0	106	81-118
Cyanide, Total	335.4	0.583	0.600	97	90-110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	888	914	97	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/05/17 - 09/08/17

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R1708082-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	10.1	10.0	101	81-118
Cyanide, Total	335.4	0.098	0.100	98	90-110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	874	914	96	90-110

Client: Daigler Engineering
Project: Marilla Street LF
Sample Matrix: Water

Service Request: R1708082
Date Analyzed: 09/07/17

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R1708082-LCS4

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	335.4	0.599	0.600	100	90-110

APPENDIX E

Historic Data for Shallow Overburden Background Well MW-6B

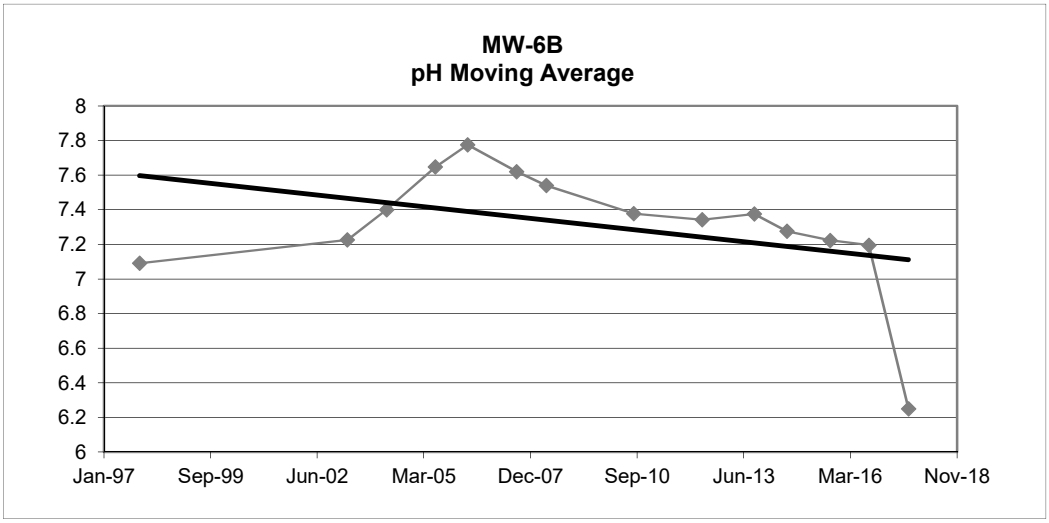
Appendix E

Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

pH

Event No.	Event Date	pH	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.	M.A. - 3 S.D.
1	Mar-96	7.22					
2	Jun-96	7.24					
3	Oct-96	7.32					
4	Dec-96	6.88					
5	Mar-97	7.14					
6	Jun-97	7.19					
7	Sep-97	7.00					
8	Dec-97	7.03	7.090	0.090	0.269	7.359	6.821
9	Apr-03	7.68	7.225	0.315	0.944	8.169	6.281
10	Apr-04	7.89	7.400	0.453	1.359	8.759	6.041
11	Jul-05	7.99	7.648	0.431	1.294	8.942	6.353
12	May-06	7.54	7.775	0.203	0.609	8.384	7.166
13	Aug-07	7.06	7.620	0.420	1.261	8.881	6.359
14	May-08	7.57	7.540	0.380	1.141	8.681	6.399
15	Aug-10	7.34	7.378	0.235	0.705	8.083	6.673
16	May-12	7.40	7.343	0.212	0.636	7.979	6.706
17	Sep-13	7.19	7.375	0.157	0.471	7.846	6.904
18	Jul-14	7.17	7.275	0.113	0.338	7.613	6.937
19	Aug-15	7.13	7.223	0.121	0.363	7.585	6.860
20	Aug-16	7.29	7.195	0.068	0.204	7.399	6.991
21	Aug-17	3.41	6.250	1.895	5.684	11.934	0.566

Background Mean Concentration (BMC)= 7.13
3 S.D.= 2.693
BMC + 3 S.D.= 9.82
BMC - 3 S.D.= 4.43



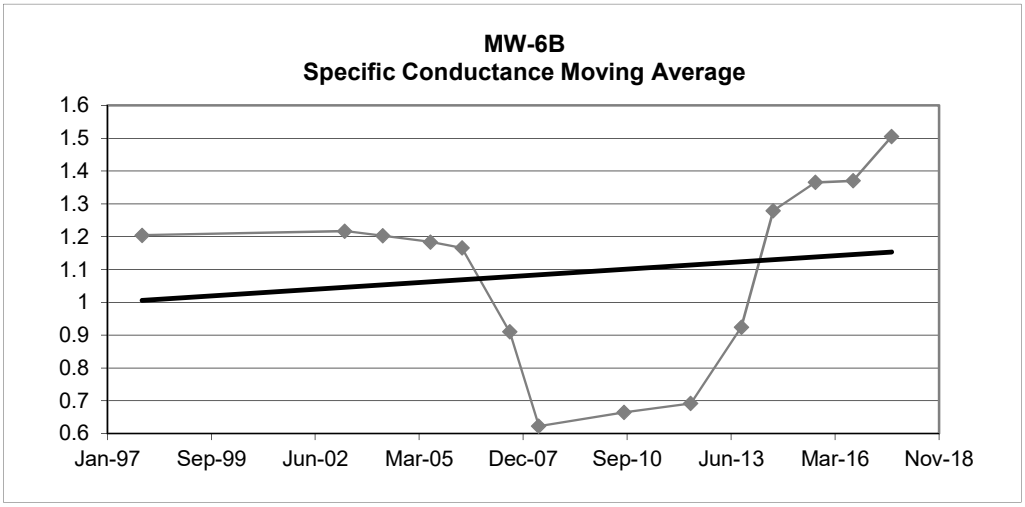
Appendix E

Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Specific Conductance

Event No.	Event Date	Specific Conductance (mS/cm)	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	1.057				
2	Jun-96	1.106				
3	Oct-96	1.118				
4	Dec-96	1.131				
5	Mar-97	1.102				
6	Jun-97	1.205				
7	Sep-97	1.234				
8	Dec-97	1.275	1.204	0.074	0.221	1.425
9	Apr-03	1.152	1.217	0.052	0.155	1.372
10	Apr-04	1.149	1.203	0.062	0.187	1.390
11	Jul-05	1.158	1.184	0.061	0.183	1.367
12	May-06	1.202	1.165	0.025	0.074	1.240
13	Aug-07	0.130	0.910	0.520	1.561	2.471
14	May-08	0.000	0.623	0.646	1.939	2.561
15	Aug-10	1.326	0.665	0.696	2.088	2.753
16	May-12	1.310	0.692	0.725	2.176	2.868
17	Sep-13	1.060	0.924	0.628	1.884	2.808
18	Jul-14	1.420	1.279	0.154	0.462	1.741
19	Aug-15	1.670	1.365	0.253	0.759	2.124
20	Aug-16	1.330	1.370	0.252	0.755	2.125
21	Aug-17	1.600	1.505	0.157	0.471	1.976

Background Mean Concentration (BMC)= 1.130
3 S.D.= 1.170
BMC + 3 S.D.= 2.300



Appendix E

Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

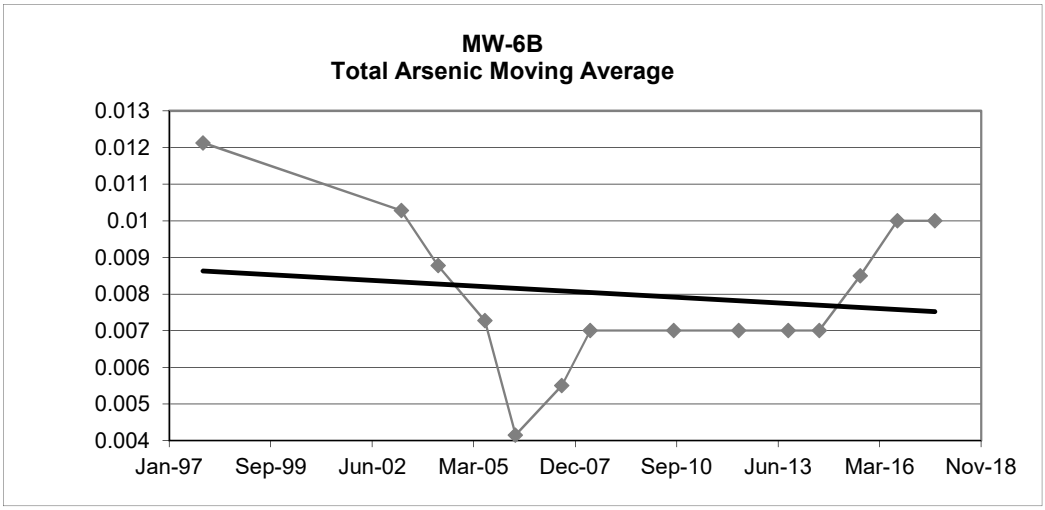
Total Arsenic

Event No.	Event Date	Arsenic, T (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.0050	*				
2	Jun-96	0.0070					
3	Oct-96	0.0050	*				
4	Dec-96	0.0050	*				
5	Mar-97	0.0120					
6	Jun-97	0.0100	*				
7	Sep-97	0.0100	*				
8	Dec-97	0.0165		0.0121	0.0031	0.0092	0.0213
9	Apr-03	0.0046	*	0.0103	0.0049	0.0146	0.0249
10	Apr-04	0.0040	*	0.0088	0.0058	0.0174	0.0262
11	Jul-05	0.0040	*	0.0073	0.0062	0.0185	0.0257
12	May-06	0.0040	*	0.0042	0.0003	0.0009	0.0051
13	Aug-07	0.0100	*	0.0055	0.0030	0.0090	0.0145
14	May-08	0.0100	*	0.0070	0.0035	0.0104	0.0174
15	Aug-10	0.0040	*	0.0070	0.0035	0.0104	0.0174
16	May-12	0.0040	*	0.0070	0.0035	0.0104	0.0174
17	Sep-13	0.0100	*	0.0070	0.0035	0.0104	0.0174
18	Jul-14	0.0100	*	0.0070	0.0035	0.0104	0.0174
19	Aug-15	0.0100	*	0.0085	0.0030	0.0090	0.0175
20	Aug-16	0.0100	*	0.0100	0.0000	0.0000	0.0100
21	Aug-17	0.0100	*	0.0100	0.0000	0.0000	0.0100

Background Mean Concentration (BMC)= 0.00786
3 S.D.= 0.0105
BMC + 3 S.D.= 0.0183

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.

NA = The parameter was not analyzed during that particular event or data is not available.



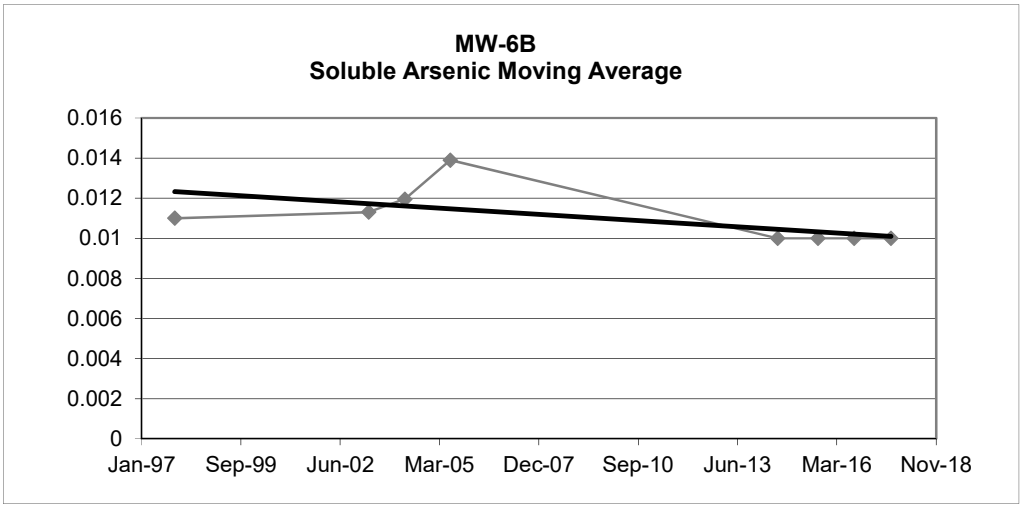
Appendix E

Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Soluble Arsenic

Event Date	Arsenic, S (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
Mar-96	0.0050	*				
Jun-96	0.0050	*				
Oct-96	0.0050	*				
Dec-96	0.0050	*				
Mar-97	0.0101					
Jun-97	0.0100	*				
Sep-97	0.0100	*				
Dec-97	0.0139		0.0110	0.0019	0.0058	0.0168
Apr-03	NA		0.0113	0.0023	0.0068	0.0181
Apr-04	NA		0.0120	0.0028	0.0083	0.0202
Jul-05	NA		0.0139	NA	NA	NA
May-06	NA		NA	NA	NA	NA
Aug-07	NA		NA	NA	NA	NA
May-08	NA		NA	NA	NA	NA
Aug-10	NA		NA	NA	NA	NA
May-12	NA		NA	NA	NA	NA
Sep-13	NA		NA	NA	NA	NA
Jul-14	0.0100	*	0.0100	NA	NA	NA
Aug-15	0.0100	*	0.0100	0.0000	0.0000	0.0100
Aug-16	0.0100	*	0.0100	0.0000	0.0000	0.0100
Aug-17	0.0100	*	0.0100	0.0000	0.0000	0.0100

Background Mean Concentration (BMC)= 0.00867
3 S.D.= 0.0088
BMC+3 S.D.= 0.0174



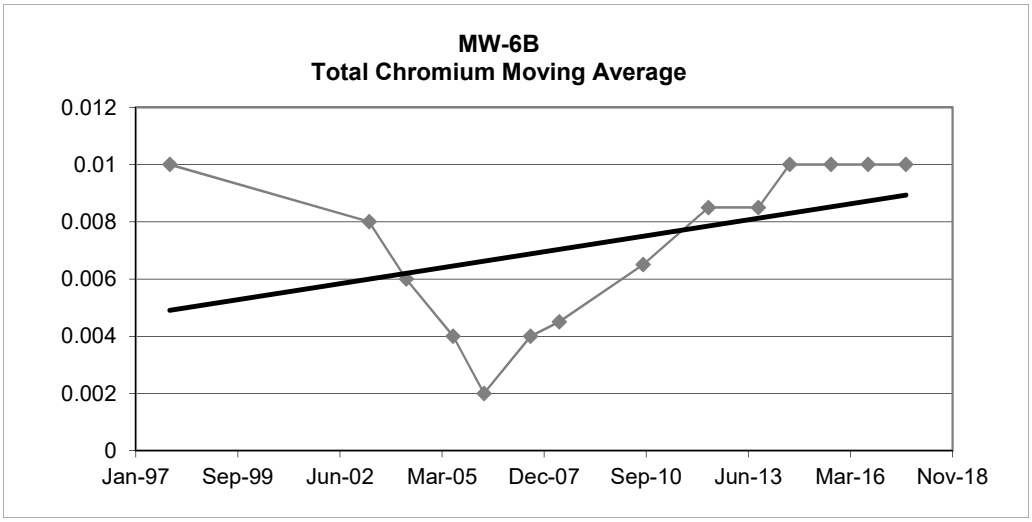
Appendix E

Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Total Chromium

Event Date	Chromium, T (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
Mar-96	0.0110	*				
Jun-96	0.0110	*				
Oct-96	0.0110	*				
Dec-96	0.0110	*				
Mar-97	0.0100	*				
Jun-97	0.0100	*				
Sep-97	0.0100	*				
Dec-97	0.0100	*	0.0100	0.0000	0.0000	0.0100
Apr-03	0.0020	*	0.0080	0.0040	0.0120	0.0200
Apr-04	0.0020	*	0.0060	0.0046	0.0139	0.0199
Jul-05	0.0020	*	0.0040	0.0040	0.0120	0.0160
May-06	0.0020	*	0.0020	0.0000	0.0000	0.0020
Aug-07	0.0100	*	0.0040	0.0040	0.0120	0.0160
May-08	0.0040	*	0.0045	0.0038	0.0114	0.0159
Aug-10	0.0100	*	0.0065	0.0041	0.0124	0.0189
May-12	0.0100	*	0.0085	0.0030	0.0090	0.0175
Sep-13	0.0100	*	0.0085	0.0030	0.0090	0.0175
Jul-14	0.0100	*	0.0100	0.0000	0.0000	0.0100
Aug-15	0.0100	*	0.0100	0.0000	0.0000	0.0100
Aug-16	0.0100	*	0.0100	0.0000	0.0000	0.0100
Aug-17	0.0100	*	0.0100	0.0000	0.0000	0.0100

