

October 11, 2016

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 – 2016 Periodic Review Report**

Dear Mr. Szymanski:

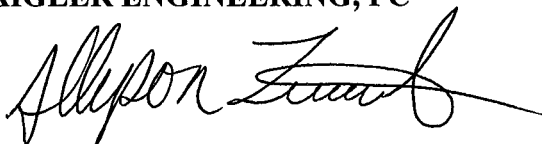
On behalf of Steelfields, LTD, please find enclosed the 2016 Periodic Review Report (PRR) for the Post-Closure Monitoring and Maintenance Plan for the Marilla Street Landfill. This report is submitted by October 12<sup>th</sup>, 2016, as required, and include all of the sampling, inspection, and maintenance activities performed during the 2016 calendar year. Appendix J 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 for 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. – Brown & Palumbo  
Gary Smith – Steelfields, LTD (c/o James Goehrig)

Enclosure: Post-Closure Monitoring and Maintenance Program – 2016 Period Review Report –  
Marilla Street Landfill



# **POST-CLOSURE MONITORING AND MAINTENANCE PROGRAM 2016 Periodic Review Report**

**MARILLA STREET LANDFILL  
NYSDEC SITE ID No. 915047**

**Prepared on behalf of:**

**Steelfields, LTD**

11 State Street  
Suite 100  
Pittsford, New York 14534-2051

**Prepared by:**



2620 Grand Island Blvd.  
Grand Island, New York 14072-2131

**October 2016**

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ENGINEERING, P.C.**  
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**October 2016**

# POST-CLOSURE MONITORING & MAINTENANCE PROGRAM

## 2016 Periodic Review Report

Steelfields, LTD

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# **POST-CLOSURE MONITORING & MAINTENANCE PROGRAM**

## **2016 Periodic Review Report**

Steelfields, LTD

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# 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.

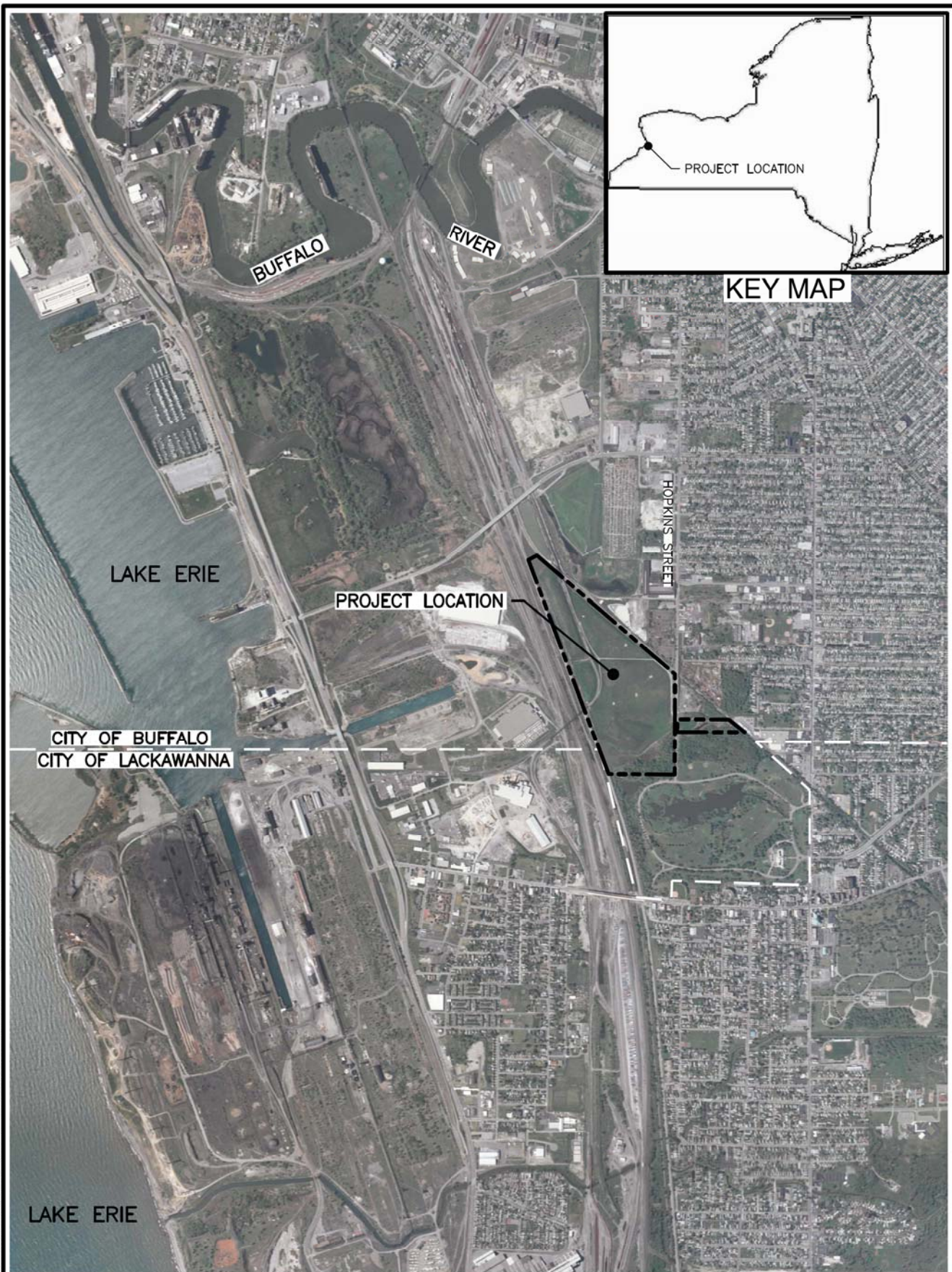
The landfill operated from 1930 through the summer of 1981 when it was owned by LTV Steel Company (formerly Republic Steel) and accepted wastes primarily produced by local steelmaking operations at the Buffalo Plant. Discarded wastes included, among others, construction and demolition debris, blast furnace 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 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. LTV Steel Company was acquired by Steelfields, LTD 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 their *Post-Closure Monitoring and Maintenance Plan for Republic Steel/LTV*, Rev October 2010 (hereto referred to as the Site Management Plan (SMP)).

This report satisfies the requirement for the 2016 annual reporting and assessment of post-closure monitoring and maintenance activities at the Marilla Street Landfill as outlined in the SMP. 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 2016 is also provided.

Q:\Steelfields\Varilla Street Landfill\ACAD\FIG 1-LOCATION MAP.dwg 9/29/2016 4:59 PM



**DAIGLER ENGINEERING, P.C.**  
CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
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## LOCATION MAP

MARILLA STREET LANDFILL PERIODIC REVIEW REPORT

STEELFIELDS, LTD

CITY OF BUFFALO

ERIE COUNTY

NEW YORK

September 2016

SCALE: NOT TO SCALE

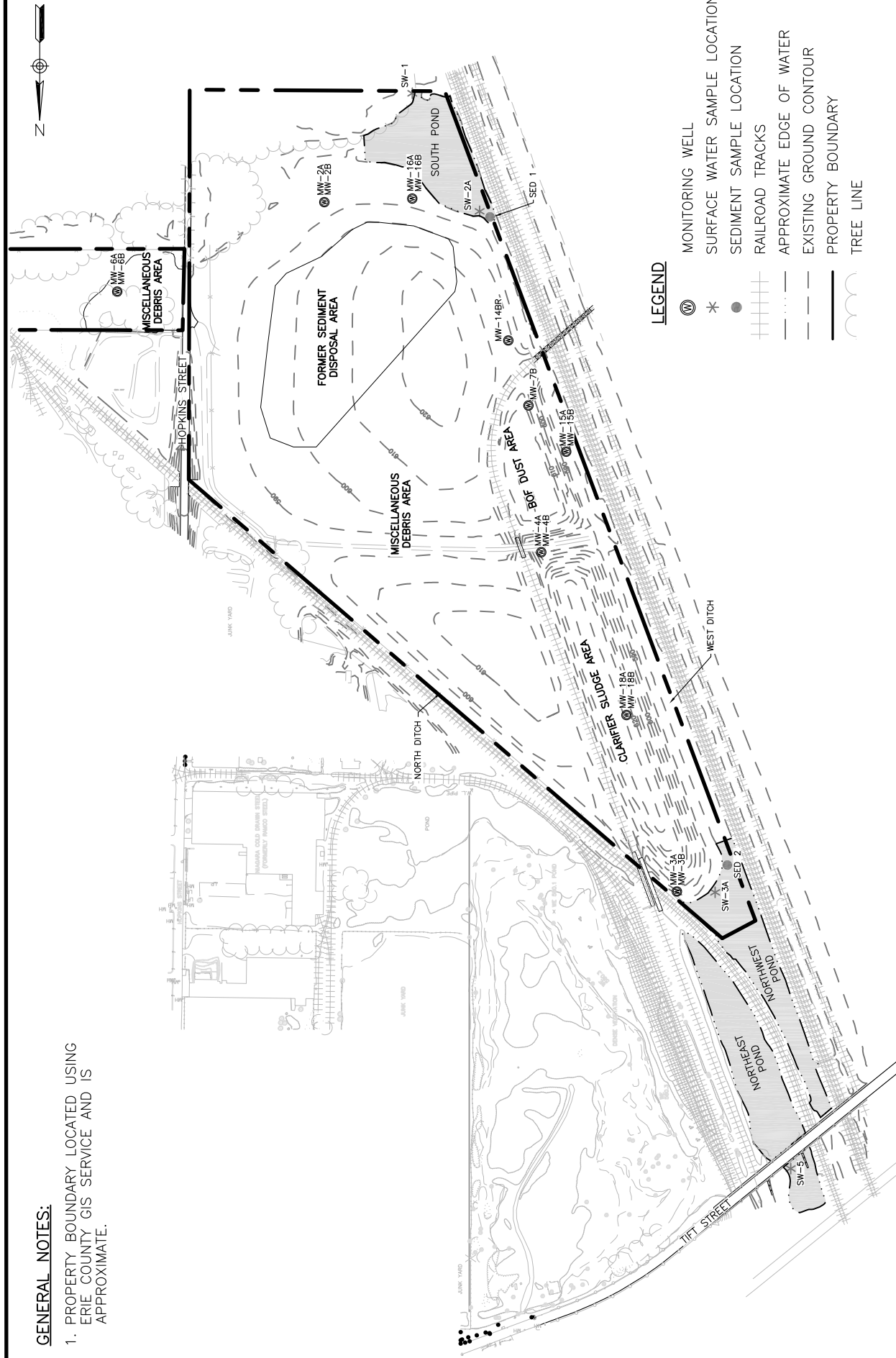
REVISION # 0

**FIGURE**  
**1**



**GENERAL NOTES:**

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





## **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. The SMP specifies 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 beginning with this event. The approximate sampling locations are shown on Figure 2.

Sampling procedures, including collection and preservation, were completed in general accordance with the SMP for the 2016 sampling event between August 22<sup>nd</sup> and 28<sup>th</sup>. 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 and sediment 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 method 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 22<sup>nd</sup>, 23<sup>rd</sup> and 25<sup>th</sup>, 2016 at the four locations as described above. A blind duplicate (SW Blind Dup) was collected at SW-2A. 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 B. 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. Surface water samples collected at SW-5 only demonstrated turbidity readings greater than 50 NTU. However, all surface water samples were filtered in the field and analyzed for soluble metals to facilitate increasing trends in groundwater wells as suggested in the 2013 Periodic Review Report, December 2013 (Daigler Engineering, PC). A summary of the analytical results are provided in Table 3 of Appendix A. Analytical reports and chain of custody forms are provided in Appendix C.

### **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 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. There were no locations where total iron was detected below the Class D standard this year. The background surface water sampling location, SW-1, is typically high in total iron concentration and appears to be on an upward trend. This result is supported by the intra-location maximum measured during this year's sampling event which is nearly 1.4 times greater than the previously recorded maximum in May 2012. Total iron has been decreasing at

all downgradient locations as can be seen in the moving average trend analyses for surface water presented in Appendix H. Therefore, the source of iron contributing to the exceedances measured onsite appears to be from an undetermined upstream location.

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. Following last year's intra-location minima in total iron and total manganese at SW-2A, both parameters rebounded but continued to be lower than the geometric mean for the available data set this year. Total organic carbon at all three downgradient surface water sampling locations were intra-location maxima during this year's sampling event. The concentration of total organic carbon upgradient at SW-1 was the second highest recorded at this location. With these elevated values, trending at SW-1, SW-2A, and SW-3A continued upward with respect to total organic carbon. Trending in total organic carbon at SW-5 was decreasing last year, however, with the intra-location maximum, SW-5 is now observed with a slight increasing trending as shown in the moving average trend analyses presented in Appendix H. All other surface water results were typical.

## **2.3 SEDIMENT**

Sediment samples are collected once every three years within the remediated wetland areas. Two sediment samples are to be collected from the following locations and analyzed for the parameters listed in Table 1:

- **SED 1** – South Pond near inlet to West Ditch; and,
- **SED 2** – Southern end of Northwest Pond (near outlet of West Ditch).

Sediment samples were collected on August 22<sup>nd</sup> and August 25<sup>th</sup>, 2016 at the two locations listed above with a blind duplicate (SED-DUP) collected at SED 2. Matrix spike and matrix spike duplicate samples were also collected at SED 2. A summary of the analytical results are provided in Table 3 in Appendix A. Laboratory analyses and chain of custody forms are included in Appendix C.

### **2.3.1 Sediment Quality Analysis**

Chromium concentrations continued to level out this year after elevated concentrations were detected at SED 1 in 2012 and 2013. Both SED 1 and SED 2 were at similar concentrations this year (21.8 mg/kg and 21.3 mg/kg, respectively). The relative percent difference between SED 2 and the blind duplicate for total chromium and total manganese were 36% and 79%, respectively, with the concentration in the blind duplicate the higher result in both cases. As such, the concentrations of these two parameters in SED 2 should be considered a usable estimate with the true concentration possibly higher than reported. Since total chromium is generally not detected in the surface water across the site, this continued decrease suggests an end to elevated chromium levels. Total recoverable phenolics (TRP) at both sediment sampling locations was not detected during this sampling event, consistent with the low levels measured in surface water samples. Total cadmium was also not detected.

Specific conductivity and pH were recorded for both sediment sampling locations this year. The pH results were mildly basic but were less than the pH results recorded in 2012. Conversely, specific conductivity was higher this year by more than an order of magnitude. The conductivity and pH were consistent with the measurements recorded in the surface water. Total lead and total manganese concentrations at both sediment sampling locations were the lowest on record for the available data set this year.

SED 2 reportedly had an increasing trend with respect to total iron based on previous sampling events. This year's result, while still elevated, is inconsistent with an increasing trend as the concentration was lower than observed during the last two sampling events. The elevated total iron concentrations for both sediment sampling locations are consistent with elevated levels of total iron at all four surface water locations. Concentrations of total arsenic were intra-location minima at SED 1 and SED 2. Arsenic was 2.4 times higher at SED 1 compared to SED 2 which is consistent with historic data.

NYSDEC Subpart 375-6: Remedial Program Soil Cleanup Objectives (SCO) offers a comparison for the concentrations of total arsenic, cadmium, chromium, lead, and manganese to the concentrations found in the sediment at the site<sup>1</sup>. Total arsenic, cadmium, lead, and

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<sup>1</sup> There is no SCO for iron.

manganese concentrations found at SED 1 and SED 2 were less than the unrestricted use SCO. That is, the site would require no use restrictions for the protection of public health, groundwater, and ecological resources. Chromium levels hovered just below the residential use concentrations for hexavalent chromium (22 mg/L) at SED 1 and SED 2. However, both sediment samples were below the residential use concentration for trivalent chromium (36 mg/L) and the measured concentrations are for total chromium. Further, both concentrations are well below the *restricted* residential use and commercial use SCO for the more stringent hexavalent chromium (110 mg/L and 400 mg/L, respectively). Based on this comparison to SCO concentrations, the total metals concentrations detected at the two sediment sampling locations are still at relatively low levels for all parameters.

## 2.4 GROUNDWATER

In following with the 2015 approved modifications to monitoring requirements, groundwater at the site is monitored on an annual basis for the parameters listed in Table 1 at nine 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-14BR, 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 22<sup>th</sup> and 28<sup>th</sup>, 2016. A photoionization detector was used to measure organic vapors from each well once the cover was unlocked and removed. All wells were recorded less than 5 ppm. Depth to groundwater was measured in 15 of the 16 wells, with the one exception discussed below. Following static groundwater measurement, the wells were purged and sampled using dedicated polyethylene bailers per the

requirements in the SMP. Samples from monitoring wells MW-2A and MW-6A were collected by running disposable plastic tubing down the well and pushing up on a foot valve. Water collected through the tubing was conveyed to a decontaminated container, then poured into laboratory supplied sample bottles. While purging, the groundwater was field tested for temperature, pH, conductivity, and turbidity and recorded on the field observation sheets shown in Appendix B. Just prior to the well becoming dry or after purging four well volumes, field parameters were recorded on the field observation sheets. Field parameters were not recorded for the sample itself. Field data are summarized in Table 2. Groundwater samples were preserved for analysis in laboratory provided containers.

The dedicated bailer could not be retrieved from MW-14BR. The well had a new protective casing but the PVC well casing for MW-14BR appeared to be damaged. The water level meter probe was obstructed and the water surface could not be reached. Consequently, no water elevation data or water quality samples were obtained from MW-14BR. Inspection of the conditions in this well is discussed further in Section 2.5.