Background Mean Concentration (BMC)= 0.00838
3 S.D.= 0.0104
BMC+3 S.D.= 0.0188



Appendix E

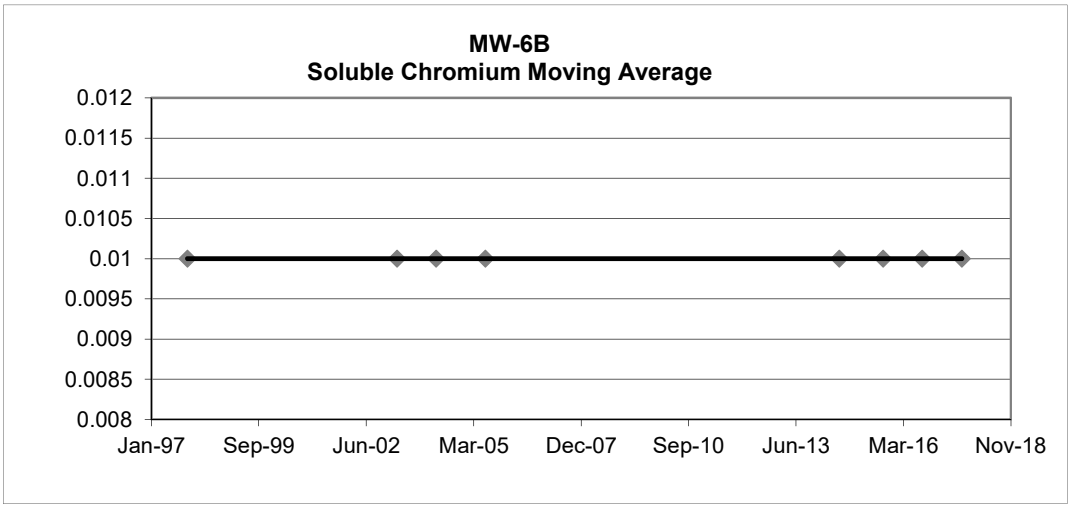
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Soluble Chromium

Event No.	Event Date	Chromium, S (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.0110	*				
2	Jun-96	0.0110	*				
3	Oct-96	0.0110	*				
4	Dec-96	0.0110	*				
5	Mar-97	0.0100	*				
6	Jun-97	0.0100	*				
7	Sep-97	0.0100	*				
8	Dec-97	0.0100	*	0.0100	0.0000	0.0000	0.0100
9	Apr-03	NA		0.0100	0.0000	0.0000	0.0100
10	Apr-04	NA		0.0100	0.0000	0.0000	0.0100
11	Jul-05	NA		0.0100	NA	NA	NA
12	May-06	NA		NA	NA	NA	NA
13	Aug-07	NA		NA	NA	NA	NA
14	May-08	NA		NA	NA	NA	NA
15	Aug-10	NA		NA	NA	NA	NA
16	May-12	NA		NA	NA	NA	NA
17	Sep-13	NA		NA	NA	NA	NA
18	Jul-14	0.0100	*	0.0100	NA	NA	NA
19	Aug-15	0.0100	*	0.0100	0.0000	0.0000	0.0100
20	Aug-16	0.0100	*	0.0100	0.0000	0.0000	0.0100
21	Aug-17	0.0100	*	0.0100	0.0000	0.0000	0.0100

Background Mean Concentration (BMC)= 0.0103
3 S.D.= 0.00148
BMC+3 S.D.= 0.0118

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

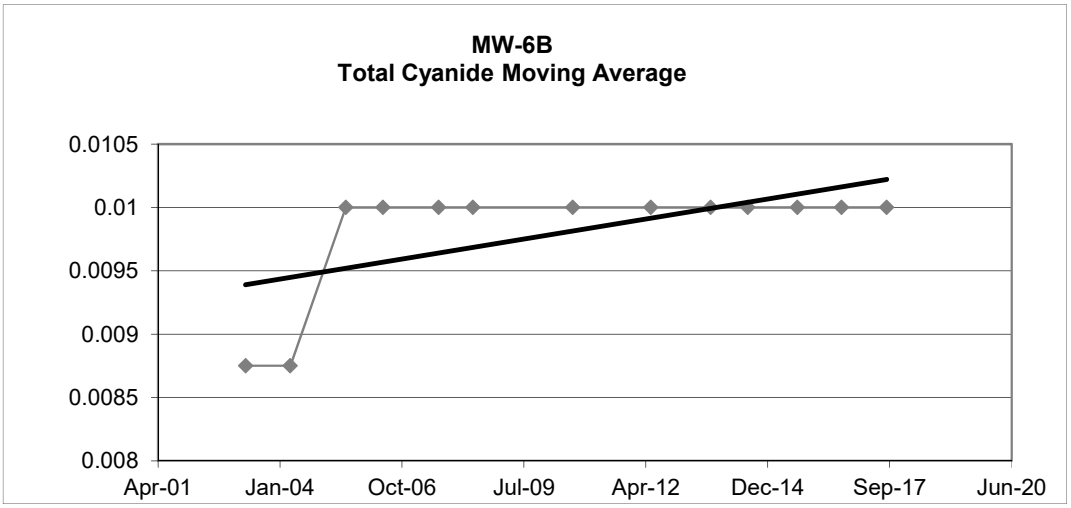
Total Cyanide

Event No.	Event Date	Cyanide, T (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Apr-01	0.010	*				
2	Oct-01	0.005					
3	Apr-02	0.010	*				
4	Apr-03	0.010	*	0.009	0.003	0.008	0.016
5	Apr-04	0.010	*	0.009	0.003	0.008	0.016
6	Jul-05	0.010	*	0.010	0.000	0.000	0.010
7	May-06	0.010	*	0.010	0.000	0.000	0.010
8	Aug-07	0.010	*	0.010	0.000	0.000	0.010
9	May-08	0.010	*	0.010	0.000	0.000	0.010
10	Aug-10	0.010	*	0.010	0.000	0.000	0.010
11	May-12	0.010	*	0.010	0.000	0.000	0.010
12	Sep-13	0.010	*	0.010	0.000	0.000	0.010
13	Jul-14	0.010	*	0.010	0.000	0.000	0.010
14	Aug-15	0.010	*	0.010	0.000	0.000	0.010
15	Aug-16	0.010	*	0.010	0.000	0.000	0.010
16	Aug-17	0.010	*	0.010	0.000	0.000	0.010

Background Mean Concentration (BMC)= 0.0097
3 S.D.= 0.0038
BMC+3 S.D.= 0.013

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.

NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

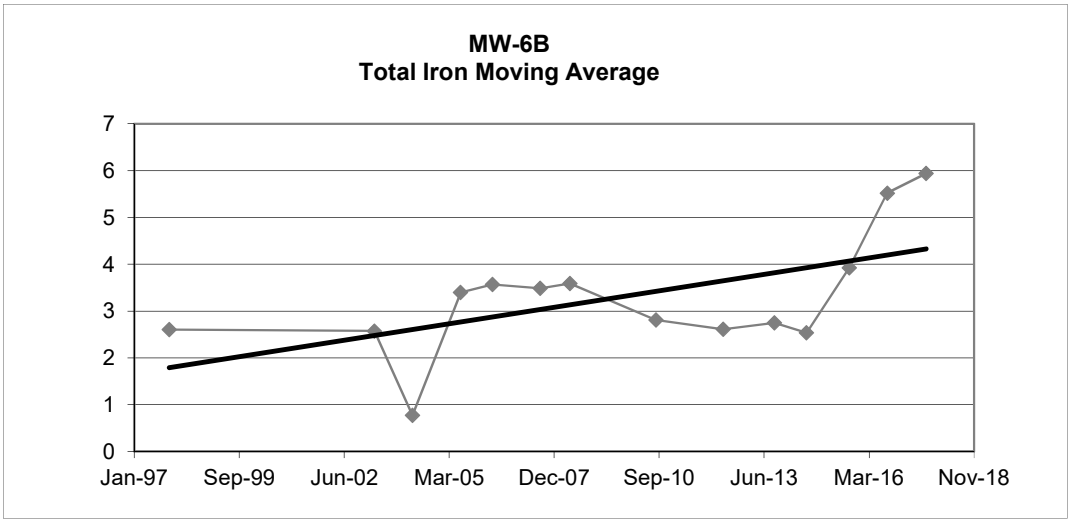
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Total Iron

Event No.	Event Date	Iron, T (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	1.300					
2	Jun-96	3.960					
3	Oct-96	0.693					
4	Dec-96	1.760					
5	Mar-97	0.205					
6	Jun-97	2.130					
7	Sep-97	0.412					
8	Dec-97	0.719		0.867	0.868	2.605	3.472
9	Apr-03	0.250		0.878	0.857	2.572	3.449
10	Apr-04	0.798		0.545	0.258	0.773	1.317
11	Jul-05	2.800		1.142	1.132	3.395	4.537
12	May-06	0.360		1.052	1.189	3.567	4.619
13	Aug-07	0.383		1.085	1.161	3.482	4.568
14	May-08	0.490		1.008	1.196	3.588	4.596
15	Aug-10	2.280		0.878	0.936	2.809	3.687
16	May-12	1.090		1.061	0.870	2.611	3.672
17	Sep-13	0.220		1.020	0.915	2.746	3.766
18	Jul-14	1.190		1.195	0.844	2.533	3.728
19	Aug-15	3.300		1.450	1.308	3.924	5.374
20	Aug-16	4.200		2.228	1.839	5.517	7.745
21	Aug-17	5.950		3.660	1.980	5.941	9.601

Background Mean Concentration (BMC)= 1.642
3 S.D.= 4.763
BMC+3 S.D.= 6.405

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

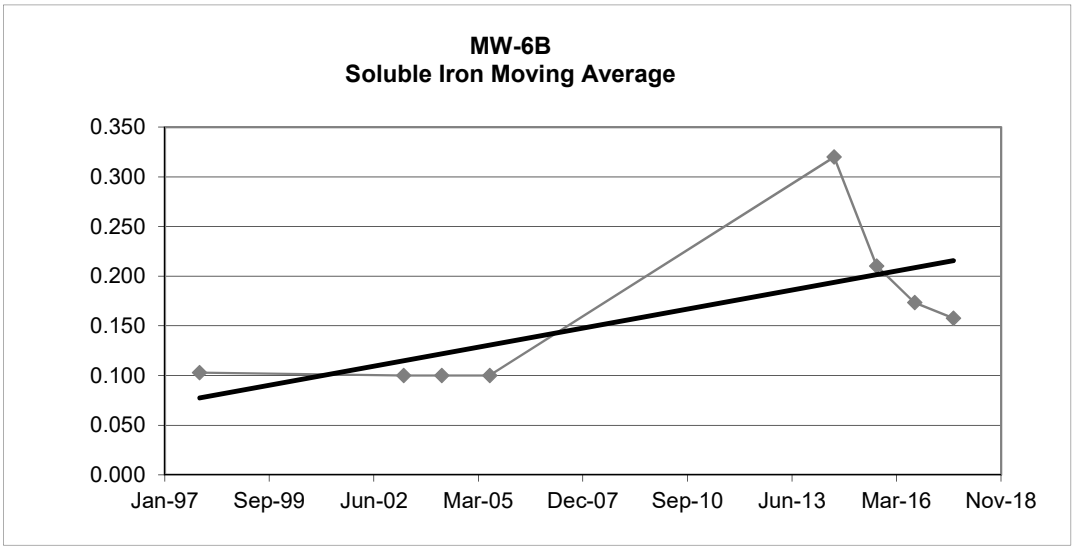
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Soluble Iron

Event No.	Event Date	Iron, S (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.070					
2	Jun-96	0.063	*				
3	Oct-96	0.310					
4	Dec-96	2.890					
5	Mar-97	0.111					
6	Jun-97	0.100	*				
7	Sep-97	0.100	*				
8	Dec-97	0.100	*	0.103	0.006	0.017	0.119
9	Apr-03	NA		0.100	0.000	0.000	0.100
10	Apr-04	NA		0.100	0.000	0.000	0.100
11	Jul-05	NA		0.100	NA	NA	NA
12	May-06	NA		NA	NA	NA	NA
13	Aug-07	NA		NA	NA	NA	NA
14	May-08	NA		NA	NA	NA	NA
15	Aug-10	NA		NA	NA	NA	NA
14	May-12	NA		NA	NA	NA	NA
15	Sep-13	NA		NA	NA	NA	NA
16	Jul-14	0.320		0.320	NA	NA	NA
17	Aug-15	0.100	*	0.210	0.156	0.467	0.677
18	Aug-16	0.100	*	0.173	0.127	0.381	0.554
19	Aug-17	0.110		0.158	0.108	0.325	0.483

Background Mean Concentration (BMC)= 0.365
3 S.D.= 2.400
BMC+3 S.D.= 2.764

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

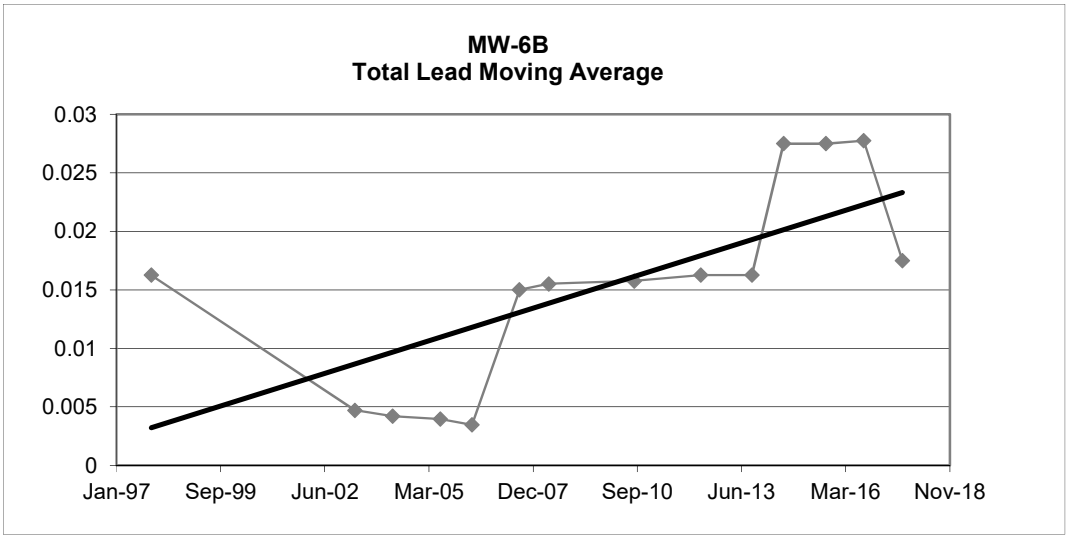
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Total Lead

Event No.	Event Date	Lead, T (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.0050	*				
2	Jun-96	0.0040	*				
3	Oct-96	0.0040	*				
4	Dec-96	0.0040	*				
5	Mar-97	0.0500	*				
6	Jun-97	0.0050					
7	Sep-97	0.0050	*				
8	Dec-97	0.0050	*	0.0163	0.0225	0.0675	0.0838
9	Apr-03	0.0038	*	0.0047	0.0006	0.0018	0.0065
10	Apr-04	0.0030	*	0.0042	0.0010	0.0029	0.0071
11	Jul-05	0.0040	*	0.0040	0.0008	0.0025	0.0064
12	May-06	0.0030	*	0.0035	0.0005	0.0016	0.0050
13	Aug-07	0.0500	*	0.0150	0.0233	0.0700	0.0850
14	May-08	0.0050	*	0.0155	0.0230	0.0690	0.0845
15	Aug-10	0.0050	*	0.0158	0.0229	0.0686	0.0843
16	May-12	0.0050	*	0.0163	0.0225	0.0675	0.0838
17	Sep-13	0.0500	*	0.0163	0.0225	0.0675	0.0838
18	Jul-14	0.0500	*	0.0275	0.0260	0.0779	0.1054
19	Aug-15	0.0050	J	0.0275	0.0260	0.0779	0.1054
20	Aug-16	0.0060	J	0.0278	0.0257	0.0771	0.1048
21	Aug-17	0.0090	J	0.0175	0.0217	0.0652	0.0827

Background Mean Concentration (BMC)= 0.0134
3 S.D.= 0.0547
BMC+3 S.D.= 0.0681

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.
J = Concentration was reported as an estimated value and could not be verified within the linear range of the calibration.



Appendix E

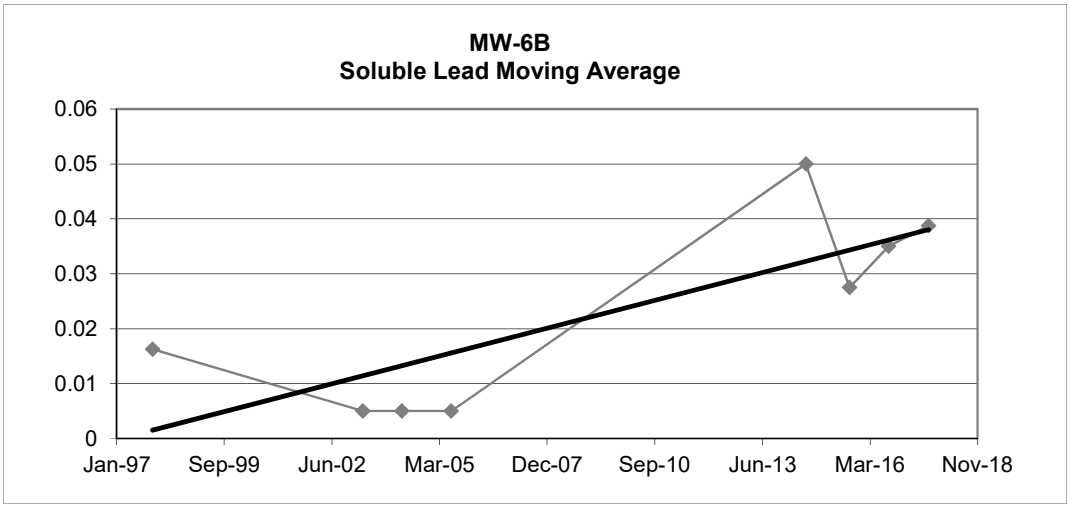
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Soluble Lead

Event No.	Event Date	Lead, S (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.0060	*				
2	Jun-96	0.0040	*				
3	Oct-96	0.0040	*				
4	Dec-96	0.0040	*				
5	Mar-97	0.0500	*				
6	Jun-97	0.0050	*				
7	Sep-97	0.0050	*				
8	Dec-97	0.0050	*	0.0163	0.0225	0.0675	0.0838
9	Apr-03	NA		0.0050	0.0000	0.0000	0.0050
10	Apr-04	NA		0.0050	0.0000	0.0000	0.0050
11	Jul-05	NA		0.0050	NA	NA	NA
12	May-06	NA		NA	NA	NA	NA
13	Aug-07	NA		NA	NA	NA	NA
14	May-08	NA		NA	NA	NA	NA
15	Aug-10	NA		NA	NA	NA	NA
16	May-12	NA		NA	NA	NA	NA
17	Sep-13	NA		NA	NA	NA	NA
18	Jul-14	0.0500	*	0.0500	NA	NA	NA
19	Aug-15	0.0050	*	0.0275	0.0318	0.0955	0.1230
20	Aug-16	0.0500	*	0.0350	0.0260	0.0779	0.1129
21	Aug-17	0.0500	*	0.0388	0.0225	0.0675	0.1063

Background Mean Concentration (BMC)= 0.0198
3 S.D.= 0.0669
BMC+3 S.D.= 0.0867

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

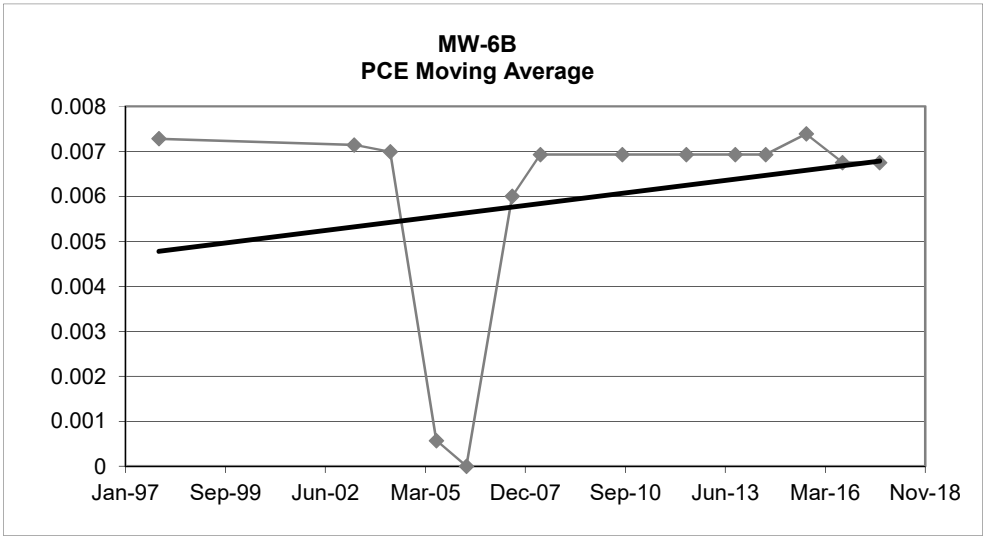
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

PCE

Event No.	Event Date	PCE (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.00090					
2	Jun-96	0.00090					
3	Oct-96	0.00090					
4	Dec-96	0.00090					
5	Mar-97	0.00069					
6	Jun-97	0.00069					
7	Sep-97	0.00552					
8	Dec-97	0.00062		0.00188	0.00243	0.00728	0.00916
9	Apr-03	0.00100	*	0.00196	0.00238	0.00714	0.00910
10	Apr-04	0.00100	*	0.00204	0.00233	0.00699	0.00903
11	Jul-05	0.00100	*	0.00091	0.00019	0.00057	0.00148
12	May-06	0.00100	*	0.00100	0.00000	0.00000	0.00100
13	Aug-07	0.00500	*	0.00200	0.00200	0.00600	0.00800
14	May-08	0.00500	*	0.00300	0.00231	0.00693	0.00993
15	Aug-10	0.00100	*	0.00300	0.00231	0.00693	0.00993
16	May-12	0.00100	*	0.00300	0.00231	0.00693	0.00993
17	Sep-13	0.00500	*	0.00300	0.00231	0.00693	0.00993
18	Jul-14	0.00500	*	0.00300	0.00231	0.00693	0.00993
19	Aug-15	0.00050	*	0.00288	0.00246	0.00739	0.01026
20	Aug-16	0.00500	*	0.00388	0.00225	0.00675	0.01063
21	Aug-17	0.00500	*	0.00388	0.00225	0.00675	0.01063

Background Mean Concentration (BMC)= 0.00227
3 S.D.= 0.00612
BMC+3 S.D.= 0.00839

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

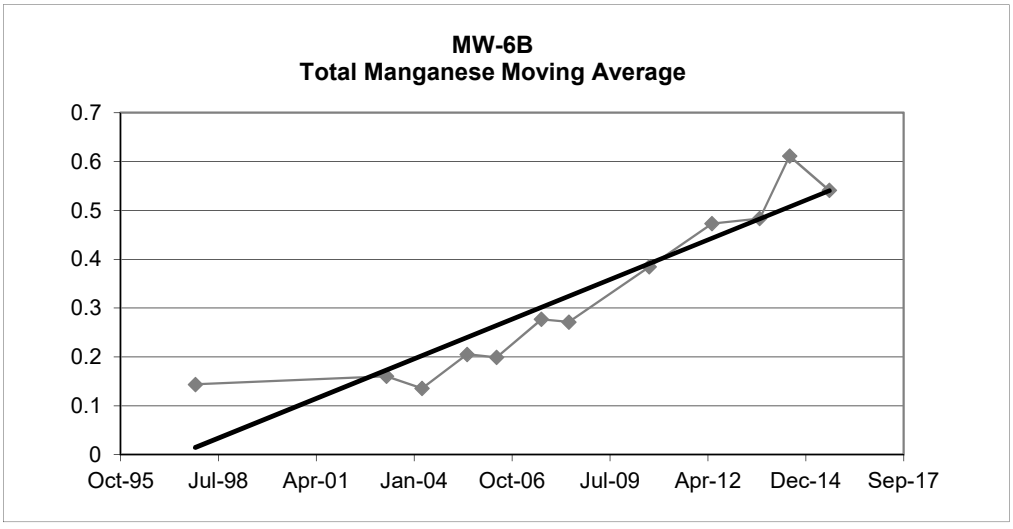
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Total Manganese

Event No.	Event Date	Manganese, T (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.1070					
2	Jun-96	0.1960					
3	Oct-96	0.1980					
4	Dec-96	0.2620					
5	Mar-97	0.1130					
6	Jun-97	0.1750					
7	Sep-97	0.1410					
8	Dec-97	0.1450		0.1435	0.0254	0.0761	0.2196
9	Apr-03	0.1800		0.1603	0.0201	0.0603	0.2205
10	Apr-04	0.0754		0.1354	0.0436	0.1309	0.2663
11	Jul-05	0.4200		0.2051	0.1497	0.4492	0.6543
12	May-06	0.1200		0.1989	0.1535	0.4606	0.6595
13	Aug-07	0.4910		0.2766	0.2094	0.6282	0.9048
14	May-08	0.0540		0.2713	0.2164	0.6492	0.9205
15	Aug-10	0.8720		0.3843	0.3778	1.1334	1.5176
16	May-12	0.4740		0.4728	0.3342	1.0026	1.4754
17	Sep-13	0.5320		0.4830	0.3356	1.0067	1.4897
18	Jul-14	0.5670		0.6113	0.1780	0.5340	1.1453
19	Aug-15	0.5910		0.5410	0.0508	0.1524	0.6934
20	Aug-16	0.7200		0.6025	0.0820	0.2460	0.8485
21	Aug-17	0.6240		0.6255	0.0672	0.2016	0.8271

Background Mean Concentration (BMC)= 0.3361
3 S.D.= 0.7317
BMC+3 S.D.= 1.0678

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

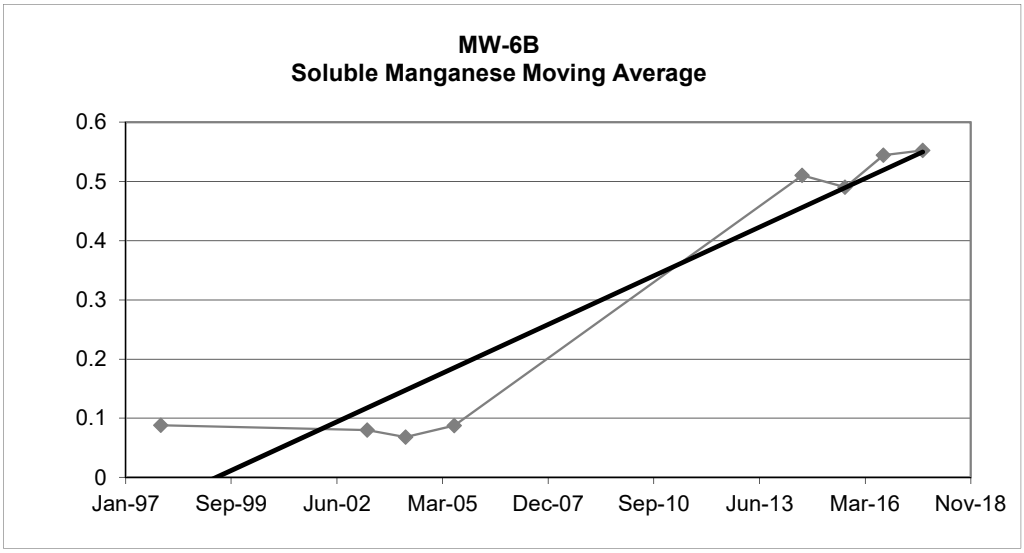
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Soluble Manganese

Event No.	Event Date	Manganese, S (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.1050					
2	Jun-96	0.0310					
3	Oct-96	0.2000					
4	Dec-96	0.2410					
5	Mar-97	0.1120					
6	Jun-97	0.1030					
7	Sep-97	0.0484					
8	Dec-97	0.0875		0.0877	0.0281	0.0843	0.1720
9	Apr-03	NA		0.0796	0.0281	0.0844	0.1640
10	Apr-04	NA		0.0680	0.0276	0.0829	0.1509
11	Jul-05	NA		0.0875	NA	NA	NA
12	May-06	NA		NA	NA	NA	NA
13	Aug-07	NA		NA	NA	NA	NA
14	May-08	NA		NA	NA	NA	NA
15	Aug-10	NA		NA	NA	NA	NA
16	May-12	NA		NA	NA	NA	NA
17	Sep-13	NA		NA	NA	NA	NA
18	Jul-14	0.51		0.5100	NA	NA	NA
19	Aug-15	0.47		0.4900	0.0283	0.0849	0.5749
20	Aug-16	0.653		0.5443	0.0962	0.2886	0.8330
21	Aug-17	0.577		0.5525	0.0802	0.2407	0.7932

Background Mean Concentration (BMC)= 0.2615
3 S.D.= 0.6787
BMC+3 S.D.= 0.9402

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

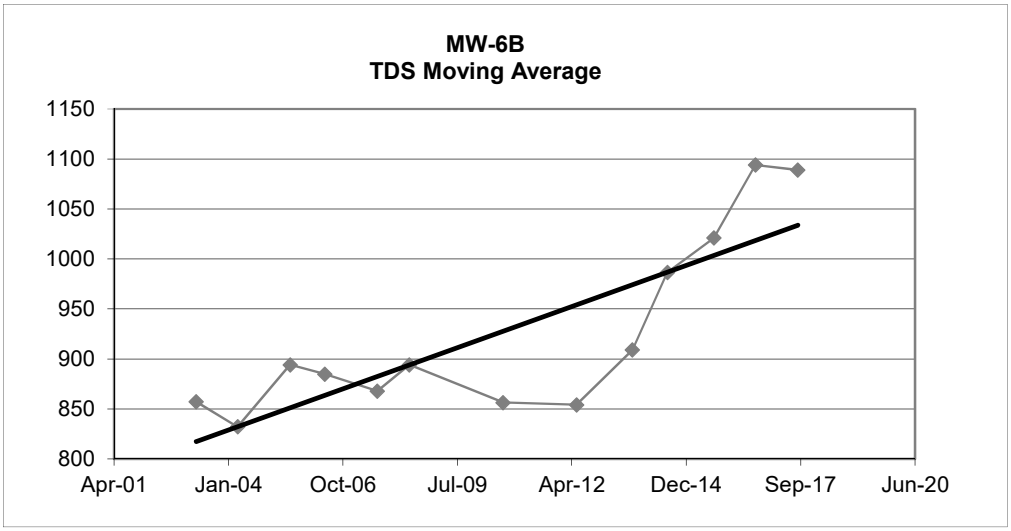
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Total Dissolved Solids

Event No.	Event Date	TDS (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Apr-01	885					
2	Oct-01	731					
3	Apr-02	914					
5	Apr-03	898		857	85	254	1111
6	Apr-04	785		832	88	265	1097
7	Jul-05	979		894	81	242	1136
8	May-06	877		885	80	239	1124
9	Aug-07	830		868	83	249	1117
10	May-08	890		894	62	187	1081
11	Aug-10	828		856	32	96	952
12	May-12	868		854	30	91	945
13	Sep-13	1050		909	97	292	1201
14	Jul-14	1200		987	172	516	1503
15	Aug-15	966		1021	141	422	1443
16	Aug-16	1160		1094	106	319	1413
17	Aug-17	1030		1089	110	329	1418

Background Mean Concentration (BMC)= 931
3 S.D.= 385
BMC+3 S.D.= 1315

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

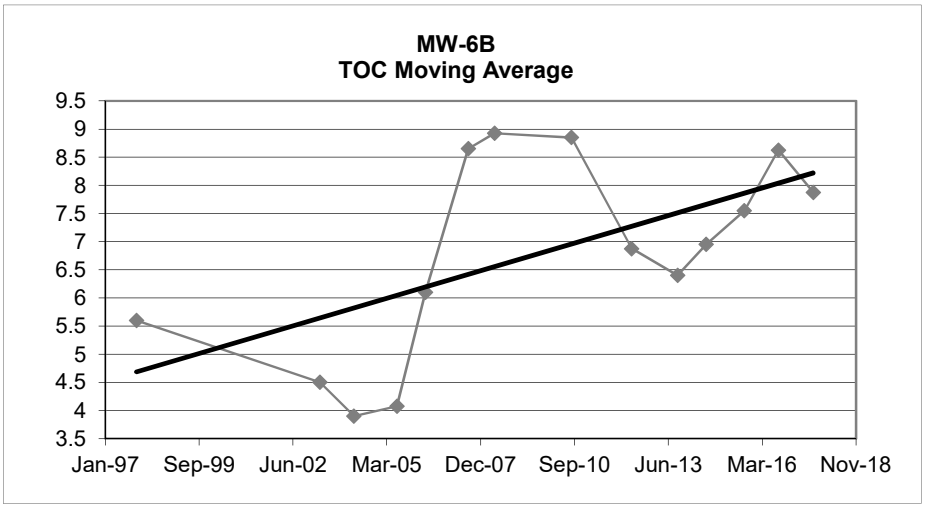
Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

Total Organic Carbon

Event No.	Event Date	TOC (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	5.10					
2	Jun-96	5.10					
3	Oct-96	5.80					
4	Dec-96	5.40					
5	Mar-97	5.40					
6	Jun-97	6.70					
7	Sep-97	5.20					
8	Dec-97	5.10		5.60	0.74	2.23	7.83
9	Apr-03	1.00	*	4.50	2.45	7.34	11.84
10	Apr-04	4.30		3.90	1.97	5.92	9.82
11	Jul-05	5.90		4.08	2.15	6.45	10.53
12	May-06	13.20		6.10	5.15	15.46	21.56
13	Aug-07	11.20		8.65	4.23	12.69	21.34
14	May-08	5.40		8.93	3.87	11.62	20.55
15	Aug-10	5.60		8.85	3.95	11.86	20.71
16	May-12	5.30		6.88	2.89	8.66	15.53
17	Sep-13	9.30		6.40	1.94	5.81	12.21
18	Jul-14	7.60		6.95	1.87	5.61	12.56
19	Aug-15	8.00		7.55	1.67	5.00	12.55
20	Aug-16	9.60		8.63	0.97	2.92	11.55
21	Aug-17	6.30		7.88	1.36	4.08	11.95

Background Mean Concentration (BMC)= 6.50
3 S.D.= 7.86
BMC+3 S.D.= 14.36

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
NA = The parameter was not analyzed during that particular event or data is not available.