Samples collected from five wells, MW-2B, MW-3A, MW-3B, MW-4A, and MW-18A, 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. MW-4B was measured at nearly 50 NTU (48.2 NTU) and described as cloudy with black particles. The samples from this well were also analyzed for soluble metals. The background monitoring wells MW-6A and MW-6B were also field filtered and tested for soluble metals for moving average trend analysis (MATA) purposes even though their turbidity readings were less than 50 NTU. A blind duplicate (GW-DUP) was collected from MW-16B and the matrix spike/matrix spike duplicate was performed on MW-2B for inorganic parameters, on MW-16B and MW-4B for total organic carbon (TOC), MW-18A for total cyanide, and MW-6B for TRP. Analytical reports prepared by ALS and chain of custody forms are provided in Appendix C. A discussion and evaluation of the results are presented herein.

#### **2.4.1 Groundwater Levels and Site Hydrogeology**

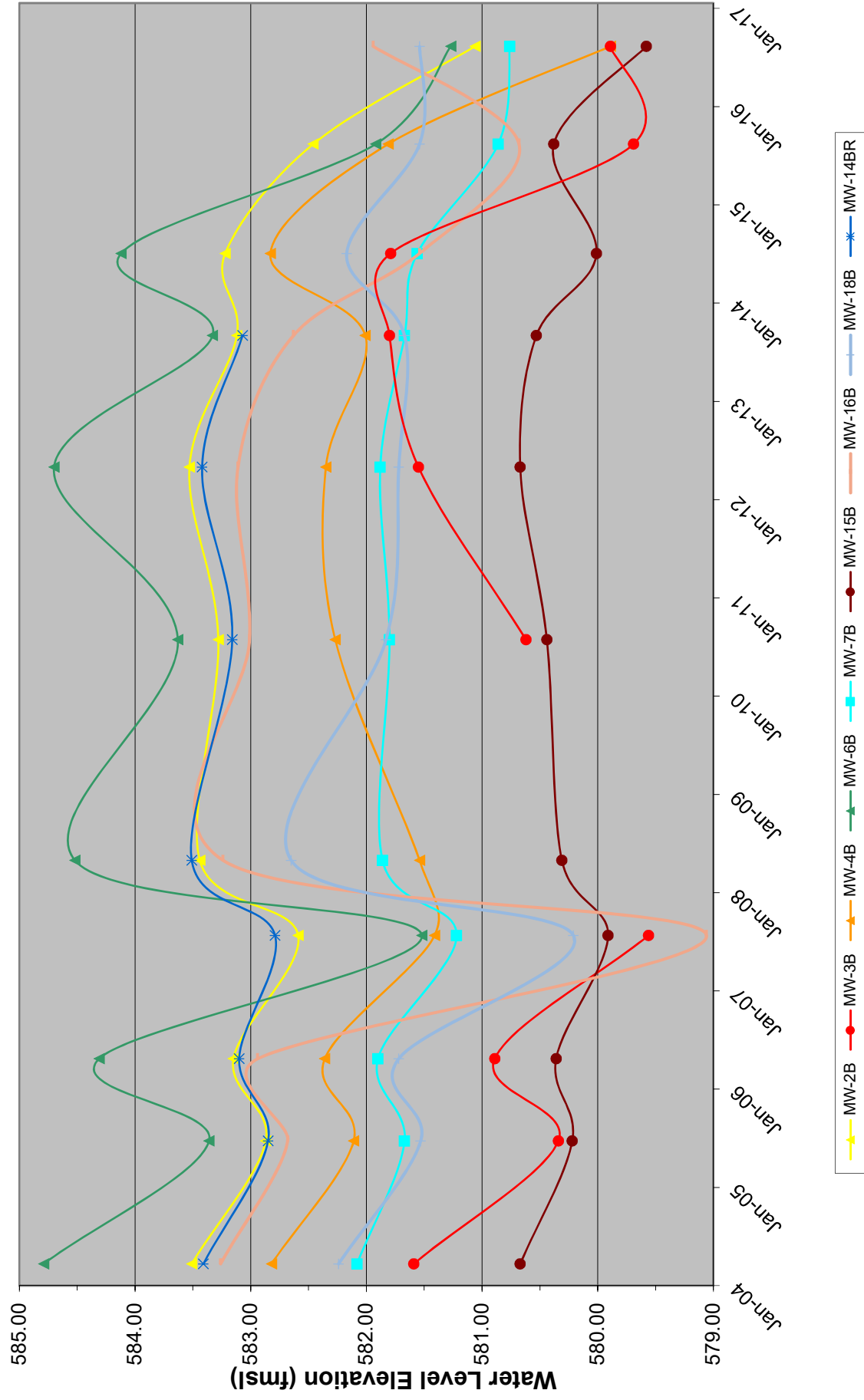
Groundwater elevation data was gathered from eight of the nine shallow overburden wells as summarized in Tables 4A and 4B and for the seven deep overburden wells as summarized in

Tables 5A and 5B 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 B.

A plot illustrating the groundwater elevations of each monitoring well is presented in Figures 3 and 4 for the shallow and deep groundwater elevations, respectively. Groundwater elevations were relatively low during this year's sampling event, with 73% of the elevations recorded at intrawell minima levels. The exceptions (MW-3B, MW-4A, MW-6A, and MW-16B) were also relatively low and measured less than the average during this sampling event. This is consistent with the exceptions given the severe drought conditions experienced by the entire region this year.

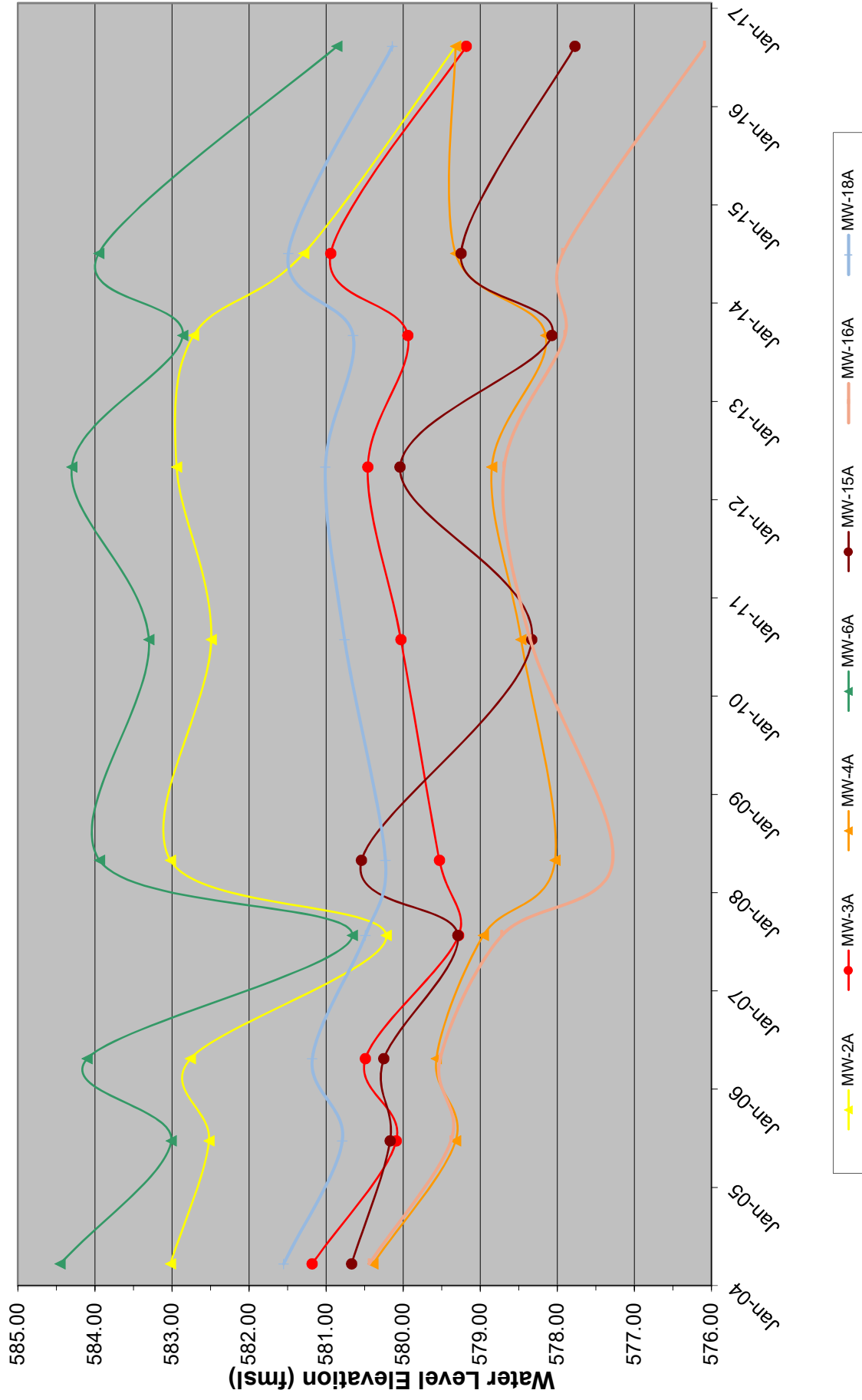


**FIGURE 3**  
Marilla Street Landfill  
August 2016 Annual Sampling Event  
Summary of Historical Groundwater Elevations for Shallow Overburden Wells





**FIGURE 4**  
 Marilla Street Landfill  
 August 2016 Annual Sampling Event  
**Summary of Historical Groundwater Elevations for Deep Overburden Wells**





## **2.4.2 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.

### **2.4.2.1 Comparison of Water Quality to Standards and Guidance Values**

Values from the annual samples of 2016 were compared to the 6 NYCRR Part 703 GA standards as shown in Tables 6 and 7 of Appendix A for the shallow and deep overburden wells, respectively. 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 total dissolved solids (TDS), total iron, and total manganese occurred in wells both up and downgradient of the site. Many of the shallow overburden downgradient monitoring wells also regularly exceed the upper limit of the pH standard. The standard of 1.0 ug/L for total recoverable phenolics (TRP) was also exceeded in many of the shallow wells but less than the detection limit in all deep 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 two parameters. Also of note are the high detection limits for VOCs in MW-15B. According to the laboratory, foaming in these samples required them to be diluted before analysis resulting in the relatively high detection limits.

Exceedances of the Class GA standard for total arsenic, chromium, and lead were measured at MW-3B. Deep overburden wells MW-2A and MW-3A also experienced exceedances of the Class GA standard with respect to these three parameters; however, they are paralleled by the same exceedances in the upgradient deep overburden well MW-6A. Other less widespread exceedances of groundwater standards or guidance values during 2016 include the following:

- pH in MW-3A;
- Total lead in MW-18A;
- Total arsenic in MW-15B;
- Acetone in MW-3B;
- Trichloroethene in MW-16B.

These exceedances are generally consistent with data from previous sampling events.

#### 2.4.2.2 Comparison of Water Quality to Background Mean Concentration

BMCs and BMC+3SDs were calculated using results from all available events for background monitoring wells MW-6A and MW-6B as shown in Appendix D and E. The results were incorporated into Tables 6 and 7, 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 and in Appendix G for the deep overburden wells.

Table 8 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 or deep overburden wells are compared to trending in the background water quality in their respective upgradient monitoring wells 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 TOC were the most prevalent found in four downgradient shallow wells (MW-3B, MW-14BR, MW-15B, and MW-16B), and four downgradient deeps wells (MW-3A, MW-4A, MW-15A, and MW-18A). Four downgradient shallow wells and one downgradient deep well exhibited increasing trends in TDS (MW-3B, MW-14BR, MW-15B, and MW-18A). Total iron and total manganese were increasing at three deep downgradient wells each (MW-2A, MW-4A, and MW-16A for total iron and MW-3A, MW-3B, and MW-18B for total manganese). Two locations each of increasing trends in total arsenic (MW-3B and MW-15B) and specific conductance (MW-15B and MW-18A) were also identified. TRP and pH were increasing at

MW-15B, and soluble manganese and soluble iron were increasing at MW-18A. Generally, increasing trends were paralleled by an increasing trend in the upgradient wells MW-6B and MW-6A with the exception of total arsenic in shallow wells MW-3B and MW-15B, conductivity and pH in MW-15B, and conductivity and TDS in MW-18A. 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.

Regression Analysis on total arsenic for well MW-3B shows that the data are reasonably well fit with a linear trend ( $R^2=0.86$ ) and the increasing trend is statistically significant at the 99% confidence level. However, the regression analysis on the data for MW-15B suggests the trend may be weakening as the confidence in the statistical significance of the increasing trend has decreased with the addition of the 2016 data. That is, the increasing trend at MW-15B no longer remains statistically significant at the 99% confidence level as it was in 2015; however, the increasing trend does remain significant at the 95% confidence level since the 95% confidence interval around the slope of the linear regression ( $R^2=0.5$ ) does not include zero. Conversely, the total arsenic concentration in MW-6B has been lower than the detection limit since 1997. 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. This is the first year that MATA for total arsenic in surface water can be performed and subsequent comparisons to the observed increasing trend in downgradient groundwater can be made. A discussion of the comparison is provided in the next section.

The increasing trend in specific conductivity in MW-15B is insignificant at the 95% confidence level and the data are not well fit by linear regression ( $R^2=0.097$ ). Similarly, the decreasing trend in specific conductivity in MW-6B is insignificant at the 95% confidence level and the data are not well fit by linear regression ( $R^2=0.195$ ). This trend is not of concern.

Evaluation of trending in pH at MW-15B must begin this year with the fifth tracked event. The increasing trend is not consistent with upgradient groundwater at MW-6B. 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. As such,

once additional data is available for pH, statistical analyses will be performed to ascertain the significance of the observed trending in MW-15B.

Sampling and analysis of groundwater samples from MW-18A were last evaluated during the 2014 sampling event. The increasing trends in TDS and specific conductivity at this well in 2014 were both insignificant at the 95% confidence level and the low  $R^2$  values indicated the data were not well fit by linear regression. These conclusions hold true when the 2016 results are included in the statistical analyses. For comparison, upgradient well MW-6A is observed with decreasing trends in both TDS and specific conductivity. The linear regression on conductivity at MW-6A shows the decreasing trend is significant at the 99% confidence level. The slight decreasing trend observed in TDS at this upgradient well is insignificant at the 95% confidence level. Despite the opposing trends found in the upgradient well, the increasing trends in TDS and specific conductivity at the deep overburden well MW-18A are not cause for concern given their statistical insignificance.

MW-18A also experienced increasing trends in soluble iron and soluble manganese which were both paralleled by statistically significant increasing trends in upgradient groundwater in MW-6A at the 95% confidence level. Therefore, upgradient groundwater may be driving downgradient water quality with respect to increases in soluble iron and soluble manganese. The comparison of these parameters to the concentrations detected in surface water is not possible until two additional sampling events occur.

Total iron concentrations in the deep overburden wells experiencing increasing trends (MW-2A and MW-4A) were elevated this year compared to 2013 when they were last sampled. MW-16A was also increasing with respect to total iron. This year's result was less than the previous two years; however, the result remains one of the higher concentrations recorded at this sampling location. The elevated concentrations are likely a direct result to the corresponding elevated concentration observed at upgradient groundwater well MW-6A this year.

#### 2.4.2.3 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 H. The

results were incorporated into Table 8, where appropriate, and trending was compared to the results from the current monitoring period.

Historically surface water MATA had only been performed on pH, specific conductance, TOC, total iron, and total manganese and comparisons could not be made with the monitoring wells exhibiting increasing trends in other parameters, namely total arsenic, TDS, and TRP, since five data points minimum are necessary to begin MATA. With the results of the 2016 sampling event, five surface water data points have been assembled for these three parameters, and comparisons can be made with the monitoring wells exhibiting increasing trends, specifically MW-3B and MW-15B for total arsenic and TDS, MW-18A for TDS, and MW-15B for TRP.

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 H for the surface water sampling locations show a higher moving average concentration this year than last; however, this is a result of the detection limit in May 2012 being 0.004 mg/L and the last four detection limits at 0.010 mg/L. As such, a graph is not provided for total arsenic and it is presumed that there are no corresponding increasing trends for the surface water (Table 8) with respect to arsenic. The trending in total arsenic at MW-3B and MW-15B does not appear to be migrating to the onsite surface water.

TDS at all four surface water sampling locations exhibit corresponding increasing trends to those in MW-3B and MW-15B, as well as, at deep overburden well MW-18A. The relatively elevated result for TDS again this year (1,680 mg/L) at MW-15B reversed the trend at this well which has not been increasing since May 2008. However, the trending in MW-15B for each sampling event between 2007 and 2016 are insignificant at the 95% confidence level given the inclusion of zero in the 95% confidence interval around the slope of the linear regression. The trends at both MW-3B and MW-18A are also insignificant. The surface water 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.

Generally, TRP has been less than the detection limit at all four surface water sampling locations since May 2012. However, the 2016 sampling event revealed unusual detections slightly greater than the TRP detection limit of 0.005 mg/L at three of the four surface water sampling locations,

namely SW-1 (0.0072 mg/L), SW-2A (0.0061 mg/L), and SW-5 (0.0061 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 but an increasing trend is noted in Table 8 with a footnote. Upgradient monitoring well MW-6B shows apparent increasing trends 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. Since concentrations of the TRP in the upgradient surface water sample (SW-1) are the highest it is most likely that the downgradient detections in surface water originated from offsite. However, concentrations of TRP in the shallow overburden wells both up and downgradient 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 possible, but inconclusive from the available data since statistical significance cannot be evaluated based on the two available data points for MW-15B and the surface water. Therefore, this parallel increasing trend in MW-15B to surface water will be evaluated for statistical significance when additional data is available.