Appendix E

Marilla Street Landfill
August 2017 Annual Sampling Event
Background Shallow Overburden Well MW-6B

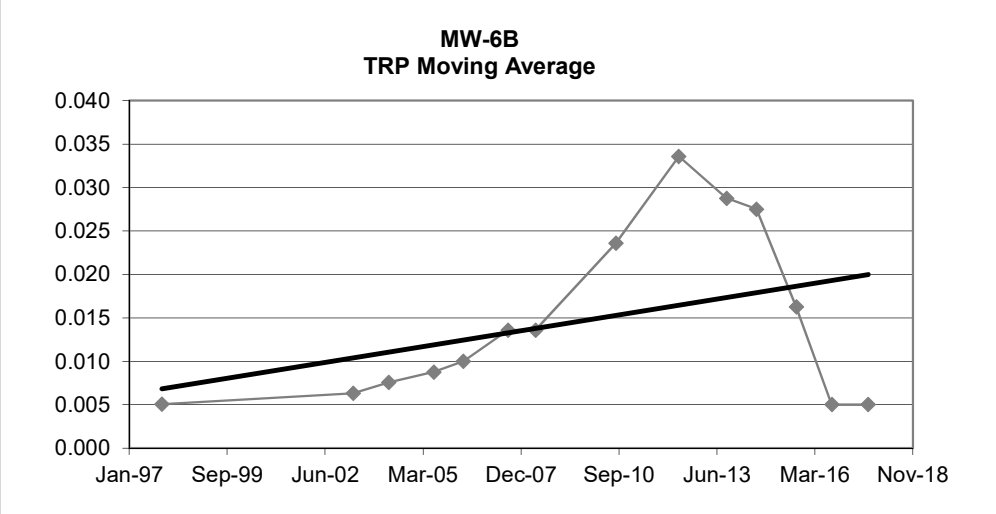
Total Recoverable Phenolics

Event No.	Event Date	TRP (mg/L)	*	Moving Average (M.A.)	Moving Standard Deviation (S.D.)	S.D. x 3	M.A. + 3 S.D.
1	Mar-96	0.005	*				
2	Jun-96	0.005	*				
3	Oct-96	0.005	*				
4	Dec-96	0.005	*				
5	Mar-97	0.005	*				
6	Jun-97	0.005					
7	Sep-97	0.00521	*				
8	Dec-97	0.005	*	0.005	0.000	0.000	0.005
9	Apr-03	0.010	*	0.006	0.002	0.007	0.014
10	Apr-04	0.010	*	0.008	0.003	0.008	0.016
11	Jul-05	0.010	*	0.009	0.003	0.008	0.016
12	May-06	0.010	*	0.010	0.000	0.000	0.010
13	Aug-07	0.0243		0.014	0.007	0.021	0.035
14	May-08	0.010	*	0.014	0.007	0.021	0.035
15	Aug-10	0.050	*	0.024	0.019	0.057	0.080
16	May-12	0.050	*	0.034	0.020	0.060	0.093
17	Sep-13	0.005	*	0.029	0.025	0.074	0.103
18	Jul-14	0.005	*	0.028	0.026	0.078	0.105
19	Aug-15	0.005	*	0.016	0.023	0.068	0.084
20	Aug-16	0.005	*	0.005	0.000	0.000	0.005
21	Aug-17	0.005	*	0.005	0.000	0.000	0.005

Background Mean Concentration (BMC)= 0.0114
3 S.D.= 0.0407
BMC+3 S.D.= 0.0521

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.

NA = The parameter was not analyzed during that particular event or data is not available.



APPENDIX F

Moving Average Trend Analysis of Tracked Parameters for Shallow Overburden Wells

Appendix F

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for MW-2B

Event Date	pH	Moving Average	TRP	Moving Average	TOC	Moving Average	Total Chromium	Moving Average	Total Iron	Moving Average	Total Manganese	Moving Average
Sep-13	13.9	-	0.088	-	0.081	-	-	-	-	-	-	-
Jul-14[(3)]	-	-	-	-	-	-	-	-	-	-	-	-
Aug-15	12.22	-	0.059	-	18.0	-	0.097	-	31.5	-	2.23	-
Aug-16	12.42	-	0.029	-	16.8	-	0.024	-	10.8	-	0.595	-
Aug-17	11.22	-	0.063	-	17.3	-	0.013	-	4.9	-	0.277	-

Notes:

(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

(2) - Data prior to September 2013 sampling event was unavailable, and/or MATA was not previously conducted.

(3) - MW-2B previously biennial, not sampled in 2014.

(4) - TOC = Total Organic Carbon

(5) - TDS = Total Dissolved Solids

(6) - TRP = Total Recoverable Phenolics

Appendix F

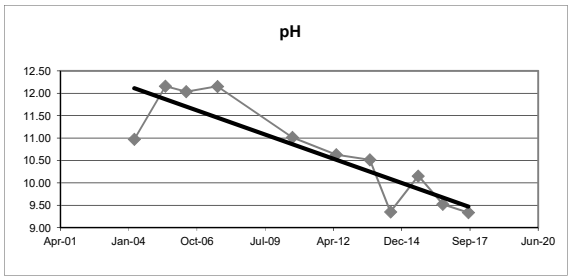
Marilla Street Landfill

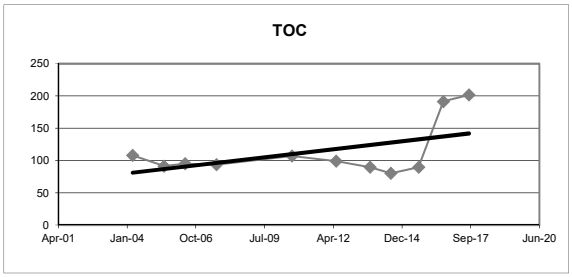
August 2017 Annual Sampling Event

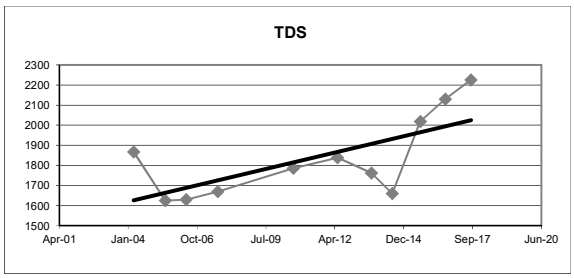
Summary of MATA Tracked Parameters for MW-3B

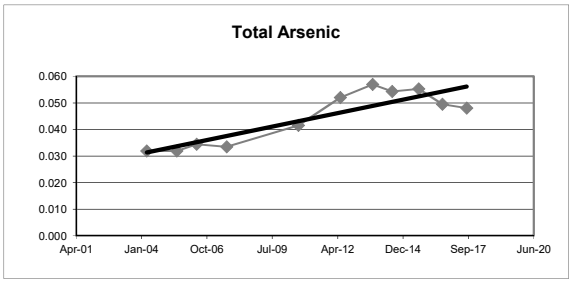
Event Date	pH	Moving Average	TOC	Moving Average	TDS	Moving Average	Total Arsenic	Moving Average	Specific Conductance	Moving Average	TRP	Moving Average
Oct-01	6.72	-	163.0	-	2400	-	0.030	-	2.30	-	1.30	-
Apr-02	12.41	-	117.0	-	1640	-	0.027	-	4.44	-	0.84	-
Apr-03	12.01	-	140.0	-	1780	-	0.037	-	2.97	-	1.10	-
Apr-04	12.74	10.97	11.0	107.8	1650	1868	0.034	0.032	3.53	3.31	0.24	0.87
Jul-05	11.48	12.16	96.9	91.2	1430	1625	0.030	0.032	2.77	3.43	0.36	0.64
May-06	11.90	12.03	132.0	95.0	1660	1630	0.037	0.034	6.69	3.99	0.72	0.61
Aug-07	12.49	12.15	134.0	93.5	1940	1670	0.058	0.034	6.13	4.78	1.05	0.59
Aug-10	8.18	11.01	63.7	106.7	2110	1785	0.026	0.042	0.90	4.12	0.36	0.62
May-12	9.95	10.63	66.6	99.1	1640	1838	0.087	0.052	1.70	3.85	0.64	0.69
Sep-13	11.44	10.52	93.6	89.5	1360	1763	0.057	0.057	1.59	2.58	0.851	0.73
Jul-14	7.84	9.35	96.0	80.0	1530	1660	0.047	0.054	2.75	1.73	0.521	0.59
Aug-15	11.38	10.15	101.0	89.3	3540	2018	0.030	0.055	2.08	2.03	0.683	0.67
Aug-16	7.42	9.52	475	191.4	2090	2130	0.064	0.050	1.73	2.04	0.812	0.72
Aug-17	10.71	9.34	134	201.5	1740	2225	0.051	0.048	3.14	2.43	0.730	0.69

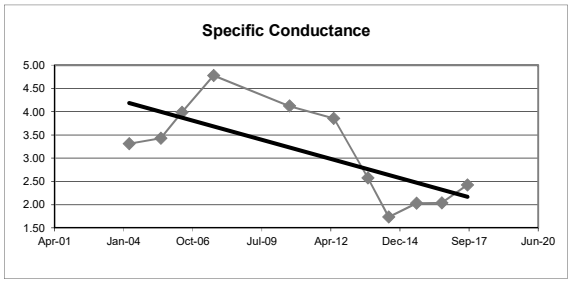
Notes:
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.
(2) - TOC = Total Organic Carbon
(3) - TDS = Total Dissolved Solids
(4) - TRP = Total Recoverable Phenolics
(5) - NA = Parameter not analyzed at this location.

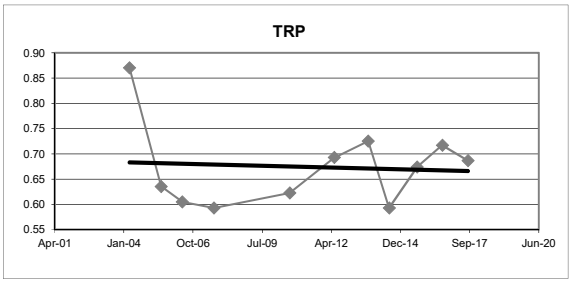












Appendix F

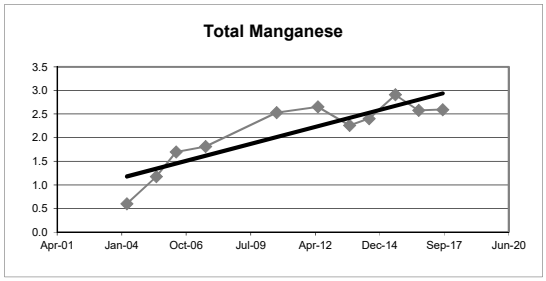
Marilla Street Landfill

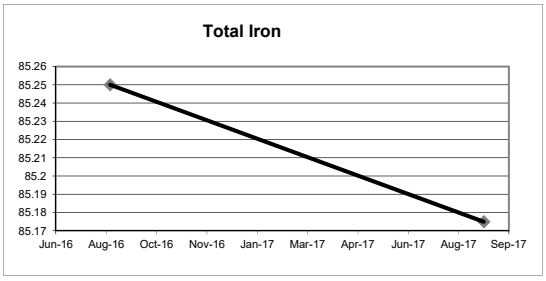
August 2017 Annual Sampling Event

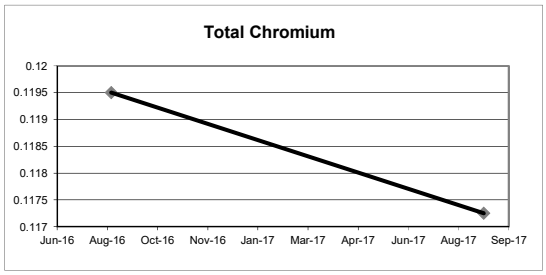
Summary of MATA Tracked Parameters for MW-3B

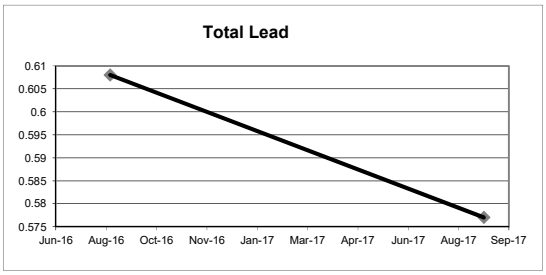
Event Date	Total Cyanide	Moving Average	Total Manganese	Moving Average	Total Chromium	Moving Average	Total Iron	Moving Average	Total Lead	Moving Average
Oct-01	0.0095	-	0.610	-						
Apr-02	0.0124	-	0.510	-						
Apr-03	0.0183	-	0.560	-						
Apr-04	0.0199	0.0150	0.727	0.602						
Jul-05	0.0262	0.0192	2.900	1.174						
May-06	0.0254	0.0225	2.600	1.697						
Aug-07	0.0174	0.0222	1.020	1.812						
Aug-10	0.0220	0.0228	3.600	2.530						
May-12	0.0100	0.0187	3.380	2.650						
Sep-13	0.0150	0.0161	1.030	2.258	0.129	-	73.3	-	0.763	-
Jun-14	0.0130	0.0150	1.610	2.405	0.133	-	94.4	-	0.582	-
Aug-15	0.0220	0.0150	5.610	2.908	0.037	-	58.3	-	0.105	-
Aug-16	0.1000	0.0375	2.050	2.575	0.179	0.120	115	85.250	0.982	0.608
Aug-17	0.1000	0.0588	1.110	2.595	0.120	0.117	73	85.175	0.639	0.577

Notes:
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.









Appendix F

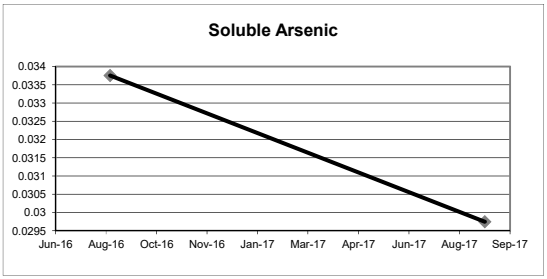
Marilla Street Landfill

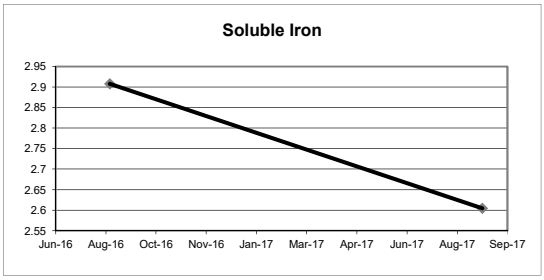
August 2017 Annual Sampling Event

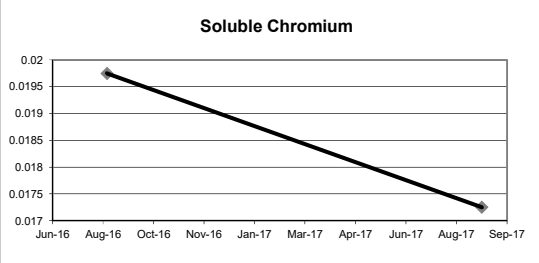
Summary of MATA Tracked Parameters for MW-3B

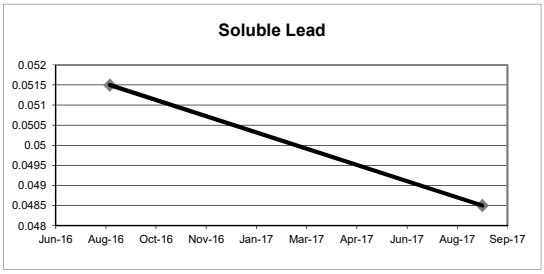
Event Date	Soluble Arsenic	Moving Average	Soluble Chromium	Moving Average	Soluble Iron	Moving Average	Soluble Lead	Moving Average
Oct-01								
Apr-02								
Apr-03								
Apr-04								
Jul-05								
May-06								
Aug-07								
Aug-10								
May-12								
Sep-13	0.041	-	0.0300	-	3.990	-	0.059	-
Jun-14	0.035	-	0.0230	-	3.040	-	0.091	-
Aug-15	0.028	-	0.0160	-	2.910	-	0.050	-
Aug-16	0.031	0.034	0.0100	0.020	1.690	2.908	0.006	0.052
Aug-17	0.025	0.030	0.0200	0.017	2.780	2.605	0.047	0.049

Notes:
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.