Total organic carbon, which demonstrates increasing trends in the downgradient couplets MW-3 and MW-15, shallow overburden well MW-16B, and deep overburden wells MW-4A and MW-18A, was elevated across the site in the groundwater and surface water this year with 74% of the sampling locations experiencing intra-location maxima or the second highest concentration on record for that location.<sup>2</sup> Elevated concentrations may be due to the severe drought conditions experienced across the entire region, which limited recharge. The increasing trends at the MW-3 couplet were insignificant at the 95% confidence level, as the interval contained zero around the slope. The past three years, decreasing trends were observed at MW-3B; however, due to an unusually elevated TOC concentration (475 mg/L), the MATA trending reversed this year. Conversely, statistically significant results are evident with at least 95% confidence for the MW-15 couplet, MW-16B, MW-4A, and MW-18A. Corresponding increasing trends at all surface water sampling locations are evident, as identified in Table 8. The statistically insignificant decreasing trend observed at SW-5 in 2015 reversed again this year, but remains statistically

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<sup>2</sup> MW-14BR which also exhibited an increasing trend in TOC is excluded from this discussion since trending could not be updated due to lack of sample data from the past three years.

insignificant at the 95% confidence level. Linear regression on the data from the other three 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 (0.74 and 0.68, respectively). The positive trending at upstream surface water location SW-1 is not statistically significant and the  $R^2$  value is relatively low (0.25) indicating a poor fit of the data to linear regression. A look at the underlying data reveals a spike in the TOC concentration at this upgradient location in 2010 biased the average for the four years it was included in the moving average which throws off the MATA. Upgradient wells MW-6B and MW-6A also demonstrated statistically significant increasing trends at the 95% confidence level in TOC, albeit a relatively weak fit of the data ( $R^2=0.33$  and  $R^2=0.34$ , 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.

The observed positive trending in total manganese at MW-3B continued this year and is paralleled by an increasing trend at MW-6B. Both trends are statistically significant at the 99% confidence level with a relatively good linear fit of the data ( $R^2=0.79$  for MW-3B and  $R^2=0.89$  for MW-6B). This well's deeper counterpart, MW-3A, is observed with an increasing trend in total manganese, yet linear regression on the moving average data is statistically insignificant at the 95% confidence level with a relatively poor fit of the data ( $R^2=0.11$ ). Total manganese in the upstream surface water sampling location has an increasing trend but is insignificant and the linear regression poorly fits the data ( $R^2=0.27$ ). The increasing trend observed at the most downstream surface water sampling point is also insignificant with a poor linear fit of the data ( $R^2=0.05$ ). Regression analysis on the decreasing trends in the centrally located surface water sampling locations (SW-2A and SW-3A) shows the linear fit of the data is very strong ( $R^2=0.88$  and  $0.91$  for SW-2A and SW-3A, respectively) and the trends are statistically significant at the 99% confidence interval. While the actual concentrations of total manganese at MW-3B are nearly double that of the upgradient groundwater, the increasing trend in this downgradient location may be supported by the increasing trend from upgradient; however, the groundwater trending does not appear to be influencing surface water.

## **2.5 POST-CLOSURE SITE INSPECTION AND MAINTENANCE**

Landfill cap vegetation was mowed during the week of August 15<sup>th</sup> to facilitate groundwater and surface water sampling the week of August 22, 2016, and the annual post-closure site inspection was conducted on October 4, 2015.

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 Post-Closure Inspection Report and photographs included in Appendix G, the landfill cap, vegetation, and drainage features were observed to be in very good condition. One man-made breach was observed in the perimeter fence in the location labelled "Deer Gate" (see Site Plan in Appendix G). This opening is directly on a whitetail deer run, with no sign of vehicular or foot traffic through this small opening. No evidence of any cover disturbance due to burrowing rodents, and no sign of these burrowing animals was found. A thick, vigorous, healthy vegetative cover was observed across the entire cap. No unauthorized dumping or refuse disposal was observed on the cap.

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

## **2.6 LABORATORY QUALITY ASSURANCE/QUALITY CONTROL**

All samples were collected with the goal of obtaining representative samples of their respective media. Case narratives prepared by ALS are included with each laboratory report in Appendix C 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 reportedly successful.

Percent completeness was calculated for each media. Groundwater, surface water, and sediment were calculated to be 94.8%, 100%, and 100% complete, respectively.

## **2.7 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 emailed 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, surface water, and sediment quality for the 2016 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 higher concentrations compared to upgradient and upstream locations. This remains true again this year.

Moving average trend analysis for TDS, TRP, and total arsenic in the surface water reached five tracked events with this year's sampling event. As such, comparisons were made to monitoring wells with increasing trends with respect to TDS (MW-3B, MW-15B, and MW-18A), TRP (MW-15B), and total arsenic (MW-3B and MW-15B) and regression analysis was performed to determine the significance of observed increasing trends in the data. Only the increasing trends in total arsenic were found to be statistically significant and not observed in the upgradient wells. Concentrations of total arsenic in upgradient well MW-6B have been below the detection limit since 1997. However, the trending appears to be weakening at these two wells with linear regression producing a shallower slope this year for both MW-3B and MW-15B data. Only two moving averages for the surface water locations provide limited insight. With additional data points, future results will better identify the statistical significance of the trending in surface water with respect to total arsenic, as well as, TDS and TRP.

Total manganese concentration is increasing in MW-3B, as well as, in the upgradient water quality at MW-6B. However, surface water monitoring locations do not appear to be influenced by this trend.

Trending at MW-15B for pH began this year with the fifth tracked parameter. Based on the two moving averages, an increasing trend is observed, and is not consistent with upgradient water quality, or other shallow overburden wells where pH has been tracked in the past. According to the SMP, trending is to be evaluated with statistical analyses after a linear trend line has been plotted for *several* sampling events. Future sampling events will help identify the statistical significance of the increasing trend in pH observed at MW-15B.

Total organic carbon concentrations were elevated across the site this year with 74% of the samples for groundwater and surface water intra-location maxima or the second highest on record. The elevated concentrations may be caused or exacerbated by the severe drought conditions. The increasing trends in TOC at the MW-15 couplet, MW-16B and MW-18A were determined to be significant. Upgradient groundwater quality and surface water have a similar upward trend.

Concentrations of total lead and total manganese at SED 1 and SED 2 were the lowest on record which supports the decreasing trend observed for these two parameters. Further, chromium detections continued to level out this year after elevated concentrations were detected at SED 1 in 2012 and 2013. Similar concentrations were detected at SED 1 and SED 2, and signifies an end to elevated chromium levels, further supported by all surface water sampling locations less than the detection limit. Total arsenic was detected at intra-location minima, and total iron concentrations were consistent with those detected in the surface water. Sediment parameters were compared to NYSDEC's SCOs. The comparisons suggested restricted residential use is appropriate based on chromium concentrations and unrestricted use based on the concentrations of arsenic, cadmium, lead, and manganese.

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.



## **APPENDIX A**

# **Summary Tables**



**TABLE 1**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Groundwater, Surface Water, and Sediment Analytical Parameters**

|                                                    | Analysis Method <sup>(3)</sup> | Groundwater | Surface Water <sup>(2)</sup> | Sediment |
|----------------------------------------------------|--------------------------------|-------------|------------------------------|----------|
| <b>FIELD PARAMETERS</b>                            |                                |             |                              |          |
| Static Water Level                                 | Field                          | X           | NA                           | NA       |
| pH                                                 | Field                          | X           | X                            | X        |
| Temperature                                        | Field                          | X           | X                            | X        |
| Specific Conductance                               | Field                          | X           | X                            | X        |
| Turbidity                                          | Field                          | X           | X                            | NA       |
| <b>WET CHEMISTRY</b>                               |                                |             |                              |          |
| Total Organic Carbon (TOC)                         | SM 5310 B                      | X           | X                            | NA       |
| Total Dissolved Solids (TDS)                       | SM 2540 C                      | X           | X                            | NA       |
| Total Recoverable Phenolics (TRP)                  | 420.4 / 9066 <sup>(4)</sup>    | X           | X                            | X        |
| <b>METALS - INORGANIC PARAMETERS<sup>(1)</sup></b> |                                |             |                              |          |
| Arsenic - Total and Soluble                        | 6010C                          | X           | X                            | X        |
| Cadmium - Total                                    | 6010C                          | NA          | NA                           | X        |
| Chromium - Total and Soluble                       | 6010C                          | X           | X                            | X        |
| Cyanide - Total                                    | 335.4                          | X           | X                            | NA       |
| Iron - Total and Soluble                           | 6010C                          | X           | X                            | X        |
| Lead - Total and Soluble                           | 6010C                          | X           | X                            | X        |
| Manganese - Total and Soluble                      | 6010C                          | X           | X                            | X        |
| <b>Volatile Organic Compounds (VOCs)</b>           |                                |             |                              |          |
| TCL Method 8260B                                   | 8260C                          | X           | X                            | NA       |

Notes:

- (1) - Groundwater and surface water samples collected for inorganic analysis are field-filtered and analyzed for soluble 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 method equivalent to those in the Site Management Plan.
- (4) - Laboratory analysis method for sediment

|           |                                                                                                                         |
|-----------|-------------------------------------------------------------------------------------------------------------------------|
| <b>NA</b> | 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 |
| <b>X</b>  | Parameters required by the Post-Closure Maintenance and Monitoring Plan and analyzed for during this sampling event     |

**TABLE 2**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Summary of Monitoring Field Measurements**

| Location                 | Sampling Date | Sampling Time | pH (units) | Temperature (°C) | Specific Conductance (Umhos/cm) | Turbidity (NTU) |
|--------------------------|---------------|---------------|------------|------------------|---------------------------------|-----------------|
| MW-2A <sup>(1)</sup>     | 8/26/2016     | 9:00          | 8.42       | 18.0             | 0.62                            | Note 2          |
| MW-2B <sup>(1)(3)</sup>  | 8/22/2016     | 12:50         | 12.4       | 19.0             | 0.81                            | 675             |
| MW-3A <sup>(1)(3)</sup>  | 8/23/2016     | 16:15         | 10.20      | 20.8             | 1.75                            | 2,252           |
| MW-3B <sup>(1)(3)</sup>  | 8/23/2016     | 16:05         | 7.42       | 16.8             | 1.73                            | 1,911           |
| MW-4A <sup>(1)</sup>     | 8/25/2016     | 12:30         | 8.40       | 17.0             | 0.58                            | 65.6            |
| MW-4B                    | 8/25/2016     | 12:05         | 8.44       | 17.3             | 0.78                            | 48.2            |
| MW-6A <sup>(3)</sup>     | 8/28/2016     | 11:28         | 7.90       | 17.9             | 1.01                            | 1157            |
| MW-6B                    | 8/23/2016     | 13:30         | 7.29       | 20.1             | 1.33                            | 13.7            |
| MW-7B                    | 8/22/2016     | 14:24         | 12.90      | 17.4             | 2.94                            | 20.0            |
| MW-14BR <sup>(4)</sup>   |               |               |            |                  |                                 |                 |
| MW-15A                   | 8/25/2016     | 14:46         | 7.32       | 15.2             | 0.84                            | 6.14            |
| MW-15B                   | 8/25/2016     | 14:00         | 13.56      | 18.0             | 4.06                            | 19.6            |
| MW-16A                   | 8/23/2016     | 11:56         | 7.31       | 17.5             | 1.11                            | 9.39            |
| MW-16B                   | 8/22/2016     | 10:08         | 12.87      | 17.1             | 1.77                            | 6.25            |
| MW-18A <sup>(1)(3)</sup> | 8/22/2016     | 16:50         | 7.27       | 15.1             | 2.55                            | 947             |
| MW-18B                   | 8/22/2016     | 15:40         | 8.29       | 14.5             | 3.03                            | 7.43            |
| SW-1                     | 8/23/2016     | 9:45          | 7.36       | 23.0             | 1.23                            | 12.7            |
| SW-2A                    | 8/22/2016     | 11:00         | 7.48       | 24.8             | 1.36                            | 6.71            |
| SW-3A                    | 8/25/2016     | 9:25          | 8.28       | 24.0             | 1.21                            | 11.99           |
| SW-5                     | 8/23/2016     | 9:00          | 9.11       | 21.9             | 1.79                            | 72              |
| SED 1                    | 8/22/2016     | 11:55         | 7.45       | 24.5             | 1.18                            | -               |
| SED 2                    | 8/25/2016     | 10:10         | 8.29       | 24.9             | 1.15                            | -               |

Notes:

- (1) - Sample was field filtered for soluble metals since turbidity measured greater than 50 NTU.
- (2) - Turbidity recorded as "overage" on Field Observation Form, reported as "milky gray" in color.
- (3) - Turbidity measured in attenuation units (AU), which is directly comparable to NTU.
- (4) - Unable to retrieve dedicated polyethylene bailer. Well casing appeared to be damaged.

TABLE 3  
Marilla Street Landfill  
August 2016 Annual Sampling Event  
Summary of Surface Water and Sediment Analytical Results

| Parameter                                                  | SW-1    | SW-2A   | SW-3A    | SW-5    | Blind Duplicate #2 <sup>(3)</sup><br>(SW DUP) | Class "D"<br>Standard <sup>(1)/(2)</sup> | SED-1 <sup>(4)</sup> | SED-2 <sup>(4)</sup> | Blind Duplicate #3 <sup>(3)/(4)</sup><br>(SED-DUP) |
|------------------------------------------------------------|---------|---------|----------|---------|-----------------------------------------------|------------------------------------------|----------------------|----------------------|----------------------------------------------------|
| WATER QUALITY (mg/L or as indicated)                       |         |         |          |         |                                               |                                          |                      |                      |                                                    |
| pH (units)                                                 | 7.36    | 7.48    | 8.28     | 9.11    | 7.48                                          | 6.0-9.5                                  | 7.45                 | 8.29                 | 8.29                                               |
| Specific Conductance (Umhos/cm)                            | 1.23    | 1.36    | 1.21     | 1.79    | 1.36                                          | NA                                       | 1.18                 | 1.15                 | 1.15                                               |
| Total Organic Carbon                                       | 13.2    | 12.5    | 10.6     | 12.4    | 12.9                                          | NA                                       | NA                   | NA                   | NA                                                 |
| Total Dissolved Solids                                     | 738     | 626     | 654      | 1010    | 635                                           | NA                                       | NA                   | NA                   | NA                                                 |
| Total Recoverable Phenolics                                | 0.0072  | 0.0061  | 0.0050 U | 0.0061  | 0.0061                                        | NA                                       | 0.15 U               | 0.12 U               | 0.12 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                                        | NA                                       | 6.7                  | 2.9                  | 2.2                                                |
| Cadmium                                                    | NA      | NA      | NA       | NA      | NA                                            | NA                                       | 0.74 U               | 0.57 U               | 0.59 U                                             |
| Chromium                                                   | 0.01 U  | 0.01 U  | 0.01 U   | 0.01 U  | 0.01 U                                        | NA                                       | 21.8                 | 21.3                 | 28.9                                               |
| Cyanide                                                    | 0.010 U | 0.010 U | 0.010 U  | 0.010 U | 0.010 U                                       | 0.022                                    | NA                   | NA                   | NA                                                 |
| Iron                                                       | 2.27    | 0.870   | 0.770    | 1.48    | 0.890                                         | 0.3                                      | 29,600               | 18,500               | 16,500                                             |
| Lead                                                       | 0.05 U  | 0.05 U  | 0.05 U   | 0.05 U  | 0.05 U                                        | NA                                       | 14.3                 | 21.8                 | 20.0                                               |
| Manganese                                                  | 0.657   | 0.080   | 0.159    | 0.079   | 0.079                                         | NA                                       | 441                  | 591                  | 1,060                                              |
| SOLUBLE METALS - INORGANIC PARAMETERS (mg/L)               |         |         |          |         |                                               |                                          |                      |                      |                                                    |
| Arsenic                                                    | 0.01 U  | 0.01 U  | 0.01 U   | 0.01 U  | 0.01 U                                        | 0.34                                     | NA                   | NA                   | NA                                                 |
| Chromium                                                   | 0.01 U  | 0.01 U  | 0.01 U   | 0.01 U  | 0.01 U                                        | H                                        | NA                   | NA                   | NA                                                 |
| Iron                                                       | 0.11    | 0.1 U   | 0.1 U    | 0.1 U   | 0.1 U                                         | NA                                       | NA                   | NA                   | NA                                                 |
| Lead                                                       | 0.05 U  | 0.05 U  | 0.05 U   | 0.05 U  | 0.05 U                                        | H                                        | NA                   | NA                   | NA                                                 |
| Manganese                                                  | 0.635   | 0.047   | 0.031    | 0.01 U  | 0.047                                         | NA                                       | NA                   | NA                   | NA                                                 |
| VOLATILE ORGANIC COMPOUNDS (AQUEOUS) (µg/L)                |         |         |          |         |                                               |                                          |                      |                      |                                                    |
|                                                            | All U   | All U   | All U    | All U   | All U                                         | Variable                                 | NA                   | NA                   | NA                                                 |

Notes:

- (1) - Class "D" Surface Water Quality Standards/Guidance Value - 6 NYCRR Part 703; revised August 1999.
- (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-2A and Blind Duplicate #3 from SED-2.
- (4) - Presented in units of mg/Kg.
- (5) - "U" indicates a non-detect value at the detection level listed.
- (6) - "NA" indicates parameter not analyzed at this location or data is not available.
- #Exceeds Surface Water Quality Standard/Guidance Value.