Appendix F

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for MW-4B

Event Date	pH	Moving Average	TOC	Moving Average	TRP	Moving Average	Total Iron	Moving Average	Soluble Iron	Moving Average	Total Manganese	Moving Average
Oct-01	NA	-	NA	-	NA	-	NA	-	NA	-		-
Apr-02	7.90	-	6.5	-	0.005	-	5.60	-	NA	-		-
Apr-03	8.08	-	4.6	-	0.010	-	30.20	-	NA	-		-
Apr-04	8.57	8.18	6.5	5.9	0.010	0.008	1.00	12.27	NA	-		-
Jul-05	7.78	8.08	22.2	10.0	0.076	0.025	10.90	11.92	4.00	4.00		-
May-06	7.71	8.04	3.9	9.3	0.010	0.027	6.60	12.17	NA	4.00		-
Aug-07	7.53	7.90	6.0	9.6	0.005	0.025	1.12	4.90	NA	4.00		-
May-08	7.81	7.71	5.0	9.3	0.010	0.025	0.72	4.84	NA	4.00		-
Aug-10	6.86	7.48	3.8	4.7	0.061	0.022	6.67	3.78	0.77	0.77		-
May-12	7.78	7.50	4.9	4.9	0.050	0.032	3.02	2.88	0.49	0.63		-
Sep-13	8.06	7.63	5.0	4.7	0.005	0.032	0.88	2.82	NA	0.63	1.02	-
Jul-14	8.04	7.69	6.8	5.1	0.0254	0.035	2.50	3.27	NA	0.63	1.02	-
Aug-15	7.60	7.87	6.7	5.9	0.0050	0.021	1.75	2.04	NA	0.49	0.89	-
Aug-16	8.44	8.04	7.7	6.6	0.0050	0.010	5.71	2.71	0.53	0.53	0.863	0.95
Aug-17	8.16	8.06	6.0	6.8	0.0050	0.010	3.84	3.45	NA		0.703	0.87

Notes:

(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

(2) - TOC = Total Organic Carbon

(3) - TRP = Total Recoverable Phenolics

(4) - NA = Parameter not analyzed at this location.

Appendix F

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for MW-7B

Event Date	pH	Moving Average	TOC	Moving Average	TRP	Moving Average	Specific Conductance	Moving Average	TDS	Moving Average
Oct-01	11.18	-	128.0	-	0.940	-	4.40	-	1420	-
Apr-02	12.61	-	61.8	-	0.950	-	3.73	-	1580	-
Apr-03	11.48	-	109.0	-	0.940	-	3.36	-	1410	-
Apr-04	12.83	12.03	97.0	99.0	0.770	0.900	3.53	3.76	1400	1453
Jul-05	11.65	12.14	47.8	78.9	0.320	0.745	2.66	3.32	1860	1563
May-06	11.69	11.91	81.4	83.8	0.600	0.658	2.83	3.10	1230	1475
Aug-07	9.65	11.46	21.0	61.8	0.083	0.443	0.11	2.28	529	1255
May-08	9.99	10.75	43.5	48.4	0.230	0.308	0.00	1.40	747	1092
Aug-10	6.94	9.57	23.0	42.2	0.220	0.283	0.97	0.98	468	744
May-12	10.45	9.26	14.6	25.5	0.080	0.153	0.12	0.30	401	536
Sep-13	12.63	10.00	36.5	29.4	0.321	0.213	4.20	1.32	1360	744
Jul-14	11.65	10.42	47.5	30.4	0.426	0.262	4.83	2.53	1070	825
Aug-15	12.70	11.86	51.8	37.6	0.587	0.354	3.70	3.21	1220	1013
Aug-16	12.90	12.47	69.0	51.2	0.689	0.506	2.94	3.92	1100	1188
Aug-17	12.01	12.32	47.4	53.9	0.370	0.518	3.37	3.71	832	1056

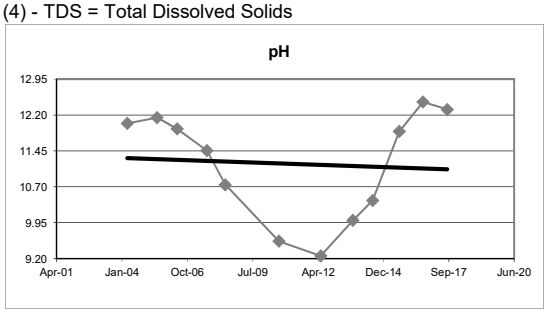
Notes:

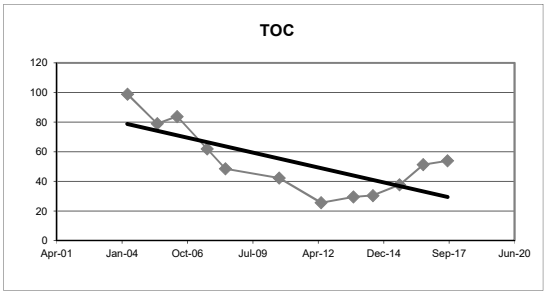
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

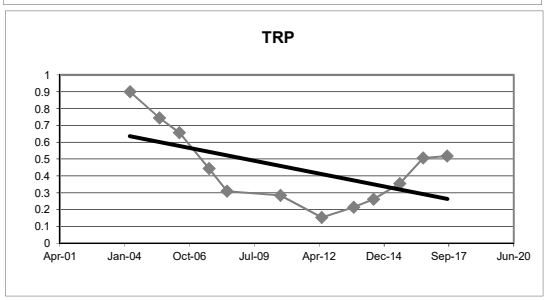
(2) - TOC = Total Organic Carbon

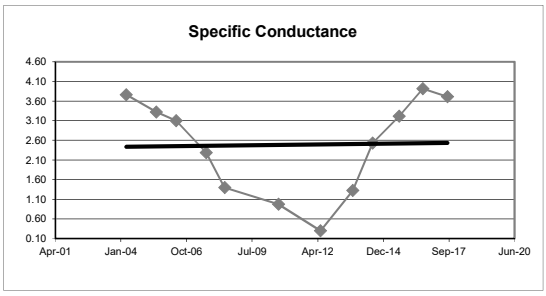
(3) - TRP = Total Recoverable Phenolics

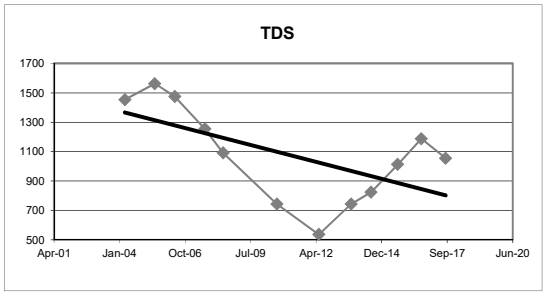
(4) - TDS = Total Dissolved Solids











Appendix F

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for MW-15B

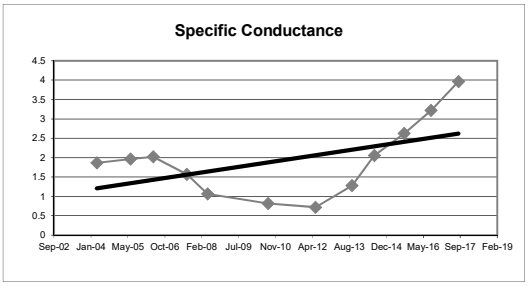
Event Date	Specific Conductance	Moving Average	TDS	Moving Average	TOC	Moving Average	Total Arsenic	Moving Average	Total Iron	Moving Average
Oct-01	1.62	-	722	-	70.2	-	0.009	-	4.7	-
Apr-02	1.81	-	1310	-	52.6	-	0.013	-	5.6	-
Apr-03	2.02	-	1240	-	62.9	-	0.014	-	30.2	-
Apr-04	2.02	1.87	1240	1128	54.6	60.1	0.023	0.015	36.5	19.3
Jul-05	2.00	1.96	1320	1278	49.9	55.0	0.076	0.032	50.5	30.7
May-06	2.04	2.02	1310	1278	50.6	54.5	0.017	0.033	29.0	36.6
Aug-07	0.23	1.57	1260	1283	56.3	52.9	0.027	0.036	43.6	39.9
May-08	0.00	1.07	1110	1250	56.8	53.4	0.040	0.040	33.0	39.0
Aug-10	1.00	0.82	951	1158	87.3	62.8	0.073	0.039	1.1	26.7
May-12	1.66	0.72	954	1069	61.3	65.4	0.032	0.043	3.6	20.3
Sep-13	2.45	1.28	1410	1106	73.8	69.8	0.059	0.051	1.4	9.8
Jul-14	3.11	2.05	1320	1159	96.0	79.6	0.032	0.049	0.85	1.7
Aug-15	3.27	2.62	1690	1344	83.0	78.5	0.026	0.037	0.53	1.6
Aug-16	4.06	3.22	1680	1525	256	127.2	0.037	0.039	0.10	0.7
Aug-17	5.41	3.96	1461	1538	51.0	121.5	0.029	0.031	0.15	0.4

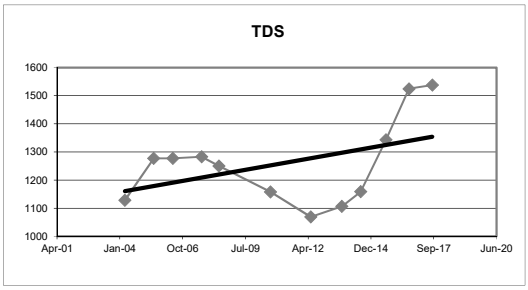
Notes:

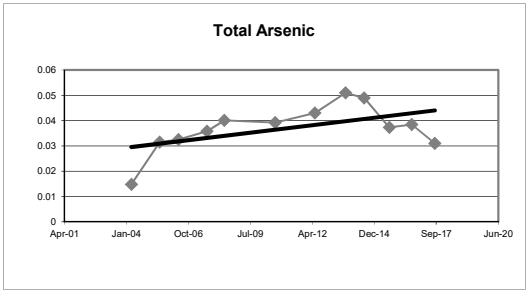
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

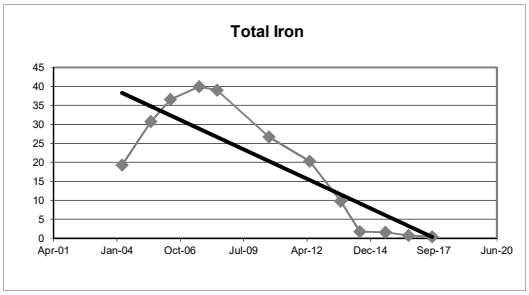
(2) - TDS = Total Dissolved Solids

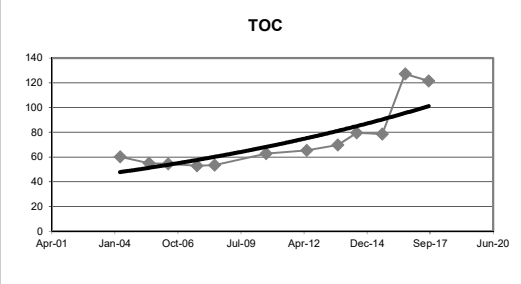
(3) - TOC = Total Organic Carbon











Appendix F

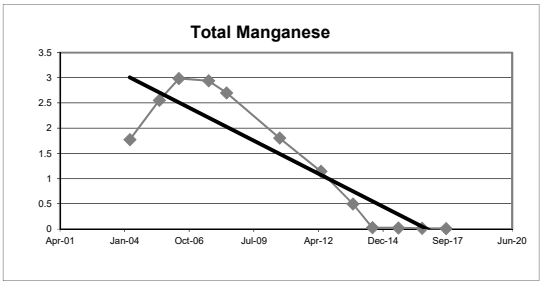
Marilla Street Landfill

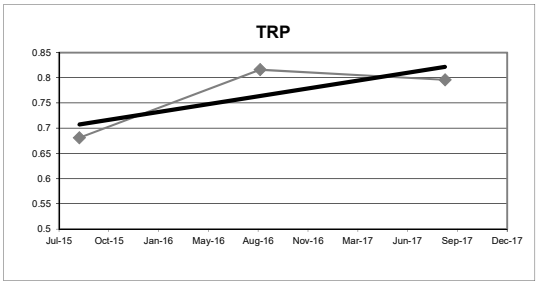
August 2017 Annual Sampling Event

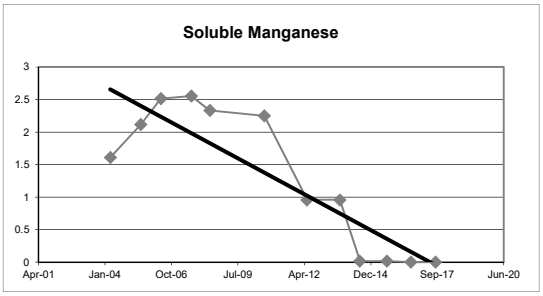
Summary of MATA Tracked Parameters for MW-15B

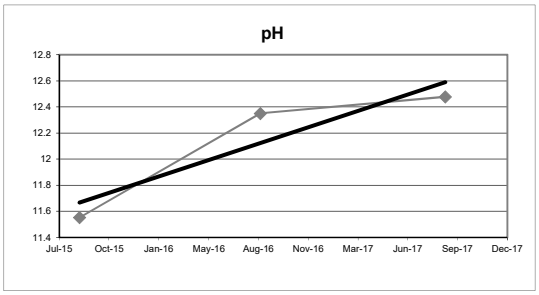
Event Date	Soluble Iron	Moving Average	Total Manganese	Moving Average	Soluble Manganese	Moving Average	TRP	Moving Average	pH	Moving Average
Oct-01	4.7	-	0.48	-	0.47	-				
Apr-02	5.6	-	0.97	-	1.00	-				
Apr-03	21.4	-	2.80	-	2.40	-				
Apr-04	26.6	14.6	2.85	1.78	2.56	1.61				
Jul-05	26.3	20.0	3.60	2.56	2.50	2.12				
May-06	28.1	25.6	2.70	2.99	2.60	2.52				
Aug-07	NA	27.0	2.61	2.94	NA	2.55				
May-08	15.2	23.2	1.90	2.70	1.90	2.33				
Aug-10	NA	21.7	0.02	1.81	NA	2.25				
May-12	1.0	8.1	0.05	1.15	0.02	0.96	0.14	-	10.37	
Sep-13	NA	8.1	0.02	0.50	NA	0.96	0.761	-	12.23	-
Jul-14	NA	1.0	0.02	0.03	NA	0.02	0.930	-	10.97	-
Aug-15	NA	1.0	0.01	0.02	NA	0.02	0.893	0.68	12.64	11.55
Aug-16	NA	-	0.01	0.01	NA	-	0.680	0.82	13.56	12.35
Aug-17	NA	-	0.01	0.01	NA	-	0.680	0.80	12.74	12.48

Notes:









Appendix F

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for MW-16B

Event Date	pH	Moving Average	Specific Conductance	Moving Average	TOC	Moving Average	TRP	Moving Average	Total Iron	Moving Average	Total Chromium	Moving Average	Total Manganese	Moving Average	TCE	Moving Average
Oct-01	10.62	-	3.00	-	14.6	-	0.013	-	8.400	-	0.055	-	1.200	-	5.0	-
Apr-02	12.11	-	2.37	-	9.3	-	0.005	-	0.970	-	0.005	-	0.130	-	5.0	-
Apr-03	11.37	-	2.19	-	11.2	-	0.010	-	1.400	-	0.010	-	0.330	-	5.0	-
Apr-04	12.41	11.63	2.24	2.45	8.6	10.9	0.010	0.010	6.070	4.210	0.055	0.031	2.060	0.930	5.0	-
Jul-05	11.63	11.88	2.22	2.25	11.0	10.0	0.010	0.009	0.090	2.133	0.002	0.018	0.005	0.631	5.0	-
May-06	11.49	11.73	2.10	2.19	6.9	9.4	0.010	0.010	0.130	1.923	0.002	0.017	0.032	0.607	31.0	11.500
Aug-07	12.14	11.92	0.23	1.70	14.5	10.3	0.010	0.010	0.100	1.598	0.010	0.017	0.010	0.527	20.0	15.250
May-08	12.11	11.84	0.00	1.14	11.6	11.0	0.010	0.010	0.051	0.093	0.004	0.005	0.003	0.013	5.0	15.250
Aug-10	7.07	10.70	0.21	0.63	15.1	12.0	0.050	0.020	0.191	0.118	0.010	0.007	0.015	0.015	1.0	14.250
May-12	11.53	10.71	1.33	0.44	17.5	14.7	0.050	0.030	0.116	0.115	0.010	0.009	0.015	0.011	11.9	9.475
Sep-13	11.88	10.65	1.50	0.76	12.0	14.1	0.0073	0.029	0.110	0.117	0.010	0.009	0.011	0.011	35.0	13.225
Jul-14	10.90	10.35	1.75	1.20	18.2	15.7	0.0073	0.029	0.510	0.232	0.010	0.010	0.061	0.026	21.0	17.225
Aug-15	12.45	11.69	2.08	1.67	14.3	15.5	0.0080	0.018	3.620	1.089	0.031	0.015	0.717	0.201	26.0	23.475
Aug-16	12.87	12.03	1.77	1.78	16.7	15.3	0.0118	0.009	0.120	1.090	0.010	0.015	0.017	0.202	25.0	26.750
Aug-17	9.96	11.55	2.38	2.00	14.1	15.8	0.0078	0.009	0.100	1.088	0.010	0.015	0.010	0.201	31.0	25.750

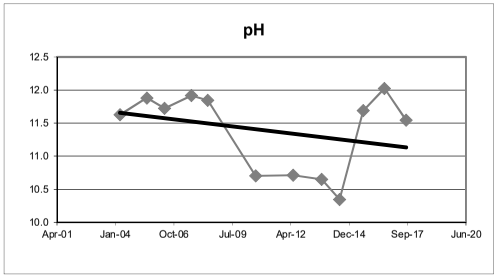
Notes:

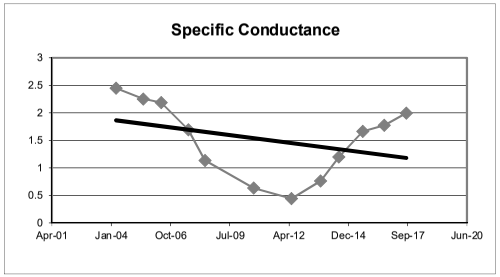
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