**TABLE 4A**

## Marilla Street Landfill

## August 2016 Annual Sampling Event

**Summary of Historical Groundwater Depths of Shallow Overburden Wells<sup>(2)(6)</sup>**

| Well ID                        | MW-2B  | MW-3B <sup>(5)</sup> | MW-4B  | MW-6B  | MW-7B  | MW-14BR <sup>(4)</sup> | MW-15B | MW-16B | MW-18B |
|--------------------------------|--------|----------------------|--------|--------|--------|------------------------|--------|--------|--------|
| Riser Elevation <sup>(1)</sup> | 590.86 | 588.29               | 591.89 | 597.92 | 615.76 | 607.37                 | 586.78 | 588.09 | 627.04 |
| Year <sup>(3)</sup>            |        |                      |        |        |        |                        |        |        |        |
| Apr-04                         | 7.35   | 6.11                 | 9.07   | 13.13  | 33.68  | 23.96                  | 6.11   | 4.83   | 44.80  |
| Jul-05                         | 7.99   | 7.36                 | 9.78   | 14.56  | 34.09  | 24.52                  | 6.56   | 5.41   | 45.51  |
| May-06                         | 7.71   | 6.81                 | 9.53   | 13.61  | 33.86  | 24.27                  | 6.42   | 5.15   | 45.32  |
| Aug-07                         | 8.27   | 8.14                 | 10.48  | 16.40  | 34.54  | 24.58                  | 6.87   | 9.03   | 46.83  |
| May-08                         | 7.42   | Note 4               | 10.35  | 13.40  | 33.90  | 23.86                  | 6.47   | 4.85   | 44.39  |
| Aug-10                         | 7.58   | 7.67                 | 9.62   | 14.29  | 33.96  | 24.21                  | 6.34   | 5.08   | 45.21  |
| May-12                         | 7.33   | 6.74                 | 9.54   | 13.22  | 33.88  | 23.95                  | 6.11   | 4.98   | 45.32  |
| Sep-13                         | 7.74   | 6.49                 | 9.88   | 14.59  | 34.09  | 24.30                  | 6.25   | 5.46   | 45.37  |
| Jul-14                         | 7.64   | 6.50                 | 9.06   | 13.80  | 34.20  | Note 4                 | 6.77   | 6.55   | 44.87  |
| Aug-15                         | 8.40   | 8.60                 | 10.08  | 16.00  | 34.90  | Note 4                 | 6.40   | 7.41   | 45.50  |
| Aug-16                         | 9.80   | 8.40                 | 12.00  | 16.65  | 35.00  | Note 4                 | 7.20   | 6.15   | 45.50  |

**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) - MW-14BR damaged and not gauged since 2013.

(5) - 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.

(6) - 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 nine wells required for this year's sampling event are shown in this table.

**TABLE 4B**  
Marilla Street Landfill  
August 2016 Annual Sampling Event

**Summary of Historical Groundwater Elevations of Shallow Overburden Wells<sup>(5)</sup>**

| Well ID                        | MW-2B  | MW-3B <sup>(4)</sup> | MW-4B  | MW-6B  | MW-7B  | MW-14BR <sup>(3)</sup> | MW-15B | MW-16B | MW-18B |
|--------------------------------|--------|----------------------|--------|--------|--------|------------------------|--------|--------|--------|
| Riser Elevation <sup>(1)</sup> | 590.86 | 588.29               | 591.89 | 597.92 | 615.76 | 607.37                 | 586.78 | 588.09 | 627.04 |
| Year <sup>(2)</sup>            |        |                      |        |        |        |                        |        |        |        |
| Apr-04                         | 583.51 | 581.59               | 582.82 | 584.79 | 582.08 | 583.41                 | 580.67 | 583.26 | 582.24 |
| Jul-05                         | 582.87 | 580.34               | 582.11 | 583.36 | 581.67 | 582.85                 | 580.22 | 582.68 | 581.53 |
| May-06                         | 583.15 | 580.89               | 582.36 | 584.31 | 581.90 | 583.10                 | 580.36 | 582.94 | 581.72 |
| Aug-07                         | 582.59 | 579.56               | 581.41 | 581.52 | 581.22 | 582.79                 | 579.91 | 579.06 | 580.21 |
| May-08                         | 583.44 | Note 3               | 581.54 | 584.52 | 581.86 | 583.51                 | 580.31 | 583.24 | 582.65 |
| Aug-10                         | 583.28 | 580.62               | 582.27 | 583.63 | 581.80 | 583.16                 | 580.44 | 583.01 | 581.83 |
| May-12                         | 583.53 | 581.55               | 582.35 | 584.70 | 581.88 | 583.42                 | 580.67 | 583.11 | 581.72 |
| Sep-13                         | 583.12 | 581.80               | 582.01 | 583.33 | 581.67 | 583.07                 | 580.53 | 582.63 | 581.67 |
| Jul-14                         | 583.22 | 581.79               | 582.83 | 584.12 | 581.56 | Note 3                 | 580.01 | 581.54 | 582.17 |
| Aug-15                         | 582.46 | 579.69               | 581.81 | 581.92 | 580.86 | Note 3                 | 580.38 | 580.68 | 581.54 |
| Aug-16                         | 581.06 | 579.89               | 579.89 | 581.27 | 580.76 | Note 3                 | 579.58 | 581.94 | 581.54 |

**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) - MW-14BR damaged and not gauged since 2013.
- (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 nine wells required for this year's sampling event are shown in this table.

**TABLE 5A**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Summary of Historical Groundwater Depths of Deep Overburden Wells<sup>(2)(4)</sup>**

| Well ID                        | MW-2A  | MW-3A  | MW-4A  | MW-6A  | MW-15A | MW-16A | MW-18A |
|--------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Riser Elevation <sup>(1)</sup> | 591.02 | 587.18 | 591.82 | 597.66 | 586.97 | 588.59 | 627.54 |
| Year <sup>(3)</sup>            |        |        |        |        |        |        |        |
| Apr-04                         | 8.00   | 6.00   | 11.43  | 13.21  | 6.30   | 8.15   | 45.99  |
| Jul-05                         | 8.50   | 7.09   | 12.50  | 14.65  | 6.80   | 9.21   | 46.75  |
| May-06                         | 8.26   | 6.69   | 12.25  | 13.56  | 6.72   | 9.07   | 46.36  |
| Aug-07                         | 10.80  | 7.90   | 12.86  | 17.00  | 7.68   | 9.87   | 47.05  |
| May-08                         | 8.00   | 7.65   | 13.79  | 13.72  | 6.43   | 11.31  | 47.31  |
| Aug-10                         | 8.53   | 7.15   | 13.35  | 14.36  | 8.64   | 10.24  | 46.78  |
| May-12                         | 8.08   | 6.72   | 12.97  | 13.36  | 6.93   | 9.90   | 46.53  |
| Sep-13                         | 8.30   | 7.24   | 13.67  | 14.80  | 8.90   | 10.69  | 46.89  |
| Jul-14                         | 9.73   | 6.24   | 12.50  | 13.71  | 7.72   | 10.66  | 46.05  |
| Aug-16                         | 11.70  | 8.00   | 12.50  | 16.80  | 9.20   | 12.50  | 47.40  |

**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) - 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 nine wells required for this year's sampling event are shown in this table.

**TABLE 5B**  
Marilla Street Landfill  
August 2016 Annual Sampling Event

| <b>Summary of Historical Groundwater Elevations of Deep Overburden Wells<sup>(3)</sup></b> |        |        |        |        |        |        |        |  |  |
|--------------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| Well ID                                                                                    | MW-2A  | MW-3A  | MW-4A  | MW-6A  | MW-15A | MW-16A | MW-18A |  |  |
| Riser Elevation <sup>(1)</sup>                                                             | 591.02 | 587.18 | 591.82 | 597.66 | 586.97 | 588.59 | 627.54 |  |  |
| Year <sup>(2)</sup>                                                                        |        |        |        |        |        |        |        |  |  |
| Apr-04                                                                                     | 583.02 | 581.18 | 580.39 | 584.45 | 580.67 | 580.44 | 581.55 |  |  |
| Jul-05                                                                                     | 582.52 | 580.09 | 579.32 | 583.01 | 580.17 | 579.38 | 580.79 |  |  |
| May-06                                                                                     | 582.76 | 580.49 | 579.57 | 584.10 | 580.25 | 579.52 | 581.18 |  |  |
| Aug-07                                                                                     | 580.22 | 579.28 | 578.96 | 580.66 | 579.29 | 578.72 | 580.49 |  |  |
| May-08                                                                                     | 583.02 | 579.53 | 578.03 | 583.94 | 580.54 | 577.28 | 580.23 |  |  |
| Aug-10                                                                                     | 582.49 | 580.03 | 578.47 | 583.30 | 578.33 | 578.35 | 580.76 |  |  |
| May-12                                                                                     | 582.94 | 580.46 | 578.85 | 584.30 | 580.04 | 578.69 | 581.01 |  |  |
| Sep-13                                                                                     | 582.72 | 579.94 | 578.15 | 582.86 | 578.07 | 577.90 | 580.65 |  |  |
| Jul-14                                                                                     | 581.29 | 580.94 | 579.32 | 583.95 | 579.25 | 577.93 | 581.49 |  |  |
| Aug-16                                                                                     | 579.32 | 579.18 | 579.32 | 580.86 | 577.77 | 576.09 | 580.14 |  |  |

**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) - 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 nine wells required for this year's sampling event are shown in this table.

**TABLE 6**  
Marilla Street Landfill  
August 2016 Annual Sampling Event  
**Summary of Shallow Groundwater Analytical Results**

| Parameter                                                        | MW-2B   | MW-3B   | MW-4B    | MW-6B    | MW-7B   | MW-14BR <sup>(4)</sup> | MW-15B  | MW-16B | MW-18B   | Blind Duplicate #1 <sup>(6)</sup><br>(BLIND DUP) | Class "GA"<br>Standard <sup>(1)</sup> | BMC <sup>(2)</sup> | BMC +3SDs <sup>(3)</sup> |
|------------------------------------------------------------------|---------|---------|----------|----------|---------|------------------------|---------|--------|----------|--------------------------------------------------|---------------------------------------|--------------------|--------------------------|
| <b>WATER QUALITY (mg/L or as indicated)</b>                      |         |         |          |          |         |                        |         |        |          |                                                  |                                       |                    |                          |
| pH (standard units)                                              | 12.42   | 7.42    | 8.44     | 7.29     | 12.90   | NA                     | 13.56   | 12.87  | 8.29     | 12.87                                            | 6.5-8.5                               | 7.31               | 6.44-8.19                |
| Specific Conductance (Umhos/cm)                                  | 0.81    | 1.73    | 0.78     | 1.33     | 2.94    | NA                     | 4.06    | 1.77   | 3.03     | 1.77                                             | NA                                    | 1.11               | 2.26                     |
| Total Organic Carbon                                             | 16.8    | 475     | 7.7      | 9.6      | 69.0    | NA                     | 256     | 16.7   | 17.6     | 16.5                                             | NA                                    | 6.51               | 14.58                    |
| Total Dissolved Solids                                           | 490     | 2,090   | 548      | 1,160    | 1,100   | NA                     | 1,680   | 670    | 2,740    | 636                                              | 500                                   | 924                | 1,314                    |
| Total Recoverable Phenolics                                      | 0.029   | 0.812   | 0.0050 U | 0.0050 U | 0.689   | NA                     | 0.680   | 0.0118 | 0.0050 U | 0.0079                                           | 0.001                                 | 0.0117             | 0.0533                   |
| <b>TOTAL METALS - INORGANIC PARAMETERS (mg/L)</b>                |         |         |          |          |         |                        |         |        |          |                                                  |                                       |                    |                          |
| Arsenic                                                          | 0.01 U  | 0.064   | 0.01 U   | 0.01 U   | 0.01 U  | NA                     | 0.037   | 0.01 U | 0.016    | 0.01 U                                           | 0.025                                 | 0.00776            | 0.0184                   |
| Chromium                                                         | 0.024   | 0.179   | 0.01 U   | 0.01 U   | 0.01 U  | NA                     | 0.01 U  | 0.01 U | 0.01 U   | 0.01 U                                           | 0.05                                  | 0.00830            | 0.0189                   |
| Cyanide                                                          | 0.010 U | 0.10 U  | 0.010 U  | 0.010 U  | 0.035   | NA                     | 0.010 U | 0.025  | 0.019    | 0.022                                            | 0.2                                   | 0.00967            | 0.014                    |
| Iron                                                             | 10.8    | 115     | 5.71     | 4.20     | 0.46    | NA                     | 0.1 U   | 0.12   | 1.17     | 0.11                                             | 0.3                                   | 1.427              | 5.254                    |
| Lead                                                             | 0.013 J | 0.982   | 0.05 U   | 0.006 J  | 0.008 J | NA                     | 0.05 U  | 0.05 U | 0.05 U   | 0.05 U                                           | 0.025                                 | 0.0136             | 0.0697                   |
| Manganese                                                        | 0.595   | 2.05    | 0.882    | 0.720    | 0.013   | NA                     | 0.01 U  | 0.017  | 2.19     | 0.013                                            | 0.3                                   | 0.322              | 1.04                     |
| <b>SOLUBLE METALS - INORGANIC PARAMETERS (mg/L)</b>              |         |         |          |          |         |                        |         |        |          |                                                  |                                       |                    |                          |
| Arsenic                                                          | 0.01 U  | 0.031   | 0.01 U   | 0.01 U   | NA      | NA                     | NA      | NA     | NA       | NA                                               | NA                                    | 0.00855            | 0.0176                   |
| Chromium                                                         | 0.01 U  | 0.01 U  | 0.01 U   | 0.01 U   | NA      | NA                     | NA      | NA     | NA       | NA                                               | NA                                    | 0.0104             | 0.0119                   |
| Iron                                                             | 0.1 U   | 1.69    | 0.53     | 0.1 U    | NA      | NA                     | NA      | NA     | NA       | NA                                               | NA                                    | 0.388              | 2.89                     |
| Lead                                                             | 0.05 U  | 0.006 J | 0.05 U   | 0.05 U   | NA      | NA                     | NA      | NA     | NA       | NA                                               | NA                                    | 0.0171             | 0.0805                   |
| Manganese                                                        | 0.01 U  | 0.029   | 0.863    | 0.653    | NA      | NA                     | NA      | NA     | NA       | NA                                               | NA                                    | 0.233              | 0.872                    |
| <b>VOLATILE ORGANIC COMPOUNDS (AQUEOUS) (ug/L)<sup>(6)</sup></b> |         |         |          |          |         |                        |         |        |          |                                                  |                                       |                    |                          |
| Acetone                                                          | 14      | 710     | 10 U     | 10 U     | 10 U    | NA                     | 200 U   | 10 U   | 10 U     | 10 U                                             | 50                                    | NA                 | NA                       |
| cis-1,2-Dichloroethene                                           | 5.0 U   | 50 U    | 5.0 U    | 5.0 U    | 5.0 U   | NA                     | 100 U   | 8.1    | 5.0 U    | 9                                                | 60                                    | NA                 | NA                       |
| Trichloroethene                                                  | 5.0 U   | 50 U    | 5.0 U    | 5.0 U    | 5.0 U   | NA                     | 100 U   | 25     | 5.0 U    | 33                                               | 5                                     | NA                 | NA                       |

Notes:

- (1) - Class "GA" Groundwater Quality Standards/Guidance Value - 6 NYCRR Part 703; revised August 1999.
- (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) - Monitoring well MW-14-BR was damaged and not sampled during the current event.
- (5) - Blind Duplicate #1 was collected from MW-16B.
- (6) - Only those parameters detected at a minimum of one sample location are reported in this table.
- (7) - "NA" indicates parameter not analyzed at this location or data is not available.
- (8) - "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 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 2016 Annual Sampling Event  
**Summary of Deep Groundwater Analytical Results**

| Parameter                                                        | MW-2A    | MW-3A    | MW-4A    | MW-6A    | MW-15A   | MW-16A   | MW-18A   | Class "GA" Standard <sup>(1)</sup> | BMC <sup>(2)</sup> | BMC +3SDs <sup>(3)</sup> |
|------------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------------------|--------------------|--------------------------|
| <b>WATER QUALITY (mg/L or as indicated)</b>                      |          |          |          |          |          |          |          |                                    |                    |                          |
| pH (standard units)                                              | 8.42     | 10.20    | 8.40     | 7.90     | 7.32     | 7.31     | 7.27     | 6.5-8.5                            | 7.66               | 6.92-8.39                |
| Specific Conductance (Umhos/cm)                                  | 0.62     | 1.75     | 0.58     | 1.01     | 0.84     | 1.11     | 2.55     | NA                                 | 0.86               | 1.81                     |
| Total Organic Carbon                                             | 10.1     | 7.2      | 10.7     | 3.4      | 7.5      | 3.5      | 21.1     | NA                                 | 2.19               | 4.51                     |
| Total Dissolved Solids                                           | 398      | 1,540    | 367      | 726      | 588      | 645      | 2,050    | 500                                | 591                | 1,354                    |
| Total Recoverable Phenolics                                      | 0.0050 U | 0.0050 U | 0.0050 U | 0.0050 U | 0.0050 U | 0.0050 U | 0.0050 U | 0.001                              | 0.0114             | 0.0541                   |
| <b>TOTAL METALS - INORGANIC PARAMETERS (mg/L)</b>                |          |          |          |          |          |          |          |                                    |                    |                          |
| Arsenic                                                          | 0.028    | 0.033    | 0.01 U   | 0.065    | 0.01 U   | 0.01 U   | 0.01 U   | 0.025                              | 0.01239            | 0.0609                   |
| Chromium                                                         | 0.165    | 0.103    | 0.01 U   | 0.076    | 0.01 U   | 0.01 U   | 0.012    | 0.05                               | 0.01213            | 0.0611                   |
| Cyanide                                                          | 0.010 U  | 0.010 U  | 0.010 U  | 0.010 U  | 0.010 U  | 0.010 U  | 0.010 U  | 0.2                                | 0.0096             | 0.014                    |
| Iron                                                             | 154      | 145      | 6.70     | 91.6     | 0.46     | 3.43     | 22.80    | 0.3                                | 5.943              | 70.133                   |
| Lead                                                             | 0.065    | 0.788    | 0.05 U   | 0.062    | 0.05 U   | 0.05 U   | 0.044 J  | 0.025                              | 0.0175             | 0.0848                   |
| Manganese                                                        | 6.13     | 2.40     | 0.135    | 1.80     | 0.022    | 0.13     | 1.44     | 0.3                                | 0.311              | 1.644                    |
| <b>SOLUBLE METALS - INORGANIC PARAMETERS (mg/L)</b>              |          |          |          |          |          |          |          |                                    |                    |                          |
| Arsenic                                                          | 0.01 U   | 0.01 U   | 0.01 U   | 0.01 U   | NA       | NA       | 0.01 U   | NA                                 | 0.010525           | 0.0279                   |
| Chromium                                                         | 0.01 U   | 0.01 U   | 0.01 U   | 0.01 U   | NA       | NA       | 0.01 U   | NA                                 | 0.0104             | 0.0119                   |
| Iron                                                             | 0.1 U    | 0.1 U    | 0.1 U    | 0.1 U    | NA       | NA       | 7.11     | NA                                 | 0.138              | 0.652                    |
| Lead                                                             | 0.05 U   | 0.05 U   | 0.05 U   | 0.05 U   | NA       | NA       | 0.05 U   | NA                                 | 0.0181             | 0.0842                   |
| Manganese                                                        | 0.165    | 0.43     | 0.070    | 0.075    | NA       | NA       | 0.89     | NA                                 | 0.137              | 0.490                    |
| <b>VOLATILE ORGANIC COMPOUNDS (AQUEOUS) (ug/L)<sup>(6)</sup></b> |          |          |          |          |          |          |          |                                    |                    |                          |
|                                                                  | All U    | All U    | All U    | All U    | All U    | All U    | All U    | Variable                           | NA                 | NA                       |

Notes:

- (1) - Class "GA" Groundwater Quality Standards/Guidance Value - 6 NYCRR Part 703; revised August 1999.
  - (2) - Value represents the Background Mean Concentration of Well MW-6A.
  - (3) - Value represents the Background Mean plus 3 standard deviation concentrations of well MW-6A. Plus 3 and minus 3 standard deviations for pH.
  - (4) - Monitoring well MW-14-BR was damaged and not sampled during the current event.
  - (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 8**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Parameter Tracking for Moving Average Trend Analysis (MATA)**

| Well I.D.                                   | Tracked Parameters          | Sampling Event |        |        |        |        |        |        |        |        |        |        | No. of Tracked Events | Increasing Trend? <sup>(1)</sup> | 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                          |    | Upgradient Groundwater <sup>(7)</sup> |       | Surface Water <sup>(2)(3)</sup> |                    |                    |                    |                    |
|                                             |                             |                |        |        |        |        |        |        |        |        |        |        |                       |                                  |                                 |    | MW-6A                                 | MW-6B | SW-1                            | SW-2A              | SW-3A              | SW-5               |                    |
| <b>Shallow Groundwater Monitoring Wells</b> |                             |                |        |        |        |        |        |        |        |        |        |        |                       |                                  |                                 |    |                                       |       |                                 |                    |                    |                    |                    |
| MW-2B <sup>(6)</sup>                        | pH                          |                |        |        |        |        |        |        |        |        |        | X      | X                     | X                                |                                 | 3  | TBD <sup>(4)</sup>                    |       |                                 |                    |                    |                    |                    |
|                                             | Total Organic Carbon        |                |        |        |        |        |        |        |        |        |        | X      | X                     | X                                |                                 | 3  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Recoverable Phenolics |                |        |        |        |        |        |        |        |        |        | X      | X                     |                                  |                                 | 2  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Chromium              |                |        |        |        |        |        |        |        |        |        |        |                       | X                                |                                 | 1  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Iron                  |                |        |        |        |        |        |        |        |        |        |        | X                     | X                                |                                 | 2  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Manganese             |                |        |        |        |        |        |        |        |        |        |        |                       | X                                |                                 | 1  | TBD                                   |       |                                 |                    |                    |                    |                    |
| MW-3B <sup>(6)</sup>                        | pH                          |                | X      | X      | X      | X      | X      | X      |        |        | X      | X      |                       | X                                |                                 | 9  | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Specific Conductance        | X              | X      | X      | X      | X      | X      | X      |        |        |        | X      |                       |                                  |                                 | 8  | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Total Cyanide               |                |        | X      |        |        |        | X      |        |        |        |        |                       |                                  |                                 | 2  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Dissolved Solids      |                | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X                     | X                                | X                               | 12 | Yes                                   | -     | Yes                             | Yes                | Yes                | Yes                | Yes                |
|                                             | Total Organic Carbon        | X              | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X                     | X                                | X                               | 13 | Yes                                   | -     | Yes                             | Yes                | Yes                | Yes                | Yes                |
|                                             | Total Recoverable Phenolics | X              | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X                     | X                                | X                               | 13 | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Total Arsenic               | X              | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X                     | X                                | X                               | 13 | Yes                                   | -     | No                              | No <sup>(9)</sup>  | No <sup>(9)</sup>  | No <sup>(9)</sup>  | No <sup>(9)</sup>  |
|                                             | Total Chromium              |                |        |        |        |        |        |        |        |        |        | X      | X                     | X                                |                                 | 3  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Iron                  |                |        |        |        |        |        |        |        |        |        | X      | X                     | X                                | X                               | 4  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Lead                  |                |        |        |        |        |        |        |        |        |        | X      | X                     | X                                | X                               | 4  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Manganese             |                |        |        |        |        |        | X      | X      | X      | X      | X      | X                     | X                                | X                               | 7  | Yes                                   | -     | Yes                             | Yes                | No                 | No                 | Yes                |
|                                             | Soluble Arsenic             |                |        |        |        |        |        |        |        |        |        | X      | X                     | X                                | X                               | 4  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Soluble Chromium            |                |        |        |        |        |        |        |        |        |        | X      | X                     | X                                |                                 | 3  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Soluble Iron                |                |        |        |        |        |        |        |        |        |        | X      |                       |                                  |                                 | 1  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Soluble Lead                |                |        |        |        |        |        |        |        |        |        | X      | X                     |                                  |                                 | 2  | 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                               | 13 | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Specific Conductance        | X              | X      | X      | X      | X      | X      |        |        |        |        | X      | X                     | X                                | X                               | 10 | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | 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                                | X                               | 12 | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Total Recoverable Phenolics | X              | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X                     | X                                | X                               | 14 | No                                    |       |                                 |                    |                    |                    |                    |
| MW-14BR <sup>(6)</sup>                      | pH                          | X              | X      | X      | X      | X      | X      |        |        |        | X      | X      |                       |                                  |                                 | 8  | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Specific Conductance        | X              | X      | X      | X      | X      | X      |        |        |        |        |        |                       |                                  |                                 | 6  | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Total Cyanide               |                |        | X      | X      | X      | X      | X      | X      | X      | X      |        |                       |                                  |                                 | 7  | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Total Dissolved Solids      |                |        | X      | X      | X      | X      | X      | X      | X      | X      | X      |                       |                                  |                                 | 9  | Yes                                   | -     | Yes                             | Yes                | Yes                | Yes                | Yes                |
|                                             | Total Organic Carbon        | X              | X      | X      | X      | X      |        |        |        |        |        |        |                       |                                  |                                 | 5  | Yes                                   | -     | Yes                             | Yes                | Yes                | Yes                | Yes                |
|                                             | Total Recoverable Phenolics | X              |        |        |        |        |        |        |        |        |        |        |                       |                                  |                                 | 1  | TBD                                   |       |                                 |                    |                    |                    |                    |
|                                             | Total Manganese             |                | X      |        | X      |        |        | X      | X      |        |        |        |                       |                                  |                                 | 4  | TBD                                   |       |                                 |                    |                    |                    |                    |
| MW-15B                                      | pH                          |                |        |        |        |        |        |        |        |        | X      | X      | X                     | X                                | X                               | 5  | Yes                                   | -     | No                              | No                 | No                 | No                 | Yes                |
|                                             | Specific Conductance        | X              | X      | X      | X      | X      | X      |        |        |        | X      | X      | X                     | X                                | X                               | 10 | Yes                                   | -     | No                              | No                 | No                 | No                 | Yes                |
|                                             | Total Dissolved Solids      |                |        | X      | X      | X      | X      | X      | X      |        | X      | X      | X                     | X                                | X                               | 10 | Yes                                   | -     | Yes                             | Yes                | Yes                | Yes                | Yes                |
|                                             | Total Organic Carbon        | X              | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X                     | X                                | X                               | 13 | Yes                                   | -     | Yes                             | Yes                | Yes                | Yes                | Yes                |
|                                             | Total Recoverable Phenolics |                |        |        |        |        |        |        |        |        | X      | X      | X                     | X                                | X                               | 5  | Yes                                   | -     | Yes                             | Yes <sup>(9)</sup> | Yes <sup>(9)</sup> | Yes <sup>(9)</sup> | Yes <sup>(9)</sup> |
|                                             | Total Arsenic               |                |        |        |        | X      |        | X      | X      | X      | X      | X      | X                     | X                                | X                               | 9  | Yes                                   | -     | No                              | No <sup>(9)</sup>  | No <sup>(9)</sup>  | No <sup>(9)</sup>  | No <sup>(9)</sup>  |
|                                             | 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                                    |       |                                 |                    |                    |                    |                    |
| MW-16B                                      | Soluble Manganese           | X              | X      | X      | X      | X      | X      |        |        |        |        |        |                       |                                  |                                 | 6  | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | pH                          | X              |        |        |        |        |        | X      | X      | X      | X      | X      | X                     | X                                | X                               | 12 | No                                    |       |                                 |                    |                    |                    |                    |
|                                             | Specific Conductance        | X              | X      | X      | X      | X      | X      |        |        |        |        |        |                       |                                  |                                 | 6  | 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                                   |       |                                 |                    |                    |                    |                    |

**TABLE 8**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Parameter Tracking for Moving Average Trend Analysis (MATA)**

| Well I.D.                                | Tracked Parameters          | Sampling Event |        |        |        |        |        |        |        |        |        |        |        | No. of Tracked Events | Increasing Trend? <sup>(1)</sup> | 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                |                                  | Upgradient Groundwater <sup>(7)</sup> | Surface Water <sup>(2)(3)</sup> |      |       |       |      |     |
|                                          |                             |                |        |        |        |        |        |        |        |        |        |        |        |                       |                                  | MW-6A                                 | MW-6B                           | SW-1 | SW-2A | SW-3A | SW-5 |     |
| MW-18B                                   | pH                          |                |        |        | X      |        |        |        |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Specific Conductance        | X              | X      | X      | X      | X      | X      |        |        |        | X      | X      | X      | X                     | 11                               | No                                    |                                 |      |       |       |      |     |
|                                          | Total Dissolved Solids      |                |        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X                     | 12                               | No                                    |                                 |      |       |       |      |     |
|                                          | Total Organic Carbon        | X              | X      | X      | X      | X      |        | X      | X      |        |        |        | X      | X                     | 10                               | No                                    |                                 |      |       |       |      |     |
|                                          | Total Recoverable Phenolics | X              |        |        |        |        |        |        |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Iron                  |                |        |        |        |        |        |        |        |        |        | X      |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Manganese             | X              | X      | X      | X      | X      |        | X      | X      |        |        |        | X      | X                     | 10                               | Yes                                   | -                               | Yes  | Yes   | No    | No   | Yes |
| <b>Deep Groundwater Monitoring Wells</b> |                             |                |        |        |        |        |        |        |        |        |        |        |        |                       |                                  |                                       |                                 |      |       |       |      |     |
| MW-2A                                    | pH                          |                |        |        |        |        | X      |        |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Organic Carbon        |                |        |        |        |        |        |        |        |        |        |        |        | X                     | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Chromium              |                |        |        |        |        |        |        |        |        |        | X      |        | X                     | 2                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Iron                  |                |        |        | X      |        | X      |        | X      |        | X      |        |        | X                     | 5                                | Yes                                   | Yes                             | -    | Yes   | No    | No   | No  |
|                                          | Total Manganese             |                |        |        |        |        |        |        |        |        |        | X      |        | X                     | 2                                | TBD                                   |                                 |      |       |       |      |     |
| MW-3A                                    | pH                          |                |        |        | X      |        |        |        |        |        |        |        |        | X                     | 2                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Specific Conductance        | X              | X      | X      | X      | X      |        |        |        |        |        |        |        |                       | 6                                | No                                    |                                 |      |       |       |      |     |
|                                          | Total Organic Carbon        |                | X      |        |        | X      | X      | X      | X      |        |        | X      |        | X                     | 7                                | Yes                                   | Yes                             | -    | Yes   | Yes   | Yes  | Yes |
|                                          | Total Dissolved Solids      |                | X      | X      | X      | X      |        | X      | X      | X      |        | X      |        | X                     | 9                                | No                                    |                                 |      |       |       |      |     |
|                                          | Total Iron                  | X              |        | X      | X      |        |        |        |        |        |        |        |        | X                     | 4                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Chromium              |                |        |        |        |        |        |        |        |        |        |        |        | X                     | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Lead                  |                |        |        |        |        |        |        |        |        |        |        |        | X                     | 1                                | TBD                                   |                                 |      |       |       |      |     |
| MW-4A                                    | Total Manganese             |                |        | X      | X      | X      | X      |        |        |        |        | X      |        | X                     | 7                                | Yes                                   | Yes                             | -    | Yes   | No    | No   | Yes |
|                                          | pH                          |                |        | X      |        |        |        |        |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Recoverable Phenolics |                | X      |        |        |        |        |        |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Organic Carbon        | X              | X      | X      | X      | X      |        |        | X      | X      |        | X      |        | X                     | 9                                | Yes                                   | Yes                             | -    | Yes   | Yes   | Yes  | Yes |
|                                          | Total Iron                  |                | X      | X      |        |        |        |        | X      | X      | X      |        |        |                       | 5                                | Yes                                   | Yes                             | -    | Yes   | No    | No   | No  |
|                                          | Soluble Iron                |                |        |        |        |        |        |        | X      |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
| MW-15A                                   | Soluble Manganese           |                |        |        |        |        |        |        | X      | X      |        |        |        |                       | 2                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Specific Conductance        | X              | X      | X      | X      | X      | X      |        |        |        |        |        |        |                       | 6                                | No                                    |                                 |      |       |       |      |     |
|                                          | Total Dissolved Solids      |                |        |        |        |        | X      |        |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Organic Carbon        | X              | X      | X      | X      | X      | X      | X      | X      | X      |        | X      |        | X                     | 11                               | Yes                                   | Yes                             | -    | Yes   | Yes   | Yes  | Yes |
|                                          | Total Iron                  | X              | X      | X      | X      | X      |        |        |        |        |        |        |        |                       | 5                                | No                                    |                                 |      |       |       |      |     |
|                                          | Soluble Iron                |                |        |        | X      | X      |        |        |        |        |        |        |        |                       | 2                                | TBD                                   |                                 |      |       |       |      |     |
| MW-16A                                   | Total Manganese             |                |        | X      | X      | X      | X      |        |        |        |        |        |        |                       | 4                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Specific Conductance        | X              |        |        |        |        |        |        |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Organic Carbon        |                |        |        |        |        | X      | X      |        |        |        |        |        |                       | 2                                | TBD                                   |                                 |      |       |       |      |     |
| MW-18A                                   | Total Iron                  | X              | X      | X      | X      | X      |        |        | X      |        | X      |        |        |                       | 7                                | Yes                                   | Yes                             | -    | Yes   | No    | No   | No  |
|                                          | pH                          |                |        |        |        |        |        | X      |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Specific Conductance        | X              | X      | X      | X      | X      |        |        | X      | X      | X      | X      | X      | X                     | 11                               | Yes                                   | No                              | -    | No    | No    | No   | Yes |
|                                          | Total Dissolved Solids      |                |        |        |        | X      | X      | X      | X      | X      | X      | X      | X      | X                     | 9                                | Yes                                   | No                              | -    | Yes   | Yes   | Yes  | Yes |
|                                          | Total Organic Carbon        | X              | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X                     | 13                               | Yes                                   | Yes                             | -    | Yes   | Yes   | Yes  | Yes |
|                                          | Soluble Arsenic             |                |        | X      |        |        |        |        |        |        |        |        |        |                       | 1                                | TBD                                   |                                 |      |       |       |      |     |
|                                          | Total Iron                  | X              | X      | X      | X      | X      | X      | X      | X      | X      | X      |        | X      |                       | 11                               | No                                    |                                 |      |       |       |      |     |
|                                          | Soluble Iron                |                |        | X      |        | X      | X      | X      | X      | X      | X      |        |        | X                     | 8                                | Yes                                   | Yes                             | -    | TBD   | TBD   | TBD  | TBD |
|                                          | Total Manganese             |                |        | X      | X      | X      | X      | X      | X      | X      | X      | X      |        |                       | 10                               | No                                    |                                 |      |       |       |      |     |
|                                          | Soluble Manganese           |                |        | X      |        | X      | X      | X      | X      | X      | X      |        | X      | X                     | 9                                | Yes                                   | Yes                             | -    | TBD   | TBD   | TBD  | TBD |