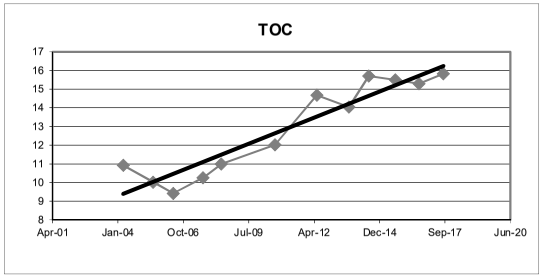
(2) - TOC = Total Organic Carbon

(3) - TCE = Trichloroethene

(4) - TRP = Total Recoverable Phenolics







Appendix F

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for MW-18B

Event Date	pH	Moving Average	Specific Conductance	Moving Average	TOC	Moving Average	TRP	Moving Average	TDS	Moving Average	Total Manganese	Moving Average	Total Iron	Moving Average
Oct-01	7.27	-	5.58	-	40.0	-	0.007	-	3860	-	2.900	-		
Apr-02	7.57	-	4.77	-	16.2	-	0.005	-	4220	-	0.740	-		
Apr-03	7.85	-	4.84	-	30.2	-	0.010	-	3940	-	2.500	-		
Apr-04	8.61	7.83	4.40	4.90	14.0	25.1	0.010	0.008	3820	3960	0.341	1.620		
Jul-05	7.89	7.98	3.79	4.45	17.9	19.6	0.010	0.009	3380	3840	0.630	1.053		
May-06	8.33	8.17	4.05	4.27	10.0	18.0	0.010	0.010	3450	3648	0.710	1.045		
Aug-07	7.56	8.10	0.45	3.17	16.9	14.7	0.005	0.009	3510	3540	0.952	0.658		
May-08	7.92	7.93	0.00	2.07	16.9	15.4	0.011	0.009	2920	3315	1.300	0.898		
Aug-10	7.49	7.83	0.42	1.23	19.3	15.8	0.050	0.019	1950	2958	0.908	0.968		
May-12	7.91	7.72	3.49	1.09	15.1	17.1	0.050	0.029	3990	3093	1.030	1.048		
Sep-13	7.68	7.75	2.81	1.68	14.4	16.4	0.005	0.029	1820	2670	0.896	1.034	7.660	-
Jul-14	7.55	7.66	2.82	2.38	24.4	18.3	0.005	0.028	2380	2535	1.40	1.059	1.09	-
Aug-15	7.84	7.75	3.41	3.13	17.0	17.7	0.005	0.016	2830	2755	1.73	1.264	1.89	-
Aug-16	8.29	7.84	3.03	3.02	17.6	18.4	0.005	0.005	2740	2443	2.19	1.554	0.17	2.703
Aug-17	7.56	7.81	3.25	3.13	24.3	20.8	0.005	0.005	2710	2665	2.10	1.855	0.64	0.948

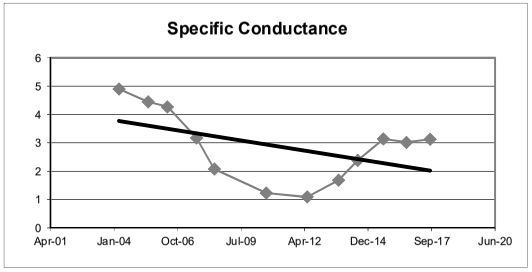
Notes:

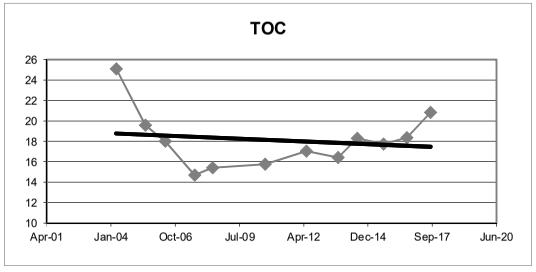
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

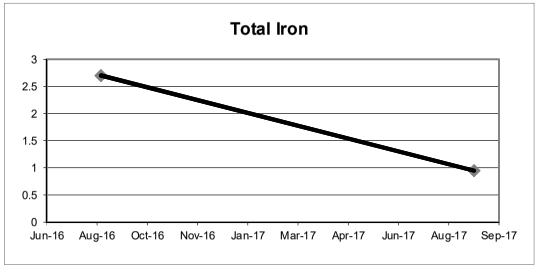
(2) - TOC = Total Organic Carbon

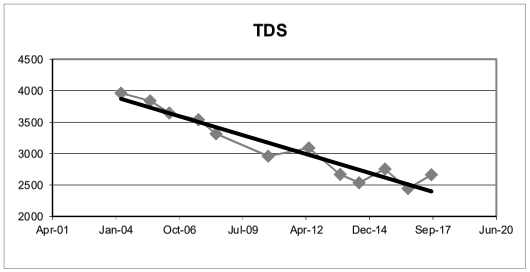
(3) - TRP = Total Recoverable Phenolics.

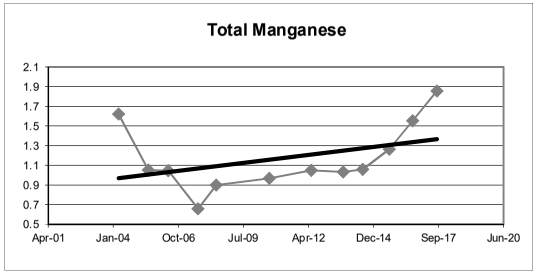
(4) - TDS = Total Dissolved Solids











APPENDIX G

Moving Average Trend Analysis of Tracked Parameters for Surface Water

Appendix G

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for SW-1

Event Date	pH	Moving Average	Specific Conductance	Moving Average	TOC	Moving Average	Total Iron	Moving Average	Total Manganese	Moving Average	TDS	Moving Average
Apr-01	7.62	-	1.21	-	6.6	-	0.730	-	0.300	-		
Oct-01	7.53	-	0.77	-	4.9	-	1.200	-	0.045	-		
Apr-02	8.02	-	1.23	-	3.5	-	0.390	-	0.160	-		
Apr-03	8.56	-	2.02	-	4.4	-	0.740	-	0.082	-		
Apr-04	8.85	8.24	1.30	1.33	2.5	3.8	0.564	0.724	0.219	0.127		
Jul-05	7.48	8.23	0.75	1.32	5.4	4.0	0.480	0.544	0.083	0.136		
May-06	7.95	8.21	0.87	1.24	7.3	4.9	0.070	0.464	0.070	0.114		
Aug-07	6.02	7.58	0.18	0.78	4.7	5.0	0.430	0.386	0.178	0.138		
May-08	8.07	7.38	0.00	0.45	5.2	5.7	0.880	0.465	0.140	0.118		
Jul-10	6.40	7.11	0.66	0.43	71.7	22.2	0.428	0.452	0.040	0.107		
May-12	8.00	7.12	0.89	0.43	6.6	22.1	1.600	0.835	0.126	0.121	366	-
Sep-13	8.05	7.63	0.48	0.51	4.5	22.0	0.570	0.870	0.077	0.096	267	-
Jul-14	7.16	7.40	0.79	0.70	6.1	22.2	0.750	0.837	0.279	0.130	414	-
Aug-15	8.12	7.83	0.87	0.76	5.2	5.6	0.870	0.948	0.284	0.192	363	353
Aug-16	7.36	7.67	1.23	0.84	13.2	7.3	2.27	1.115	0.657	0.324	738	446
Aug-17	6.93	7.39	0.87	0.94	9.9	8.6	1.16	1.263	0.482	0.426	422	484

Notes:

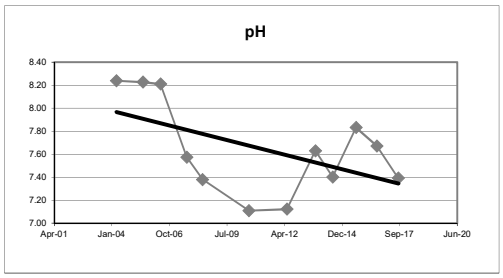
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

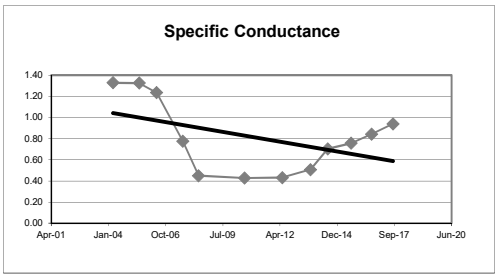
(2) - TOC = Total Organic Carbon

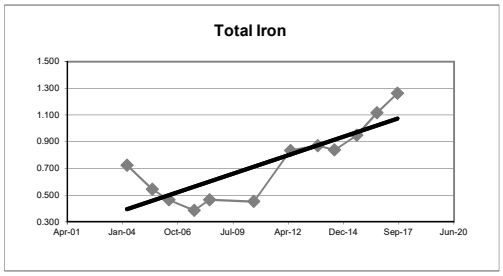
(3) - TDS = Total Dissolved Solids

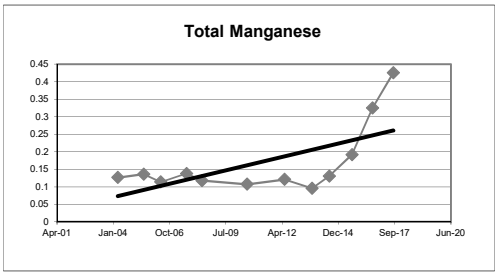
(4) - NA = Parameter not analyzed at this location.

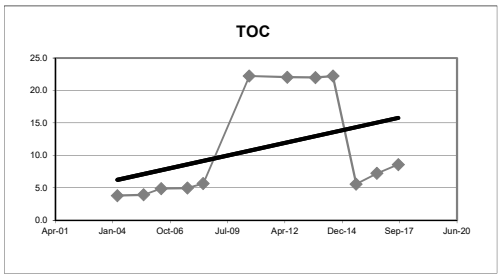
(5) - TRP = Total Recoverable Phenolics.

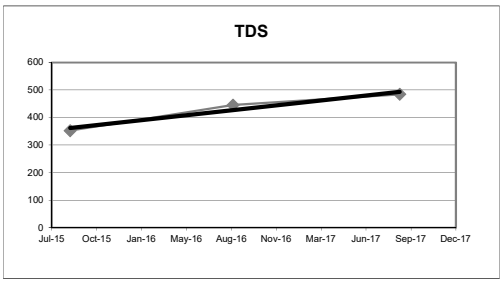












Appendix G

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for SW-1

Event Date	TRP	Moving Average	Total Arsenic	Moving Average	Total Chromium	Moving Average	Total Cyanide	Moving Average	Total Lead	Moving Average	Soluble Iron	Moving Average	Soluble Manganese	Moving Average
Apr-01														
Oct-01														
Apr-02														
Apr-03														
Apr-04														
Jul-05														
May-06														
Aug-07														
May-08														
Jul-10														
May-12	0.050	-	0.004	-	0.010	-	0.010	-	0.005	-				
Sep-13	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-				
Jul-14	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-	0.100	-	0.188	-
Aug-15	0.005	0.016	0.010	0.009	0.010	0.010	0.010	0.010	0.050	0.039	1.130	-	0.282	-
Aug-16	0.007	0.006	0.010	0.010	0.010	0.010	0.010	0.010	0.050	0.050	0.110	-	0.635	-
Aug-17	0.006	0.006	0.010	0.010	0.010	0.010	0.010	0.010	0.050	0.050	0.100	0.360	0.464	0.392

Notes:
(1) - Graphs not shown for parameters where all data are reported less than the detection limit or detection limits depict false trending.

Appendix G

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for SW-2A

Event Date	pH	Moving Average	Specific Conductance	Moving Average	TOC	Moving Average	Total Iron	Moving Average	Total Manganese	Moving Average	TDS	Moving Average
Apr-01	8.58	-	1.29	-	6.4	-	0.780	-	0.360	-		
Oct-01	8.02	-	0.78	-	5.1	-	0.920	-	0.096	-		
Apr-02	8.45	-	1.12	-	4.0	-	0.950	-	0.180	-		
Apr-03	8.26	-	1.85	-	4.3	-	4.200	-	0.210	-		
Apr-04	8.85	8.40	1.28	1.26	4.2	4.4	1.540	1.903	0.265	0.188		
Jul-05	8.08	8.41	0.79	1.26	4.7	4.3	1.100	1.948	0.180	0.209		
May-06	8.30	8.37	0.89	1.20	6.9	5.0	0.800	1.910	0.051	0.177		
Aug-07	8.17	8.35	0.23	0.80	4.9	5.2	0.794	1.059	0.136	0.158		
May-08	8.62	8.29	0.00	0.48	5.2	5.4	1.100	0.949	0.160	0.132		
Jul-10	6.12	7.80	0.00	0.28	9.5	6.6	0.999	0.923	0.159	0.127		
May-12	8.20	7.78	0.93	0.29	4.8	6.1	0.569	0.866	0.095	0.137	365	-
Sep-13	8.35	7.82	0.43	0.34	5.4	6.2	0.550	0.805	0.045	0.115	293	-
Jul-14	7.50	7.54	0.77	0.53	5.8	6.4	0.480	0.650	0.141	0.110	409	-
Aug-15	8.69	8.19	0.91	0.76	6.9	5.7	0.270	0.467	0.010	0.073	375	361
Aug-16	7.48	8.01	1.38	0.87	12.5	7.7	0.870	0.543	0.080	0.069	626	426
Aug-17	6.81	7.62	1.45	1.13	9.8	8.8	1.910	0.883	0.669	0.225	426	459

Notes:

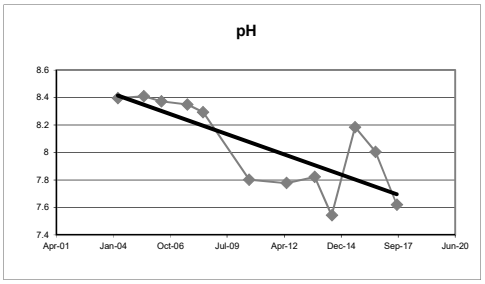
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

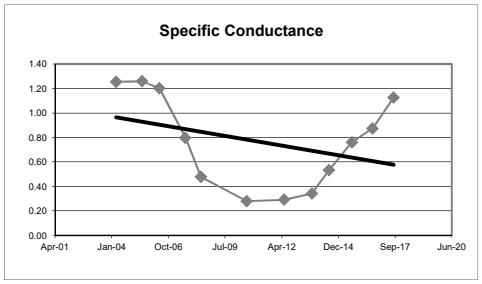
(2) - TOC = Total Organic Carbon

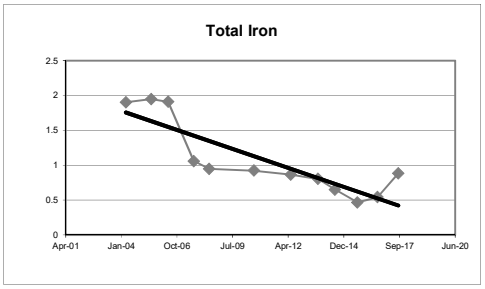
(3) - TDS = Total Dissolved Solids

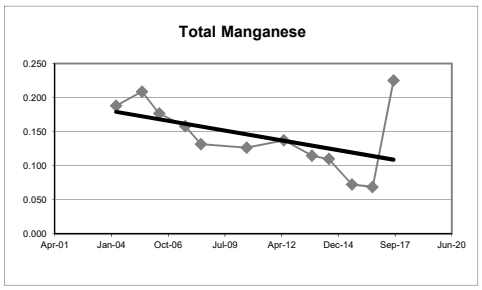
(4) - NA = Parameter not analyzed at this location.

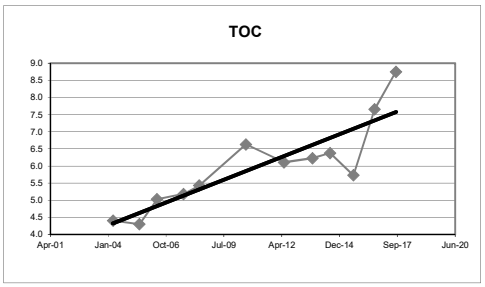
(5) - TRP = Total Recoverable Phenolics.

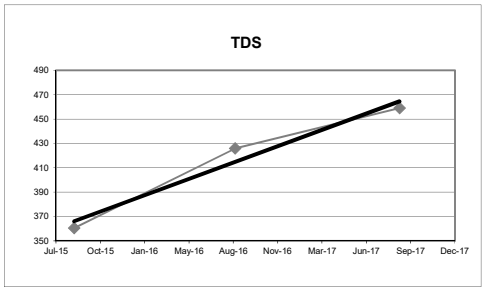












Appendix G

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for SW-2A

Event Date	TRP	Moving Average	Total Arsenic	Moving Average	Total Chromium	Moving Average	Total Cyanide	Moving Average	Total Lead	Moving Average	Soluble Iron	Moving Average	Soluble Manganese	Moving Average
Apr-01														
Oct-01														
Apr-02														
Apr-03														
Apr-04														
Jul-05														
May-06														
Aug-07														
May-08														
Jul-10														
May-12	0.050	-	0.004	-	0.010	-	0.010	-	0.005	-				
Sep-13	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-				
Jul-14	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-	0.10	-	0.079	-
Aug-15	0.005	0.016	0.010	0.009	0.010	0.010	0.010	0.010	0.050	0.039	0.370	-	0.011	-
Aug-16	0.0061	0.005	0.010	0.010	0.010	0.010	0.010	0.010	0.050	0.050	0.100	-	0.047	-
Aug-17	0.0062	0.006	0.010	0.010	0.010	0.010	0.010	0.010	0.050	0.050	0.100	0.168	0.534	0.168

Notes:

(1) - Graphs not shown for parameters where all data are reported less than the detection limit or detection limits depict false trending.