**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 until a 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. Sampling of deep wells was not required in 2015 and required only once every 3 years starting in 2016.
- (6) - MW-3B could not be sampled during the May 2008 event. This well was repaired in August 2010. MW-14BR could not be sampled since 2013.
- (7) - Shallow monitoring wells (designated "B") are compared to upgradient monitoring well MW-6B. Deep monitoring wells ("A") are compared to upgradient monitoring well MW-6A.
- (8) - MW-2B previously biennial, not sampled in 2014.
- (9) - The detection limit was greater in May 2012 and the resulting observed trending may be an artifact of the change in detection limits over time. The trending analysis assumes the detection limits are the same over time.

|     |                                                                                                                                                                      |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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**

# **Field Observation Sheets**



# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-2A

Field Personnel: SJD

Sample Matrix: GROUNDWATER

## MONITORING WELL INSPECTION:

Date/Time 8/25/16 1:30 pm

Cond of seal: ☒ Good ☐ Cracked ☐ None ☐ Buried %

Prot. Casing/riser height: 3.1'

Cond of prot. Casing/riser: ☐ Unlocked ☒ Good  
☐ Loose ☐ Flush Mount  
☐ Damaged

If prot. casing; depth to riser below: 35'

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

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): 1.0

## PURGE INFORMATION:

Date / Time Initiated: 8/25/16 3:35 PM

Date / Time Completed: 8/26/16 9:00 AM

Surf. Meas. Pt: ☒ Prot. Casing ☐ Riser

Riser Diameter, Inches: 6.5

Initial Water Level, Feet: 11.7

Elevation, GW MSL: \_\_\_\_\_

Well Total Depth, Feet: 33.0

Method of Well Purge: TUBING w/ FOOT VALVE

One (1) Riser Volume, Gal: 3.58 (4 = 14.3)

Dedicated: ☒ N

Total Volume Purged, Gal: 5 gal.

Purged To Dryness ☒ N

Purge Observations: MILKY GRAY

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 |
|--------------|----------------------|-------------------|-----------|----------------|--------------------|-------------|------------|-------|
| 8/25 3:35    |                      | INITIAL           | 19.5      | 8.09           | 0.38               | 19.3        |            |       |
| 8/26 9:00 AM |                      | 5                 | 18.0      | 8.42           | 0.62               | OVERSAMPLE  | MILKY GRAY |       |
|              |                      |                   |           |                |                    |             |            |       |
|              |                      |                   |           |                |                    |             |            |       |
|              |                      |                   |           |                |                    |             |            |       |
|              |                      |                   |           |                |                    |             |            |       |
|              |                      |                   |           |                |                    |             |            |       |

(TUBING STUCK IN WELL  
8/22/16,  
BRING WIRE  
8/23

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: ZA

Field Personnel: SJD

Sample Matrix: \_\_\_\_\_

## MONITORING WELL INSPECTION:

Date/Time 1

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: - 1 - % LEL: - 1 -

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): 106

## PURGE INFORMATION:

Date / Time Initiated: \_\_\_\_\_

Date / Time Completed: 1

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<br>(gpm/htz) | Cumulative<br>Volume | Temp.<br>(C) | pH<br>(std units) | Conduct<br>(Umhos/cm) | Turb.<br>(NTU) | Other | Other |
|------|-------------------------|----------------------|--------------|-------------------|-----------------------|----------------|-------|-------|
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: AL-2B

Field Personnel: SJD

Sample Matrix: GROUND WATER

## MONITORING WELL INSPECTION:

Date/Time: 8/22/16 12:30pm

Cond of seal: ☒ Good ☐ Cracked ☐ None ☐ Buried

Prot. Casing/riser height: 3.1"

Cond of prot. Casing/riser: ☐ Unlocked ☒ Good ☐ Loose ☐ Flush Mount ☐ Damaged

If prot. casing; depth to riser below: .35'

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

Vol. Organic Meter (Calibration/Reading):            Volatiles (ppm): - 10.6

## PURGE INFORMATION:

Date / Time Initiated: 8/22/16 12:40pm

Date / Time Completed: 8/22/16 12:51pm

Surf. Meas. Pt: ☒ Prot. Casing ☐ Riser

Riser Diameter, Inches: 6.5"

Initial Water Level, Feet: 9.8'

Elevation. GW MSL:           

Well Total Depth, Feet: 12.7'

Method of Well Purge:           

One (1) Riser Volume, Gal: .47 (4:1.89)

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 1.5

Purged To Dryness ☒ Y ☐ N @ 1.5 gal

Purge Observations: CLOUDY AFTER  
5 gal

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 |
|---------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 12:41pm | -                    | INITIAL           | 20.4      | 11.01          | .37                | 34.0        |       |       |
| 12:50pm |                      | 1.5               | 19.0      | 12.42          | .81                | 675         | DRY   |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-3A

Field Personnel: JD

Sample Matrix: GROUNDWATER

## MONITORING WELL INSPECTION:

Date/Time 8/23/16 1 3:35 pm

Cond of seal: ☒ Good ☐ Cracked ☐ None ☐ Buried %

Prot. Casing/riser height: 2.4'

Cond of prot. Casing/riser: ☐ Unlocked ☒ Good  
☐ Loose ☐ Flush Mount  
☐ Damaged

If prot. casing; depth to riser below: 2.3'

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

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): - 1, 2

## PURGE INFORMATION:

Date / Time Initiated: 8/23/16 / 4:15 pm

Date / Time Completed: 4:30 pm  
5.5"

Surf. Meas. Pt: ☒ Prot. Casing ☐ Riser

Riser Diameter, Inches:

Initial Water Level, Feet: 8.0'

Elevation. G/W MSL:

Well Total Depth, Feet: 12.1'

Method of Well Purge:

One (1) Riser Volume, Gal: 0.67 (4=2.67)

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 1 GALLON

Purged To Dryness ☒ Y ☐ N

Purge Observations: BROWN

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 |
|---------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 4:15 pm | -                    | INITIAL           | 20.8      | 10.20          | 1.75               | 2252 (10)   | BROWN |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |

## FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-3D

Field Personnel: SJD

Sample Matrix: GROUNDWATER

### MONITORING WELL INSPECTION:

Date/Time 8/23/16 1 3:35 pm

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

Prot. Casing/riser height: 0.8'

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

If prot. casing; depth to riser below: 0.55'

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

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): 1.5

### PURGE INFORMATION:

Date / Time Initiated: 8/23/16 / 3:40 pm

Date / Time Completed: 4:05 pm

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

Riser Diameter, Inches: 4"

Initial Water Level, Feet: 8.4'

Elevation, GW MSL:           

Well Total Depth, Feet: 22.3'

Method of Well Purge: BAUER

One (1) Riser Volume, Gal: 2.27 (4-9.06)

Dedicated: (Y) / (N)

Total Volume Purged, Gal: 5 gallons

Purged To Dryness (Y) / (N)

Purge Observations: SLIGHTLY CLOUDY AFTER ~2.5g

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 |
|----------------|----------------------|-------------------|-------------|----------------|--------------------|------------------|--------------|-------|
| <u>3:40 pm</u> |                      | <u>INITIAL</u>    | <u>20.5</u> | <u>7.39</u>    | <u>2.06</u>        | <u>5.34</u>      |              |       |
| <u>3:55 pm</u> |                      | <u>2.5</u>        | <u>16.2</u> | <u>7.51</u>    | <u>1.82</u>        | <u>31.9</u>      |              |       |
| <u>4:05 pm</u> |                      | <u>5</u>          | <u>16.8</u> | <u>7.42</u>    | <u>1.73</u>        | <u>1911 (au)</u> | <u>BROWN</u> |       |
|                |                      |                   |             |                |                    |                  |              |       |
|                |                      |                   |             |                |                    |                  |              |       |
|                |                      |                   |             |                |                    |                  |              |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW 4A

Field Personnel: SJD

Sample Matrix: GROUND WATER

## MONITORING WELL INSPECTION:

Date/Time 8/25/16 11:40am

Cond of seal: ☒ Good ☐ Cracked ☐ None ☐ Buried %

Prot. Casing/riser height: 2.2'

Cond of prot. Casing/riser: ☐ Unlocked ☒ Good  
☐ Loose ☐ Flush Mount  
☐ Damaged

If prot. casing; depth to riser below: .5'

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

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): 1 0.0

## PURGE INFORMATION:

Date / Time Initiated: 8/25/16 12:10

Date / Time Completed: 1

Surf. Meas. Pt: ☒ Prot. Casing ☐ Riser

Riser Diameter, Inches: 6.5"

Initial Water Level, Feet: 14.5'

Elevation, GW MSL:

Well Total Depth, Feet: 24.6'

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 1.65 (4 = 6.6)

Dedicated: (Y) N

Total Volume Purged, Gal: 7.0

Purged To Dryness Y (N)

Purge Observations:

Start  Finish

## PURGE DATA: (if applicable)

| Time   | Purge Rate (gpm/ftz) | Cumulative Volume | Temp. (C) | pH (std units) | Conduct (Umhos/cm) | Turb. (NTU) | Other              | Other |
|--------|----------------------|-------------------|-----------|----------------|--------------------|-------------|--------------------|-------|
| 12:10  |                      | INITIAL           | 24.1      | 6.93           | 0.36               | 11.34       |                    |       |
| 12:20  |                      | 2.5               | 16.1      | 7.96           | 0.80               | 41.2        |                    |       |
| 12:30p |                      | 7.0               | 17.0      | 8.40           | .58                | 65.6        | (BROWN/CRAZY TINT) |       |
|        |                      |                   |           |                |                    |             |                    |       |
|        |                      |                   |           |                |                    |             |                    |       |
|        |                      |                   |           |                |                    |             |                    |       |
|        |                      |                   |           |                |                    |             |                    |       |

NO CAP/LOCK

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-4B

Field Personnel: SJD

Sample Matrix: GROUNDWATER

## MONITORING WELL INSPECTION:

Date/Time: 8/25/16 11:30am

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

Prot. Casing/riser height: 3.2'

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

If prot. casing; depth to riser below: 4'

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

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

## PURGE INFORMATION:

Date / Time Initiated: 8/25/16 / 11:50

Date / Time Completed: 12:05pm

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

Riser Diameter, Inches: 4.5"

Initial Water Level, Feet: 12.0'

Elevation, GW MSL: \_\_\_\_\_

Well Total Depth, Feet: 19.2'

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 1.17 (4-4.7)

Dedicated: (X) Y N

Total Volume Purged, Gal: 2 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 |
|--------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-----------------------------|-------|
| 11:55  | -                    | INITIAL           | 22.2      | 8.76           | 1.39               | 12.4        |                             |       |
| 12:05p | -                    | 1.75              | 17.3      | 8.44           | 0.78               | 48.2        | (cloudy w/ BLACK PARTICLES) |       |
|        |                      |                   |           |                |                    |             |                             |       |
|        |                      |                   |           |                |                    |             |                             |       |
|        |                      |                   |           |                |                    |             |                             |       |
|        |                      |                   |           |                |                    |             |                             |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-6A

Field Personnel: JJD

Sample Matrix: GROUNDWATER

## MONITORING WELL INSPECTION:

Date/Time: 8/23/16 1

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

Prot. Casing/riser height: 4.3'

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose ( ) Flush Mount ( ) Damaged BAKER STICKS 3 FEET DOWN, MOST "CAUTION" BAKER TO PASS INTO WELL, VERY DIFFICULT.

If prot. casing; depth to riser below: 25'

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

% LEL: -1

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): 1.3

## PURGE INFORMATION:

Date / Time Initiated: 8/23/16 / 1:40pm

Date / Time Completed: 1

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

Riser Diameter, Inches: 4"

Initial Water Level, Feet: 16.8

Elevation. G/W MSL:

Well Total Depth, Feet: 30.0'

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 2.15 (4 = 8.6)

Dedicated: ( ) Y ( ) N

Total Volume Purged, Gal:

Purged To Dryness Y / N

Purge Observations: SLIGHT ODOR

Start  Finish

PURGE DATA: (if applicable) (SULFUR?)

| Time   | Purge Rate (gpm/htz)                             | Cumulative Volume | Temp. (C) | pH (std units) | Conduct (Umhos/cm) | Turb. (NTU) | Other | Other |
|--------|--------------------------------------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 1:40pm | —                                                | INITIAL           | 17.6      | 7.66           | 0.90               | 3.2         |       |       |
| 1:50pm | —                                                | 2.5               | 16.7      | 7.77           | 0.92               | 26.1        |       |       |
|        | AFTER 3 GALLONS, COARSE SAND PARTICLES IN BAILER |                   |           |                |                    |             |       |       |
|        | CAUSING THE BAIL TO NOT HOLD WATER, WATER        |                   |           |                |                    |             |       |       |
|        | RELEASED INTO WELL ON WAY UP                     |                   |           |                |                    |             |       |       |
|        |                                                  |                   |           |                |                    |             |       |       |
|        |                                                  |                   |           |                |                    |             |       |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-6A

Field Personnel: SJD

Sample Matrix: GW

## MONITORING WELL INSPECTION:

Date/Time 1

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: 1 % LEL: 1

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

## PURGE INFORMATION:

Date / Time Initiated: 8/28/16/11:15

Date / Time Completed: 11:30 AM

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

Riser Diameter, inches: \_\_\_\_\_

Initial Water Level, Feet: 16.8

Elevation, GW MSL: \_\_\_\_\_

Well Total Depth, Feet: 30.0

Method of Well Purge: TUBING w/ FOOT VALVE

One (1) Riser Volume, Gal: 2.15 (4=8.6)

Dedicated: (Y) N

Total Volume Purged, Gal: 4 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 |
|-------------------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 11:19             |                      | 1.0               | 20.6      | 7.77           | 1.03               | 1024        |       |       |
| 11:28             |                      | 3.0               | 17.9      | 7.90           | 1.01               | 1157 (AV)   |       |       |
| DRI AFTER - 4 gal |                      |                   |           |                |                    |             |       |       |
|                   |                      |                   |           |                |                    |             |       |       |
|                   |                      |                   |           |                |                    |             |       |       |
|                   |                      |                   |           |                |                    |             |       |       |
|                   |                      |                   |           |                |                    |             |       |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-613

Field Personnel: SSD

Sample Matrix: GROUND WATER

## MONITORING WELL INSPECTION:

Date/Time 8/23/16 1:15pm

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

Prot. Casing/riser height: 4'

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

If prot. casing; depth to riser below: .3'

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

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): 1.4

## PURGE INFORMATION:

Date / Time Initiated: 8/23/16 1:15pm Date / Time Completed: 8/23/16 1:30pm

Surf. Meas. Pt: (X) Prot. Casing ( ) Riser Riser Diameter, Inches: 4"

Initial Water Level, Feet: 16.65' Elevation, G/W MSL: \_\_\_\_\_

Well Total Depth, Feet: 19.0' Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 38 (4=1.5) Dedicated: (Y) N

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

Purge Observations: SLIGHT ODOOR Start \_\_\_\_\_ Finish \_\_\_\_\_

## PURGE DATA: (if applicable) (SULFUR?)

| Time   | Purge Rate (gpm/htz) | Cumulative Volume | Temp. (C) | pH (std units) | Conduct (Umhos/cm) | Turb. (NTU) | Other | Other |
|--------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 1:23p  | -                    | INITIAL           | 18.5      | 7.22           | 1.28               | 1.90        |       |       |
| 1:30pm |                      | .5                | 20.1      | 7.29           | 1.33               | 1.27        | (DRY) |       |
|        |                      |                   |           |                |                    |             |       |       |
|        |                      |                   |           |                |                    |             |       |       |
|        |                      |                   |           |                |                    |             |       |       |
|        |                      |                   |           |                |                    |             |       |       |
|        |                      |                   |           |                |                    |             |       |       |

## FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-7B

Field Personnel: SJD

Sample Matrix: GROUNDWATER

### MONITORING WELL INSPECTION:

Date/Time 8/22/16 12:05 pm

Cond of seal: ( ) Good ( ) Cracked \_\_\_\_\_ %  
~~( ) None~~ ( ) Buried

Prot. Casing/riser height: 3'

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

If prot. casing; depth to riser below: 69'

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

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): 10.5

### PURGE INFORMATION:

Date / Time Initiated: 8/22/16 / 2:15 pm

Date / Time Completed: 8/22/16 2:30 pm

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

Riser Diameter, Inches: 4"

Initial Water Level, Feet: 35.0'

Elevation. GW MSL: \_\_\_\_\_

Well Total Depth, Feet: 41.4'

Method of Well Purge: BAKER

One (1) Riser Volume, Gal: 1.04 (4 = 4.17)

Dedicated: (Y) N

Total Volume Purged, Gal: 1.5

Purged To Dryness (Y) N @ 1.5

Purge Observations: CLEAR / MINOR 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 |
|-------------|----------------------|-------------------|-------------|----------------|--------------------|-------------|------------|-------|
| <u>2:20</u> | <u>-</u>             | <u>INITIAL</u>    | <u>20.8</u> | <u>13.12</u>   | <u>2.71</u>        | <u>741</u>  |            |       |
| <u>2:24</u> |                      | <u>1.5</u>        | <u>17.4</u> | <u>12.9</u>    | <u>2.98</u>        | <u>20.0</u> | <u>DRY</u> |       |
|             |                      |                   |             |                |                    |             |            |       |
|             |                      |                   |             |                |                    |             |            |       |
|             |                      |                   |             |                |                    |             |            |       |
|             |                      |                   |             |                |                    |             |            |       |

## FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-143R

Field Personnel: SJD

Sample Matrix: GROUNDWATER

### MONITORING WELL INSPECTION:

Date/Time 8/23/16

Cond of seal: ( ) Good ( ) Cracked \_\_\_\_\_ %  
( ) None ( ) Buried

Prot. Casing/riser height: \_\_\_\_\_

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

If prot. casing; depth to riser below: \_\_\_\_\_

Gas Meter (Calibration/ Reading): \_\_\_\_\_ % Gas: 1

% LEL: 1

Vol. Organic Meter (Calibration/Reading): \_\_\_\_\_

Volatiles (ppm): 1

PVC WELL  
STILL  
DAMAGED

### PURGE INFORMATION:

Date / Time Initiated: \_\_\_\_\_

Date / Time Completed: 1

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 \_\_\_\_\_

UN-SAMPLEABLE

### PURGE DATA: (if applicable)

| Time | Purge Rate<br>(gpm/htz) | Cumulative<br>Volume | Temp.<br>(C) | pH<br>(std units) | Conduct<br>(Umhos/cm) | Turb.<br>(NTU) | Other | Other |
|------|-------------------------|----------------------|--------------|-------------------|-----------------------|----------------|-------|-------|
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |
|      |                         |                      |              |                   |                       |                |       |       |

# FIELD OBSERVATIONS

Facility: Marilla Street landfill

Sample Point ID: MLW-15A

Field Personnel: SJD

Sample Matrix: GROUND WATER

## MONITORING WELL INSPECTION:

Date/Time: 8/25/16 1:35pm

Cond of seal: ☒ Good ☐ Cracked ☐ None ☐ Buried

Prot. Casing/riser height: 1.35'

Cond of prot. Casing/riser: ☐ Unlocked ☒ Good  
☐ Loose ☐ Flush Mount  
☐ Damaged

If prot. casing; depth to riser below: .09'

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

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): 1.9

## PURGE INFORMATION:

Date / Time Initiated: 8/25/16 / 2:05pm

Date / Time Completed: 6"

Surf. Meas. Pt: ☒ Prot. Casing ☐ Riser

Riser Diameter, inches: 6"

Initial Water Level, Feet: 9.2

Elevation, G/W MSL: BAKER

Well Total Depth, Feet: 40.8'

Method of Well Purge: BAKER

One (1) Riser Volume, Gal: 5.3 (4-2)

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 21

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       |
|-------|----------------------|-------------------|-----------|----------------|--------------------|-------------|--------|-------------|
| 2:05p |                      | INITIAL           | 16.3      | 7.30           | 1.18               | 8.44        | STRONG | SULFUR ODOR |
| 2:10p | -                    | 5                 | 16.9      | 7.68           | 1.14               | 33.9        |        | ↓           |
| 2:27p |                      | 10                | 16.5      | 7.62           | .91                | 15.8        |        | ↓           |
| 2:37  |                      | 15                | 16.9      | 7.44           | .87                | 9.87        |        | ↓           |
| 2:46  |                      | 21                | 15.2      | 7.32           | .84                | 6.14        |        | ↓           |
|       |                      |                   |           |                |                    |             |        |             |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-15B

Field Personnel: SJD

Sample Matrix: GROUNDWATER

## MONITORING WELL INSPECTION:

Date/Time: 8/25/16 1:35pm

Cond of seal: ☒ Good ☐ Cracked ☐ None ☐ Buried

Prot. Casing/riser height: 85'

Cond of prot. Casing/riser: ☐ Unlocked ☒ Good  
☐ Loose ☐ Flush Mount  
☐ Damaged

If prot. casing; depth to riser below: 0.1'

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

Vol. Organic Meter (Calibration/Reading): 1.4 Volatiles (ppm): 1.4

## PURGE INFORMATION:

Date / Time Initiated: 8/25/16 1:45pm

Date / Time Completed: 1

Surf. Meas. Pt: ☒ Prot. Casing ☐ Riser

Riser Diameter, Inches: 4"

Initial Water Level, Feet: 7.2

Elevation. G/W MSL:

Well Total Depth, Feet: 13.3'

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 10 (4=4)

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 23

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 |
|--------|----------------------|-------------------|-----------|----------------|--------------------|-------------|------------------------|-------|
| 1:45pm | -                    | INITIAL           | 25.7      | 11.5           | 1.76               | 24.4        |                        |       |
| 1:50pm |                      | 2                 | 18.0      | 13.51          | 4.60               | 26.4        | (SLIGHT AMMONIA SMELL) |       |
| 2:00pm |                      | 3                 | 18.0      | 13.56          | 4.06               | 19.6        | ↓                      |       |
|        |                      |                   |           |                |                    |             |                        |       |
|        |                      |                   |           |                |                    |             |                        |       |
|        |                      |                   |           |                |                    |             |                        |       |
|        |                      |                   |           |                |                    |             |                        |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: 16A

Field Personnel: SJD

Sample Matrix: GROUND WATER

## MONITORING WELL INSPECTION:

Date/Time 8/23/16 11:05

Cond of seal: ☒ Good ☐ Cracked ☐ None ☐ Buried

Prot. Casing/riser height: 4'

Cond of prot. Casing/riser: ☐ Unlocked ☒ Good  
☐ Loose ☐ Flush Mount  
☐ Damaged

If prot. casing; depth to riser below: 0.02'

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

% LEL: - 1 -

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): 1 (USED WAST SPRAY FOR NEST IN WELL, CANT GET ACCURATE READING)

## PURGE INFORMATION:

Date / Time Initiated: 8/23/16/11:05

Date / Time Completed: 11:56

Surf. Meas. Pt: ☐ Prot. Casing ☒ Riser

Riser Diameter, Inches: 3.5"

Initial Water Level, Feet: 12.5'

Elevation. G/W MSL: \_\_\_\_\_

Well Total Depth, Feet: 25.4'

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 2.1027 (4.8.4)

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 7.0

Purged To Dryness ☒ Y ☐ N

Purge Observations: QUICK RECOVERY / CLEAR 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 |
|---------|----------------------|-------------------|-----------|----------------|--------------------|-------------|--------|-------|
| 11:10am | -                    | INITIAL           | 17.3      | 7.94           | 0.95               | 11.3        |        |       |
| 11:22am | -                    | 2.5               | 15.4      | 7.13           | 1.12               | 17.4        |        |       |
| 11:36am | -                    | 5.0               | 16.4      | 7.16           | 1.09               | 11.5        |        |       |
| 11:56   |                      | 7.0               | 16.4      | 7.31           | 1.11               | 9.39        | 17.5°C |       |
|         |                      |                   |           |                |                    |             |        |       |
|         |                      |                   |           |                |                    |             |        |       |

(GW-DUP)

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: 16B

Field Personnel: SJD

Sample Matrix: \_\_\_\_\_

## MONITORING WELL INSPECTION:

Date/Time 8-22-16 19:15m

Cond of seal: ☒ Good ☐ Cracked ☐ None ☐ Buried \_\_\_\_\_ %

Prot. Casing/riser height: 1.75'

Cond of prot. Casing/riser: ☐ Unlocked ☒ Good  
☐ Loose ☐ Flush Mount  
☐ Damaged \_\_\_\_\_

If prot.casing; depth to riser below: 0.8'

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

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

## PURGE INFORMATION:

Date / Time Initiated: 8-22-16/9:30am

Date / Time Completed: 1

Surf. Meas. Pt: ☒ Prot. Casing ☐ Riser

Riser Diameter, Inches: 3.5"

Initial Water Level, Feet: 6.15'

Elevation, GW MSL: \_\_\_\_\_

Well Total Depth, Feet: 15.2'

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 1.48 (4: 5.9)

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 6.00 gal

Purged To Dryness ☒ Y ☐ N

Purge Observations: \_\_\_\_\_

Start 9:40am Finish 10:08am

## PURGE DATA: (if applicable)

| Time | Purge Rate (gpm/htz) | Cumulative Volume | Temp. (C) | pH (std units) | Conduct (Umhos/cm) | Turb. (NTU)          | Other | Other |
|------|----------------------|-------------------|-----------|----------------|--------------------|----------------------|-------|-------|
| 942  | -                    | INITIAL           | 20.2      | 12.23          | 1.00               | 2.09                 |       |       |
| 952  |                      | 2 gal             | 14.1      | 12.91          | 1.67               | 21.7                 |       |       |
| 958  |                      | 4 gal             | 14.9      | 13.02          | 1.80               | 11.7                 |       |       |
| 1008 |                      | 6 gal             | 12.1      | 12.87          | 1.77               | <del>11.7</del> 6.25 |       |       |
|      |                      |                   |           |                |                    |                      |       |       |
|      |                      |                   |           |                |                    |                      |       |       |

## FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-18A

Field Personnel: SJD

Sample Matrix: GROUNDWATER

### MONITORING WELL INSPECTION:

Date/Time 8/22/16 14:00pm

Cond of seal: ( ) Good ( ) Cracked ( ) None ( ) Buried \_\_\_\_\_ %

Prot. Casing/riser height: 1.48'

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

If prot. casing; depth to riser below: +0.15

Gas Meter (Calibration/ Reading): \_\_\_\_\_ % Gas: -1- % LEL: 1

Vol. Organic Meter (Calibration/Reading): \_\_\_\_\_ Volatiles (ppm): -14.00

### PURGE INFORMATION:

Date / Time Initiated: 8/22/16 14:05pm

Date / Time Completed: 8/22/16 14:50pm

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

Riser Diameter, Inches: 3.5"

Initial Water Level, Feet: 47.4'

Elevation. GW MSL: \_\_\_\_\_

Well Total Depth, Feet: 61.1

Method of Well Purge: BALER

One (1) Riser Volume, Gal: 2.23 (4 = 8.93)

Dedicated: (X) N

Total Volume Purged, Gal: \_\_\_\_\_

Purged To Dryness Y (X) N

Purge Observations: ORANGE FLAKES / SLIGHTLY Start \_\_\_\_\_ Finish \_\_\_\_\_  
CL O.D.

### PURGE DATA: (if applicable)

| Time   | Purge Rate (gpm/htz) | Cumulative Volume | Temp. (C) | pH (std units) | Conduct (Umhos/cm) | Turb. (NTU) | Other | Other      |
|--------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|------------|
| 4:06pm | -                    | INITIAL           | 16.4      | 7.35           | 1.89               | 22.0        |       |            |
| 4:20pm |                      | 2.5               | 17.0      | 7.30           | 2.22               | 111.0       |       |            |
| 4:32pm |                      | 5                 | 15.8      | 7.23           | 2.46               | 107.0       |       | T          |
| 4:45pm |                      | 7.5               | 15.5      | 7.24           | 2.47               | 884 (AV)    |       | BROWN TINT |
| 4:50pm |                      | 9                 | 15.1      | 7.27           | 2.55               | 947 (AV)    |       | ↓          |
|        |                      |                   |           |                |                    |             |       |            |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-18B

Field Personnel: SJD

Sample Matrix: GROUNDWATER

## MONITORING WELL INSPECTION:

Date/Time 8/22/16 13:05

Cond of seal: ( ) Good ☒ Cracked 20 %  
( ) None ( ) Buried

Prot. Casing/riser height: 1.5'

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

If prot.casing; depth to riser below: 0'

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

% LEL: - 1 -

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): 104

## PURGE INFORMATION:

Date / Time Initiated: 8/22/16 3:15pm

Date / Time Completed: 8/22/16 3:40pm

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

Riser Diameter, Inches: 3.5"

Initial Water Level, Feet: 45.5

Elevation. GW MSL: \_\_\_\_\_

Well Total Depth, Feet: 52.5

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 1.14 (4 = 4.56)

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 5 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 |
|--------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 3:16pm | -                    | INITIAL           | 15.5      | 8.10           | 1.09               | 1.09        | 2.80  |       |
| 3:30pm | -                    | 2.5               | 15.3      | 8.32           | 3.02               | 6.66        |       |       |
| 3:40pm | -                    | 5.0               | 14.5      | 8.29           | 3.03               | 7.43        |       |       |
|        |                      |                   |           |                |                    |             |       |       |
|        |                      |                   |           |                |                    |             |       |       |
|        |                      |                   |           |                |                    |             |       |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW-1

Field Personnel: SJD

Sample Matrix: SURFACE WATER

## MONITORING WELL INSPECTION:

Date/Time 8/23/16 1 9:45 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: 1 % LEL: 1

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

## PURGE INFORMATION:

Date / Time Initiated: \_\_\_\_\_

Date / Time Completed: 1

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<br>(gpm/htz) | Cumulative<br>Volume | Temp.<br>( C) | pH<br>(std units) | Conduct<br>(Umhos/cm) | Turb.<br>(NTU) | Other | Other |
|---------|-------------------------|----------------------|---------------|-------------------|-----------------------|----------------|-------|-------|
| 9:45 am | -                       | -                    | 23.0          | 7.56              | 1.23                  | 12.7           |       |       |
|         |                         |                      |               |                   |                       |                |       |       |
|         |                         |                      |               |                   |                       |                |       |       |
|         |                         |                      |               |                   |                       |                |       |       |
|         |                         |                      |               |                   |                       |                |       |       |
|         |                         |                      |               |                   |                       |                |       |       |
|         |                         |                      |               |                   |                       |                |       |       |

(SW-DUP)

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW-ZA

Field Personnel: SJD

Sample Matrix: SURFACE WATER

## MONITORING WELL INSPECTION:

Date/Time 8/22/16 11:00am

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:

N/A

Date / Time Initiated: -

Date / Time Completed: 1

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

Riser Diameter, Inches: -

Initial Water Level, Feet: -

Elevation. GW 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<br>(gpm/htz) | Cumulative<br>Volume | Temp.<br>(C) | pH<br>(std units) | Conduct<br>(Umhos/cm) | Turb.<br>(NTU) | Other | Other |
|---------|-------------------------|----------------------|--------------|-------------------|-----------------------|----------------|-------|-------|
| 11:05am | -                       | -                    | 24.8         | 7.48              | 1.36                  | 6.71           |       |       |
|         |                         |                      |              |                   |                       |                |       |       |
|         |                         |                      |              |                   |                       |                |       |       |
|         |                         |                      |              |                   |                       |                |       |       |
|         |                         |                      |              |                   |                       |                |       |       |
|         |                         |                      |              |                   |                       |                |       |       |

# FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW-3A

Field Personnel: SJD

Sample Matrix: SURFACE WATER

## MONITORING WELL INSPECTION:

Date/Time 8/25/16 9:25A

Cond of seal: ( ) Good ( ) Cracked 1 %  
( ) 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: 1 % LEL: 1

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

## PURGE INFORMATION:

Date / Time Initiated: 8/25/16

Date / Time Completed: 1

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 |
|-------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 9:25A | -                    | -                 | 24.0      | 8.28           | 1.21               | 11.99       |       |       |
|       |                      |                   |           |                |                    |             |       |       |
|       |                      |                   |           |                |                    |             |       |       |
|       |                      |                   |           |                |                    |             |       |       |
|       |                      |                   |           |                |                    |             |       |       |
|       |                      |                   |           |                |                    |             |       |       |
|       |                      |                   |           |                |                    |             |       |       |

## FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW-5

Field Personnel: SJD

Sample Matrix: SURFACE WATER

### MONITORING WELL INSPECTION:

Date/Time 8/23/16 1:00 PM

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: 1

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

Riser Diameter, Inches: -

Initial Water Level, Feet: -

Elevation, GW 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 |
|---------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 9:05 AM | -                    | -                 | 21.9      | 9.11           | 127.9              | 72          |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |
|         |                      |                   |           |                |                    |             |       |       |

## FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SED-1

Field Personnel: SJD

Sample Matrix: SEDIMENT

### MONITORING WELL INSPECTION:

Date/Time 8/22/16 11:55 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: — 1 — % LEL: — 1 —

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

### PURGE INFORMATION:

Date / Time Initiated: —

Date / Time Completed: 1

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

Riser Diameter, Inches: —

Initial Water Level, Feet: —

Elevation. GW 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 |
|----------|----------------------|-------------------|-----------|----------------|--------------------|-------------|-------|-------|
| 11:55 AM | —                    | —                 | 24.5      | 7.45           | 1.18               | —           |       |       |
|          |                      |                   |           |                |                    |             |       |       |
|          |                      |                   |           |                |                    |             |       |       |
|          |                      |                   |           |                |                    |             |       |       |
|          |                      |                   |           |                |                    |             |       |       |
|          |                      |                   |           |                |                    |             |       |       |
|          |                      |                   |           |                |                    |             |       |       |

# FIELD OBSERVATIONS

(BLIND DUP)  
(MS)  
(MSD)

Facility: Marilla Street Landfill

Sample Point ID: SED 2

Field Personnel: SJD

Sample Matrix: SEDIMENT

## MONITORING WELL INSPECTION:

Date/Time 8/25/16

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: 1 % LEL: 1

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

## PURGE INFORMATION:

Date / Time Initiated: \_\_\_\_\_

Date / Time Completed: 1

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<br>(gpm/htz) | Cumulative<br>Volume | Temp.<br>(C) | pH<br>(std units) | Conduct<br>(Umhos/cm) | Turb.<br>(NTU) | Other | Other |
|-------|-------------------------|----------------------|--------------|-------------------|-----------------------|----------------|-------|-------|
| 10:10 | -                       | -                    | 24.9         | 8.29              | 1.15                  | -              |       |       |
|       |                         |                      |              |                   |                       |                |       |       |
|       |                         |                      |              |                   |                       |                |       |       |
|       |                         |                      |              |                   |                       |                |       |       |
|       |                         |                      |              |                   |                       |                |       |       |
|       |                         |                      |              |                   |                       |                |       |       |
|       |                         |                      |              |                   |                       |                |       |       |

## **APPENDIX C**

# **Laboratory Reports and Chain of Custody Forms**





September 07, 2016

Service Request No:R1608965

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

**Laboratory Results for: Marilla St. Landfill - Surface Water**

Dear Ms.Zurawski,

Enclosed are the results of the sample(s) submitted to our laboratory August 24, 2016  
For your reference, these analyses have been assigned our service request number **R1608965**.