Appendix G

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for SW-3A

Event Date	pH	Moving Average	Specific Conductance	Moving Average	TOC	Moving Average	Total Iron	Moving Average	Total Manganese	Moving Average	TDS	Moving Average
Apr-01	8.75	-	1.16	-	8.5	-	1.800	-	0.350	-		
Oct-01	7.97	-	0.80	-	5.9	-	2.300	-	0.200	-		
Apr-02	8.54	-	1.11	-	4.0	-	1.400	-	0.180	-		
Apr-03	8.18	-	1.61	-	5.2	-	3.400	-	0.280	-		
Apr-04	9.04	8.43	1.24	1.19	4.4	4.9	1.730	2.208	0.263	0.231		
Jul-05	7.55	8.33	0.89	1.21	3.6	4.3	1.500	2.008	0.220	0.236		
May-06	8.47	8.31	0.87	1.15	7.1	5.1	1.500	2.033	0.091	0.214		
Aug-07	8.33	8.35	0.17	0.79	5.8	5.2	0.805	1.384	0.142	0.179		
May-08	8.51	8.22	1.46	0.85	6.0	5.6	1.500	1.326	0.270	0.181		
Jul-10	8.44	8.44	0.00	0.63	6.1	6.3	0.800	1.151	0.112	0.154		
May-12	8.55	8.46	0.81	0.61	5.5	5.9	0.897	1.001	0.076	0.150	396	-
Sep-13	8.29	8.45	0.45	0.68	5.6	5.8	0.620	0.954	0.080	0.135	324	-
Jul-14	7.50	8.20	0.77	0.51	6.3	5.9	0.380	0.674	0.116	0.096	427	-
Aug-15	8.35	8.17	1.02	0.76	5.8	5.8	0.970	0.717	0.137	0.102	471	405
Aug-16	8.28	8.11	1.21	0.86	10.6	7.1	0.770	0.685	0.159	0.123	654	469
Aug-17	7.94	8.02	0.94	0.99	7.4	7.5	1.180	0.825	0.268	0.170	480	508

Notes:

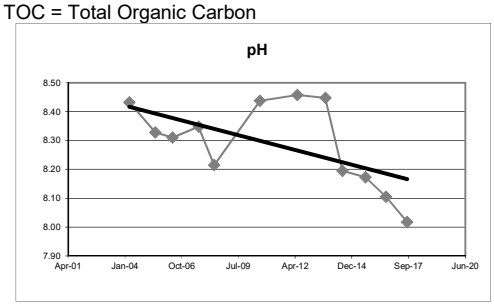
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

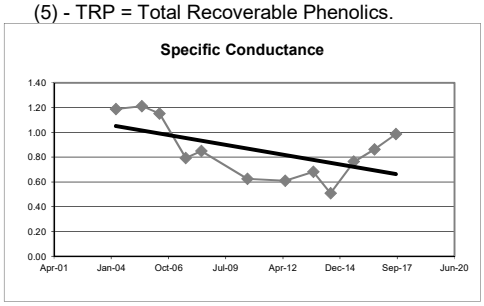
(2) - TOC = Total Organic Carbon

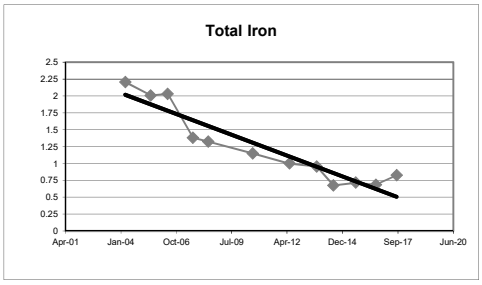
(3) - TDS = Total Dissolved Solids

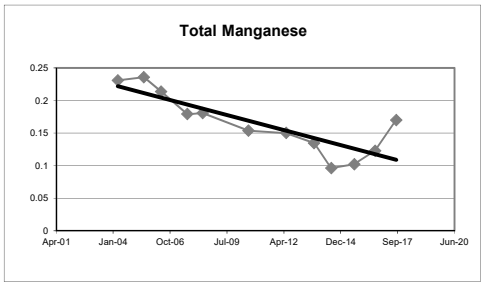
(4) - NA = Parameter not analyzed at this location.

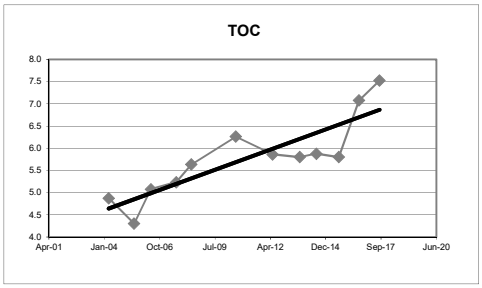
(5) - TRP = Total Recoverable Phenolics.

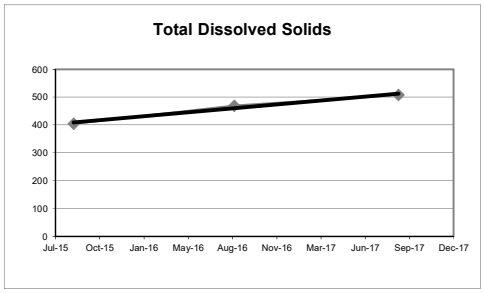












Appendix G

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for SW-3A

Event Date	TRP	Moving Average	Total Arsenic	Moving Average	Total Chromium	Moving Average	Total Cyanide	Moving Average	Total Lead	Moving Average	Soluble Iron	Moving Average	Soluble Manganese	Moving Average
Apr-01														
Oct-01														
Apr-02														
Apr-03														
Apr-04														
Jul-05														
May-06														
Aug-07														
May-08														
Jul-10														
May-12	0.050	-	0.004	-	0.010	-	0.010	-	0.005	-				
Sep-13	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-				
Jul-14	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-	0.190	-	0.081	-
Aug-15	0.005	0.016	0.010	0.009	0.010	0.010	0.010	0.010	0.050	0.039	0.850	-	0.106	-
Aug-16	0.005	0.005	0.010	0.010	0.010	0.010	0.010	0.010	0.050	0.050	0.100	-	0.031	-
Aug-17	0.005	0.005	0.010	0.010	0.010	0.010	0.010	0.010	0.050	0.050	0.100	0.310	0.067	0.071

Notes:

(1) - Graphs not shown for parameters where all data are reported less than the detection limit or detection limits depict false trending.

Appendix G

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for SW-5

Event Date	pH	Moving Average	Specific Conductance	Moving Average	TOC	Moving Average	Total Iron	Moving Average	Total Manganese	Moving Average	TDS	Moving Average
Apr-01	8.75	-	1.10	-	8.4	-	0.560	-	0.086	-		
Oct-01	8.75	-	1.18	-	10.8	-	0.370	-	0.100	-		
Apr-02	8.36	-	0.97	-	5.2	-	0.890	-	0.050	-		
Apr-03	8.38	-	1.33	-	5.2	-	8.500	-	0.016	-		
Apr-04	9.30	8.70	1.22	1.18	4.8	6.5	0.689	2.612	0.036	0.050		
Jul-05	6.53	8.14	1.32	1.21	6.2	5.4	2.400	3.120	0.097	0.050		
May-06	8.19	8.10	1.43	1.33	8.3	6.1	1.900	3.372	0.093	0.060		
Aug-07	8.34	8.09	0.15	1.03	9.2	7.1	0.651	1.410	0.166	0.098		
May-08	8.48	7.89	1.66	1.14	5.8	7.4	1.600	1.638	0.097	0.113		
Jul-10	8.24	8.31	0.00	0.81	6.3	7.4	0.737	1.222	0.103	0.115		
May-12	8.59	8.41	1.43	0.81	5.8	6.8	2.730	1.430	0.104	0.118	646	-
Sep-13	8.62	8.48	1.29	1.10	6.0	6.0	0.840	1.477	0.057	0.090	873	-
Jul-14	8.30	8.44	1.58	1.08	5.7	6.0	0.660	1.242	0.054	0.080	40	-
Aug-15	8.43	8.49	1.86	1.54	6.3	6.0	1.020	1.313	0.068	0.071	826	596
Aug-16	9.11	8.62	1.79	1.63	12.4	7.6	1.480	1.000	0.079	0.065	1010	687
Aug-17	8.81	8.66	1.64	1.72	6.4	7.7	1.310	1.118	0.099	0.075	752	657

Notes:

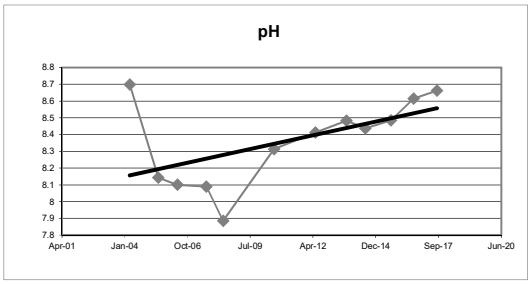
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

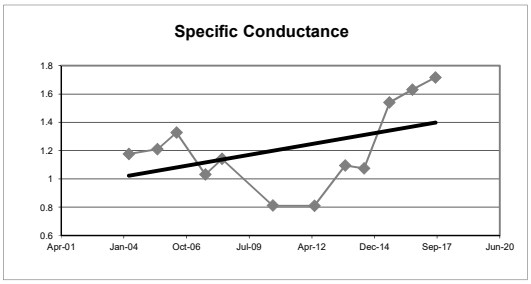
(2) - TOC = Total Organic Carbon

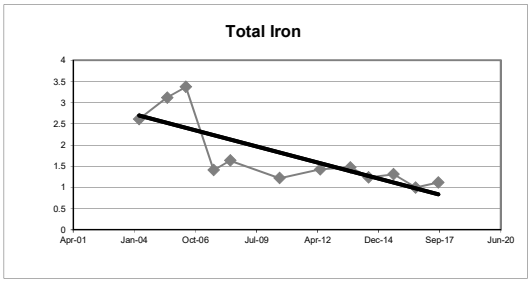
(3) - TDS = Total Dissolved Solids

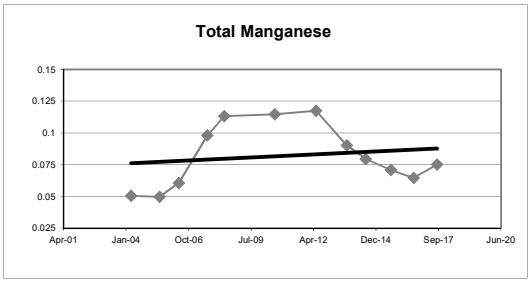
(4) - NA = Parameter not analyzed at this location.

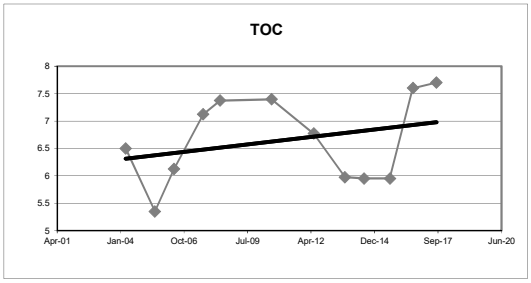
(5) - TRP = Total Recoverable Phenolics.

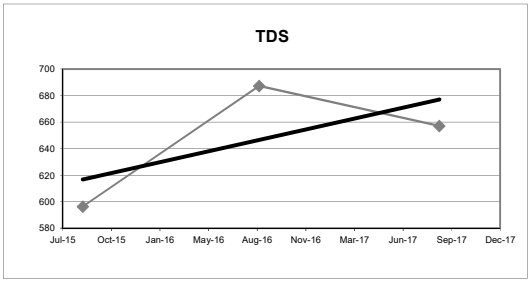












Appendix G

Marilla Street Landfill

August 2017 Annual Sampling Event

Summary of MATA Tracked Parameters for SW-5

Event Date	TRP	Moving Average	Total Arsenic	Moving Average	Total Chromium	Moving Average	Total Cyanide	Moving Average	Total Lead	Moving Average	Soluble Iron	Moving Average	Soluble Manganese	Moving Average
Apr-01														
Oct-01														
Apr-02														
Apr-03														
Apr-04														
Jul-05														
May-06														
Aug-07														
May-08														
Jul-10														
May-12	0.050	-	0.004	-	0.010	-	0.010	-	0.005	-				
Sep-13	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-				
Jul-14	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-	0.100	-	0.010	-
Aug-15	0.005	0.016	0.010	0.009	0.010	0.010	0.010	0.010	0.050	0.039	0.790	-	0.058	-
Aug-16	0.006	0.005	0.010	0.010	0.010	0.010	0.010	0.010	0.050	0.050	0.10	-	0.010	-
Aug-17	0.006	0.005	0.010	0.010	0.010	0.010	0.010	0.010	0.050	0.050	0.10	0.273	0.010	0.022

Notes:

(1) - Graphs not shown for parameters where all data are reported less than the detection limit or detection limits depict false trending.

APPENDIX H

2017 Post-Closure Inspection and Maintenance Report

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 Grand Island Blvd. Grand Island NY 14072
Ph (716) 773-6872/ Fax (716)773-6873 www.daiglerengineering.com

DAILY CONSTRUCTION INSPECTION REPORT

PROJECT: MABILLA ST LANDFILL	**DATE:** 09-07-17
OWNER: STEELFIELDS, LTD.	

ARRIVE TIME: 3:00 pm	**DEPART TIME:** 3:45 pm
WEATHER CONDITIONS: CLOUDY, RAINY	
TEMPERATURE: ~60°F. 3:00pm ~~AM~~	~~PM~~
SITE CONDITIONS: WET	

PERSONNEL AND EQUIPMENT:

SAM DAIGLER

INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:

INSPECTED LANDFILL TO CONFIRM ALL AREAS HAVE BEEN MOWED.
↳ WEST SLOPE (DOWNSLOPE OF ACCESS ROAD) OF THE BOF DUST AREA HAS NOT BEEN MOWED

CONSTRUCTION ACTIVITIES:

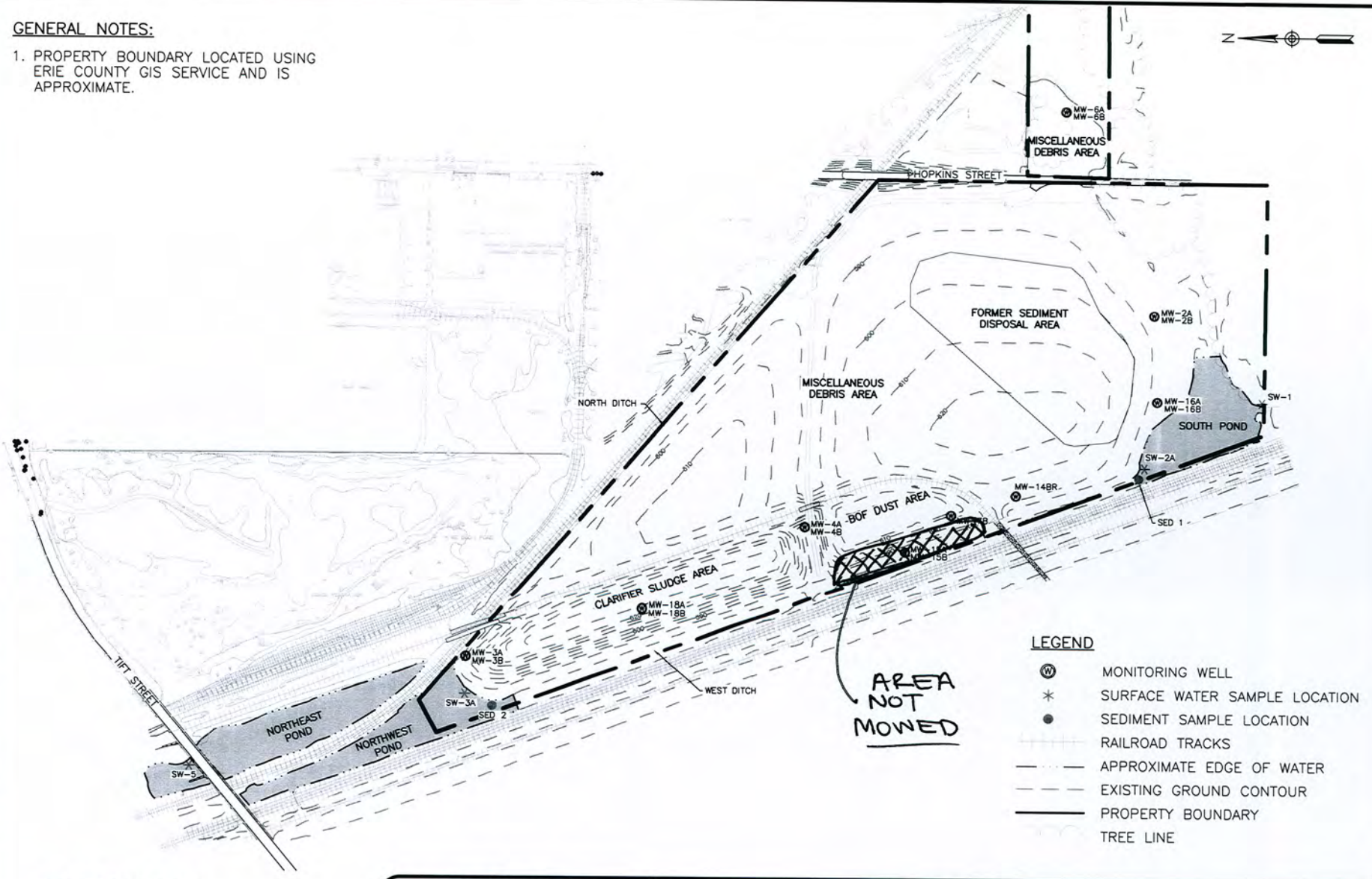
NONE.

OBSERVER: SAM DAIGLER	**SIGNATURE:**	**DATE:** 09-07-17

9/7/17

GENERAL NOTES:

1. PROPERTY BOUNDARY LOCATED USING ERIE COUNTY GIS SERVICE AND IS APPROXIMATE.



DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072
(716) 773-6872 (716) 773-6873 FAX

STEELFIELDS, LTD		SITE PLAN MARILLA STREET LANDFILL PERIODIC REVIEW REPORT		FIGURE 2
SCALE: 1" = 600'	REVISION # 0			
September 2016		CITY OF BUFFALO	ERIE COUNTY	NEW YORK

Q:\Steelfields\Marilla Street Landfill\ACAD\FIG 2-SITE PLAN.dwg 9/29/2016 5:02 PM

Photo 1 - West Slope of BOF Dust Area below Access Road

Marilla Street Landfill **Inspection Photos** **9/7/2017**	**Photograph Page** **1**

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 Grand Island Blvd. Grand Island NY 14072
Ph (716) 773-6872/ Fax (716)773-6873 www.daiglerengineering.com

DAILY CONSTRUCTION INSPECTION REPORT

PROJECT: MARILLA ST 2017 SITE INSPECTION	**DATE:** 9-21-17
OWNER:	

ARRIVE TIME: 7:40AM	**DEPART TIME:** 10:25AM	
WEATHER CONDITIONS: CLEAR SKIES		
TEMPERATURE:	62°F - 7:45 **AM**	**PM**
SITE CONDITIONS: DRY		

PERSONNEL AND EQUIPMENT:
SAM DAIGLER

INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:
ANNUAL SITE INSPECTION

CONSTRUCTION ACTIVITIES:
NONE

OBSERVER:	**SIGNATURE:**	**DATE:**
SAM DAIGLER		9-21-17

MARILLA STREET LANDFILL
POST -CLOSURE INSPECTION REPORT

DATE: 9-21-17
WEATHER: CLEAR SKIES
PERSONNEL: SAM DAIGLER

Instructions: Complete the checklist of visual evaluation items then complete specific data items. Field measurements should be made with a cloth tape, provided instrumentation on equipment or other suitable means. Estimated measurements shall be noted. Attach hand sketches or photographs to further define conditions or problems.

I. VISUAL EVALUATION ITEMS	Acceptable	Not Acceptable	Not Present	Present	Remarks
1. Vegetative Cover					
a. Within Landfill Disposal Area	X				SAME FOR BARE AREAS TO BE SEEDED
b. Around Landfill Perimeter	X				
2. Integrity of Drainage Ditches					
a. Sediment Build-up	X		X		
b. Pooling or Ponding			X		
c. Slope Integrity	X				
d. Overall Adequacy	X				
3. General Conditions of Site					
a. Road Construction	X				
b. Gates/Fences/Locks		X			FENCE DOWN IN SOME AREAS LOCKS ON ALL GATES
c. Grass Height	X				
d. Illegal Dumping	X			X	PICKED UP TRASH
e. Wetland Shrub Plantings [1]	—	—	—	—	
4. Integrity of Groundwater					
5. Integrity of Landfill Cap					
a. Erosion Damage				X	"RILLING"
b. Leachate Breakthrough			X		
c. Settlement			X		
d. Cracking			X		
e. Slope	X				
f. Undesirable plants			X		
g. Benchmark	X			X	
h. Animal Burrowing				X	

Notes: (1) Until Year 2002

II. SPECIFIC DATA ITEMS (Write N.A. if not applicable)

A. Erosion and Settlement:

1. Approximate size in feet of cap ended area(s). (List separately)
   a. _____ feet 0.75 feet (A)
   b. _____ feet 2' feet (B)
   c. _____ feet 0.5'-1.0' feet (C)

   1.5' FEET (D)

2. How deep is the most extreme point of erosion when measured from the adjacent surface. (List separately)
   a. _____ feet
   b. _____ feet N/A
   c. _____ feet

3. Approximate size in feet of eroded areas outside the soil cap area such as drainage ditches, roads or slopes.

   N/A

4. Attach a hand sketch or photograph showing the location of the eroded area(s). Identify each area by using the letter a, b, c, etc. from Question 1.

5. Approximate size in feet of leachate breakouts. (List separately)
   a. _____ feet _____ feet
   b. _____ feet _____ feet N/A
   c. _____ feet _____ feet

6. Approximate size in feet of any settlement areas within the soil cap area. (List separately)
   a. _____ feet _____ feet
   b. _____ feet _____ feet N/A
   c. _____ feet _____ feet

7. Approximate depth of each settlement area when measured from adjacent surface. (List separately)
   a. _____ feet _____ feet
   b. _____ feet _____ feet N/A
   c. _____ feet _____ feet

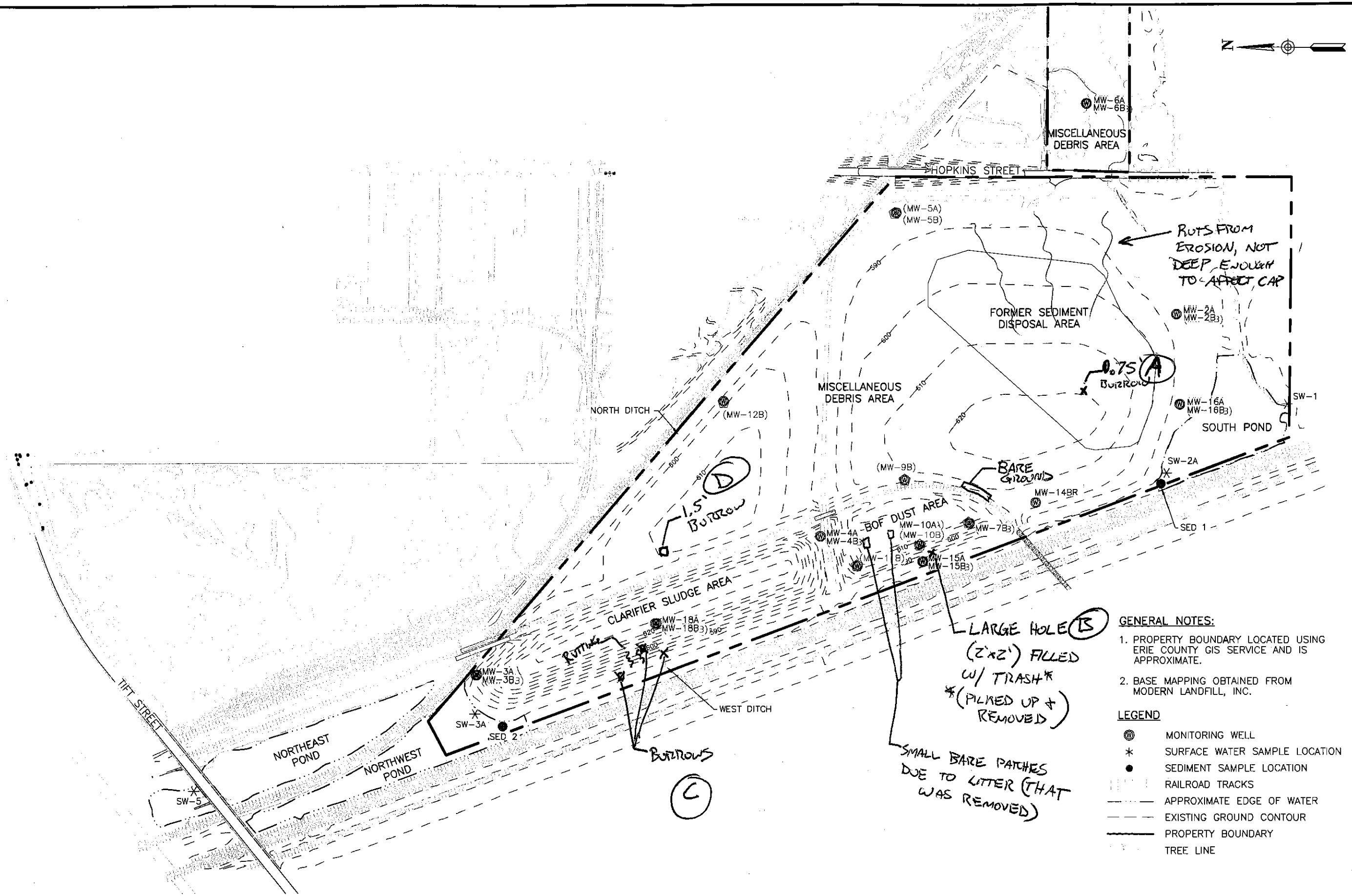
8. Attach a hand sketch or photograph showing the location of the settlement area(s). Identify each area by using the letter a, b, c, etc. from Question 6.

B. Corrective Actions:

1. Describe corrective actions taken (write N.A. if not applicable). TO BE

   FILL IN ANIMAL BURROWS/RUTS
   SEED BARE AREAS

2. Date of corrective action:



GENERAL NOTES:

1. PROPERTY BOUNDARY LOCATED USING ERIE COUNTY GIS SERVICE AND IS APPROXIMATE.
2. BASE MAPPING OBTAINED FROM MODERN LANDFILL, INC.

LEGEND

- MONITORING WELL
- SURFACE WATER SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- RAILROAD TRACKS
- APPROXIMATE EDGE OF WATER
- EXISTING GROUND CONTOUR
- PROPERTY BOUNDARY
- TREE LINE

NO.	REVISION	BY	DATE

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072
JAMES A. DAIGLER, P.E.
NYSPE NO. 061689

DATE: September 2014

SCALE: 1"=400'

PREPARED FOR: STEELFIELDS, LTD			SITE PLAN MARILLA STREET LANDFILL PERIODIC REVIEW REPORT
DES. BY:	DRW. BY:	CHK. BY:	
DWG: FIG 2-SITE PLAN.dwg			CITY OF BUFFALO / ERIE COUNTY / NEW YORK

FIGURE 2

Q:\Steelfields\Marilla Street Landfill\ACAD\FIG 2-SITE PLAN.dwg 9/2/2014 11:14 AM

Photo 1 - Burrow (A)

Photo 2 - Bare Ground by Tracks

Marilla St Landfill Annual Site Inspection 21-Sep-17	Photograph Page
	1

Photo 3 - Hole (B)

Photos 4a+b - Bare Patches from Litter

Marilla St Landfill Annual Site Inspection 21-Sep-17	Photograph Page
	2

Photo 5 - Burrows along Southwest Berm (D)

Photo 6 - Burrows along Southwest Berm (D)

Marilla St Landfill **Annual Site Inspection** **21-Sep-17**	**Photograph Page** **3**

Photo 7 - Burrow (E)

Marilla St Landfill Annual Site Inspection 21-Sep-17	Photograph Page 4

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING
2620 Grand Island Blvd. Grand Island NY 14072 Ph (716) 773-6872/ Fax (716)773-6873 www.daiglerengineering.com

DAILY INSPECTION REPORT

PROJECT: MARILLA STREET LANDFILL	**DATE:** 10-11-17
OWNER: STEELFIELDS,	

ARRIVE TIME: ~ 1:45 pm	**DEPART TIME:** ~ 2:45 pm
WEATHER CONDITIONS: overcast - light rainfall - breezy	
TEMPERATURE: ~ 55°F @ 2:00 pm AM / PM	
SITE CONDITIONS: wet,	

PERSONNEL AND EQUIPMENT:
Jim Daigler

INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:
observed repairs, seeding & mulching of cap areas -
note: attached photo's taken by Contractor before seeding & mulching & JAD confirms seeding & mulching is completed

CONSTRUCTION ACTIVITIES:
none

OBSERVER:	**SIGNATURE:**	**DATE:**
Jim Daigler	James Daigler	10-11-17

Photo 1 - Burrow (A)

Photo 2 - Hole (B)

Marilla St Landfill **Annual Site Inspection** **10-Oct-17**	**Photograph Page** **1**

Photo 3 - Burrows along Southwest Berm (C)

Photo 4 - Burrow (D)

Marilla St Landfill **Annual Site Inspection** **10-Oct-17**	**Photograph Page** **2**

Photo 5 - 15' Rut (E)

Marilla St Landfill **Annual Site Inspection** **10-Oct-17**	**Photograph Page** **3**

APPENDIX I

Institutional Controls/Engineering Controls (IC/ECs) Certification

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **915047**

Site Name Republic Steel (LTV) (Marilla St. LF)

Site Address: Marilla Street and Hopkins Street Zip Code: 14220
City/Town: Buffalo
County: Erie
Site Acreage: 110.0

Reporting Period: September 12, 2016 to September 12, 2017

	YES	NO
1. Is the information above correct?	☑ to the best of my knowledge	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☑ a portion of the site will soon be leased to a party for operation of a solar energy farm.	☐

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Closed Landfill	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑ to the best of my knowledge	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A **Corrective Measures Work Plan must be submitted along with this form to address these issues.**

Richard A. Parks, Pres 10-10-17

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 915047 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
132.16-1-11.2	Steelfields LTD	

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
~~4. Maintenance of fence around the site.~~ see Section 2.4 of PRR
5. Periodic Reporting of Site activities and evaluation of Site data.

132.16-1-13 Steelfields LTD

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
~~4. Maintenance of fence around the site.~~
5. Periodic Reporting of Site activities and evaluation of Site data.

132.16-1-14 Steelfields LTD

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
~~4. Maintenance of fence around the site~~.
5. Periodic Reporting of Site activities and evaluation of Site data.

132.16-1-9 Steelfields LTD Monitoring Plan

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
4. Periodic Reporting of Site activities and evaluation of Site data.

132.20-1-2.2 Steelfields LTD

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
~~4. Maintenance of fence around the site.~~
5. Periodic Reporting of Site activities and evaluation of Site data.

132.20-1-9 Steelfields LTD

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
~~4. Maintenance of fence around the site.~~
5. Periodic Reporting of Site activities and evaluation of Site data.

133.13-1-8 Steelfields LTD

Monitoring Plan

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
4. Periodic Reporting of Site activities and evaluation of Site data.

133.17-1-1 Steelfields LTD

Monitoring Plan

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
4. Periodic Reporting of Site activities and evaluation of Site data.

133.17-1-10 Steelfields LTD

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
~~4. Maintenance of fence around the site.~~
5. Periodic Reporting of Site activities and evaluation of Site data.

133.17-1-2 Steelfields LTD

Monitoring Plan

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
4. Periodic Reporting of Site activities and evaluation of Site data.

133.17-1-6 Steelfields LTD

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
~~4. Maintenance of fence around the site.~~ NAD
5. Periodic Reporting of Site activities and evaluation of Site data.

133.17-1-9 Steelfields LTD

Monitoring Plan

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010)was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
4. Periodic Reporting of Site activities and evaluation of Site data.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
132.16-1-11.2	~~Fencing/Access Control~~ Cover System
132.16-1-13	Cover System ~~Fencing/Access Control~~
132.16-1-14	Cover System ~~Fencing/Access Control~~
132.16-1-9	Cover System
132.20-1-2.2	Cover System ~~Fencing/Access Control~~

See Section 2.4 of PRR

Parcel	Engineering Control
132.20-1-9	Cover System ~~Fencing/Access Control~~
133.13-1-8	Cover System
133.17-1-1	Cover System
133.17-1-10	Cover System ~~Fencing/Access Control~~
133.17-1-2	Cover System
133.17-1-6	Cover System ~~Fencing/Access Control~~
133.17-1-9	Cover System

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☑	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 915047

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I JAMES A. DAIGLER at 2620 GRAND ISLAND BLVD, GRAND ISLAND NY 14072
print name print business address

am certifying as DESIGNATED REPRESENTATIVE (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

James A Daigler 10-11-17
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I JAMES A. DAIGLER at 2620 GRAND ISLAND BLVD, GRANDISLAND NY 14072
print name print business address

am certifying as a Professional Engineer for the OWNER (Owner or Remedial Party)

STATE OF NEW YORK
JAMES A. DAIGLER
061689-1
LICENSED PROFESSIONAL ENGINEER

James A. Daigler
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

10-11-17
Date