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

**ADDRESS** 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
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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](http://www.alsglobal.com)

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Received:** 08/24/16 - 08/26/16

### 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

Ten water samples were received for analysis at ALS Environmental on 08/24/2016. 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  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Volatile Organic Analyses:

No significant anomalies were noted with this analysis.

#### Metals Analyses:

No significant anomalies were noted with this analysis.

#### General Chemistry Analyses:

No significant anomalies were noted with this analysis.

Approved by  Date 9/7/2016

### SAMPLE DETECTION SUMMARY

| CLIENT ID: SW-1               |         | Lab ID: R1608965-001 |        |        |       |            |
|-------------------------------|---------|----------------------|--------|--------|-------|------------|
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 13.2    |                      | 0.2    | 1.0    | mg/L  | SM 5310 B- |
| Phenolics, Total Recoverable  | 0.0072  |                      | 0.0010 | 0.0050 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 738     |                      | 8      | 20     | mg/L  | SM 2540 C- |
| Iron, Total                   | 2270    |                      | 9      | 100    | ug/L  | 6010C      |
| Manganese, Total              | 657     |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: SW-1 Dissolved     |         | Lab ID: R1608965-002 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Iron, Dissolved               | 110     |                      | 9      | 100    | ug/L  | 6010C      |
| Manganese, Dissolved          | 635     |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: SW-2A              |         | Lab ID: R1608965-003 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 12.5    |                      | 0.2    | 1.0    | mg/L  | SM 5310 B- |
| Phenolics, Total Recoverable  | 0.0061  |                      | 0.0010 | 0.0050 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 626     |                      | 8      | 20     | mg/L  | SM 2540 C- |
| Iron, Total                   | 870     |                      | 9      | 100    | ug/L  | 6010C      |
| Manganese, Total              | 80      |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: SW-2A Dissolved    |         | Lab ID: R1608965-004 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Manganese, Dissolved          | 47      |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: SW-5               |         | Lab ID: R1608965-005 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 12.4    |                      | 0.2    | 1.0    | mg/L  | SM 5310 B- |
| Phenolics, Total Recoverable  | 0.0061  |                      | 0.0010 | 0.0050 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 1010    |                      | 8      | 20     | mg/L  | SM 2540 C- |
| Iron, Total                   | 1480    |                      | 9      | 100    | ug/L  | 6010C      |
| Manganese, Total              | 79      |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: SW DUP             |         | Lab ID: R1608965-007 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 12.9    |                      | 0.2    | 1.0    | mg/L  | SM 5310 B- |
| Phenolics, Total Recoverable  | 0.0061  |                      | 0.0010 | 0.0050 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 635     |                      | 4      | 10     | mg/L  | SM 2540 C- |
| Iron, Total                   | 890     |                      | 9      | 100    | ug/L  | 6010C      |
| Manganese, Total              | 79      |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: SW DUP Dissolved   |         | Lab ID: R1608965-008 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Manganese, Dissolved          | 47      |                      | 1.0    | 10     | ug/L  | 6010C      |

### SAMPLE DETECTION SUMMARY

| CLIENT ID: SW-3A              |         | Lab ID: R1608965-009 |     |     |       |            |
|-------------------------------|---------|----------------------|-----|-----|-------|------------|
| Analyte                       | Results | Flag                 | MDL | PQL | Units | Method     |
| Carbon, Total Organic (TOC)   | 10.6    |                      | 0.2 | 1.0 | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 654     |                      | 8   | 20  | mg/L  | SM 2540 C- |
| Iron, Total                   | 770     |                      | 9   | 100 | ug/L  | 6010C      |
| Manganese, Total              | 159     |                      | 1.0 | 10  | ug/L  | 6010C      |
| CLIENT ID: SW-3A Dissolved    |         | Lab ID: R1608965-010 |     |     |       |            |
| Analyte                       | Results | Flag                 | MDL | PQL | Units | Method     |
| Manganese, Dissolved          | 31      |                      | 1.0 | 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](http://www.alsglobal.com)

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water

**Service Request:**R1608965

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| R1608965-001    | SW-1                    | 8/23/2016   | 0950        |
| R1608965-002    | SW-1 Dissolved          | 8/23/2016   | 0950        |
| R1608965-003    | SW-2A                   | 8/22/2016   | 1115        |
| R1608965-004    | SW-2A Dissolved         | 8/22/2016   | 1115        |
| R1608965-005    | SW-5                    | 8/23/2016   | 0905        |
| R1608965-006    | SW-5 Dissolved          | 8/23/2016   | 0905        |
| R1608965-007    | SW DUP                  |             |             |
| R1608965-008    | SW DUP Dissolved        |             |             |
| R1608965-009    | SW-3A                   | 8/25/2016   | 0930        |
| R1608965-010    | SW-3A Dissolved         | 8/25/2016   | 0930        |

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 of 2

| Project Name<br><b>MARILLA ST CANDILL</b>                                                                            |                            | Project Number |               | ANALYSIS REQUESTED (Include Method Number and Container Preservative) |                                  |                                  |                             |                                       |                      |                                              |                                               |     |          |    |        |        |                                                                                                                                         |   |  |   |  |
|----------------------------------------------------------------------------------------------------------------------|----------------------------|----------------|---------------|-----------------------------------------------------------------------|----------------------------------|----------------------------------|-----------------------------|---------------------------------------|----------------------|----------------------------------------------|-----------------------------------------------|-----|----------|----|--------|--------|-----------------------------------------------------------------------------------------------------------------------------------------|---|--|---|--|
| Project Manager<br><b>A. CURRASHI</b>                                                                                |                            | Report CC      |               | PRESERVATIVE                                                          |                                  | 8                                |                             | 2                                     |                      | 2                                            |                                               | 0   |          | 3  |        | 4      |                                                                                                                                         | 0 |  | 0 |  |
| Company/Address<br><b>DAIGLER ENGINEERING P.C.</b><br><b>2620 GRAND ISLAND BLVD</b><br><b>GRAND ISLAND, NY 14072</b> |                            |                |               | Phone #<br><b>716 773 6872</b>                                        |                                  | Email<br><b>SAM@JADEWEAR.COM</b> |                             | Sampler's Signature<br><b>DAIGLER</b> |                      | Sampler's Printed Name<br><b>SAM DAIGLER</b> |                                               |     |          |    |        |        |                                                                                                                                         |   |  |   |  |
| CLIENT SAMPLE ID                                                                                                     | FOR OFFICE USE ONLY LAB ID | DATE           | SAMPLING TIME | MATRIX                                                                | NUMBER OF CONTAINERS             |                                  |                             |                                       |                      |                                              |                                               |     |          |    |        |        |                                                                                                                                         |   |  |   |  |
|                                                                                                                      |                            |                |               |                                                                       | GC/MS VOAs<br>• 8260 • 624 • CLP | GC/MS SVOCs<br>• 8270 • 625      | GC VOAs<br>• 8021 • 601/602 | PESTICIDES<br>• 8081 • 608            | PCBs<br>• 8082 • 608 | METALS, TOTAL<br>(List in comments below)    | METALS, DISSOLVED<br>(List in comments below) | TDS | TOC, LRP | CN | METALS | PHENOL | PRESERVATIVE KEY<br>0. NONE<br>1. HCL<br>2. HNO3<br>3. H2SO4<br>4. NaOH<br>5. Zn Acetate<br>6. MeOH<br>7. NaHSO4<br>8. Other <b>HCL</b> |   |  |   |  |
| MW-2B                                                                                                                |                            | 8/22/16        | 1:00 PM       | GROUND WATER                                                          | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| MW-16B                                                                                                               |                            | 8/22/16        | 10:15 AM      | GROUND WATER                                                          | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| MW-16A                                                                                                               |                            | 8/23/16        | 12:05 PM      | GROUND WATER                                                          | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| MW-18B                                                                                                               |                            | 8/22/16        | 3:45 PM       | GROUND WATER                                                          | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| MW-18A                                                                                                               |                            | 8/22/16        | 4:45 PM       | GROUND WATER                                                          | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| MW-6B                                                                                                                |                            | 8/23/16        | 2:15 PM       | GROUND WATER                                                          | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| MW-7B                                                                                                                |                            | 8/23/16        | 10:30 AM      | GROUND WATER                                                          | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| SW-1                                                                                                                 |                            | 8/23/16        | 9:55 AM       | SURFACE WATER                                                         | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| SW-2A                                                                                                                |                            | 8/23/16        | 11:15 AM      | SURFACE WATER                                                         | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| SW-5                                                                                                                 |                            | 8/23/16        | 4:05 AM       | SURFACE WATER                                                         | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |
| SED-1                                                                                                                |                            | 8/22/16        | 12:00 PM      | SEDIMENT                                                              | X                                |                                  |                             |                                       |                      | X                                            | X                                             | X   | X        |    |        |        |                                                                                                                                         |   |  |   |  |

**SPECIAL INSTRUCTIONS/COMMENTS**

**Metals**

GW: AS CR Fe Pb Mn

SW: AS CR Fe Pb Mn

See OAPP ☐

STATE WHERE SAMPLES WERE COLLECTED **MARILLA ST CANDILL**

**RELINQUISHED BY**

Signature: *[Signature]*

Printed Name: **SAM DAIGLER**

Firm: **DAIGLER ENGINEERING P.C.**

Date/Time: **8/22/16 1500**

**RECEIVED BY**

Signature: *[Signature]*

Printed Name: **SAM DAIGLER**

Firm: **DAIGLER ENGINEERING P.C.**

Date/Time: **8/22/16 1500**

**TURNAROUND REQUIREMENTS**

RUSH (SURCHARGES APPLY)

1 day \_\_\_\_\_ 2 day \_\_\_\_\_ 3 day \_\_\_\_\_

4 day \_\_\_\_\_ 5 day \_\_\_\_\_

**REQUESTED REPORT DATE**

\_\_\_\_\_

**REPORT REQUIREMENTS**

I. Results Only \_\_\_\_\_

II. Results + QC Summaries (LCS, DUP, MS/W, SD as required) \_\_\_\_\_

III. Results + QC and Calibration Summaries \_\_\_\_\_

IV. Data Validator Report with Raw Data \_\_\_\_\_

**RELINQUISHED BY**

Signature: *[Signature]*

Printed Name: **SAM DAIGLER**

Firm: **DAIGLER ENGINEERING P.C.**

Date/Time: **8/22/16 1500**

**RECEIVED BY**

Signature: *[Signature]*

Printed Name: **SAM DAIGLER**

Firm: **DAIGLER ENGINEERING P.C.**

Date/Time: **8/22/16 1500**

**INVOICE INFORMATION**

PO # \_\_\_\_\_

BILL TO: \_\_\_\_\_

DATE \_\_\_\_\_

**REMARKS/ALTERNATE DESCRIPTION**

\_\_\_\_\_



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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

PAGE 2

| ANALYSIS REQUESTED (Include Method Number and Container Preservative) |   |   |   |   |   |
|-----------------------------------------------------------------------|---|---|---|---|---|
| PRESERVATIVE                                                          | 0 | 1 | 2 | 3 | 4 |
| GCMMS VOAS<br>8260 • 624 • CLP                                        |   |   |   |   |   |
| GCMMS SVCS<br>8270 • 625                                              |   |   |   |   |   |
| GC VOAS<br>8021 • 601/602                                             |   |   |   |   |   |
| PESTICIDES<br>8081 • 608                                              |   |   |   |   |   |
| PC9S<br>8082 • 608                                                    |   |   |   |   |   |
| METALS TOTAL<br>(List in comments below)                              |   |   |   |   |   |
| METALS DISSOLVED<br>(List in comments below)                          |   |   |   |   |   |
| TDS                                                                   |   |   |   |   |   |
| TC/IRP                                                                |   |   |   |   |   |
| CN                                                                    |   |   |   |   |   |
| Preservative Key                                                      |   |   |   |   |   |
| 0. NONE                                                               |   |   |   |   |   |
| 1. HCL                                                                |   |   |   |   |   |
| 2. HNO <sub>3</sub>                                                   |   |   |   |   |   |
| 3. H <sub>2</sub> SO <sub>4</sub>                                     |   |   |   |   |   |
| 4. NaOH                                                               |   |   |   |   |   |
| 5. Zn. Acetate                                                        |   |   |   |   |   |
| 6. MeOH                                                               |   |   |   |   |   |
| 7. NaHSO <sub>4</sub>                                                 |   |   |   |   |   |
| 8. Other                                                              |   |   |   |   |   |

| SPECIAL INSTRUCTIONS/COMMENTS                                                          | TURNAROUND REQUIREMENTS                                                                                                                     | REPORT REQUIREMENTS                                                                                                                                                                                                                             | INVOICE INFORMATION                     |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <p>Metals</p> <p>GW: As Cr Fe Pb Mn</p> <p>SW: As Cd Cr Fe Pb Mn</p> <p>See QAPP ☐</p> | <p>____ RUSH (SURCHARGES APPLY)</p> <p>____ 1 day ____ 2 day ____ 3 day</p> <p>____ 4 day ____ 5 day</p> <p>REQUESTED REPORT DATE _____</p> | <p>____ I. Results Only</p> <p>____ II. Results + QC : Summaries (LOS, DUP, MS/NISD as required)</p> <p>____ III. Results + QC and Calibration Summaries</p> <p>____ IV. Data Validation Report with Raw Data</p> <p>Edata ____ Yes ____ No</p> | <p>PO # _____</p> <p>BILL TO: _____</p> |

| RELINQUISHED BY                                                         | RECEIVED BY                                                        | RELINQUISHED BY                                                    | RECEIVED BY                                                        |
|-------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|
| <p>STATE WHERE SAMPLES WERE COLLECTED MARILLA ST CANDELL</p>            |                                                                    |                                                                    |                                                                    |
| <p>Signature _____</p> <p>Printed Name SAM DAIGLER</p> <p>Firm D.E.</p> | <p>Signature _____</p> <p>Printed Name _____</p> <p>Firm _____</p> | <p>Signature _____</p> <p>Printed Name _____</p> <p>Firm _____</p> | <p>Signature _____</p> <p>Printed Name _____</p> <p>Firm _____</p> |

| DATE/TIME | DATE/TIME | DATE/TIME | DATE/TIME |
|-----------|-----------|-----------|-----------|
| 1500      |           |           |           |

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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|                                                                 |  |                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                  |  |                                                                                                                                                                                                |  |                                  |  |                                         |  |  |  |  |  |
|-----------------------------------------------------------------|--|---------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|--|-----------------------------------------|--|--|--|--|--|
| Project Name<br><b>MARULA ST. LANDFILL</b>                      |  | Project Number                              |  | ANALYSIS REQUESTED (Include Method Number and Container Preservative)                                                                                                                                                                                                                                                                                                                                                            |  |                                  |  |                                                                                                                                                                                                |  |                                  |  |                                         |  |  |  |  |  |
| Project Manager<br><b>A. ZORAWSKI</b>                           |  | Report CC                                   |  | PRESERVATIVE                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                  |  |                                                                                                                                                                                                |  |                                  |  |                                         |  |  |  |  |  |
| Company/Address<br><b>DAIGER ENGINEERING P.C.</b>               |  |                                             |  | <div style="display: flex; justify-content: space-between;"> <div> GC/MS VOAs<br/>• 8260 • 624 • CLP<br/>GC/MS SVOAs<br/>• 8270 • 625<br/>GC VOAs<br/>• 6021 • 601/602<br/>PESTICIDES<br/>• 8081 • 608<br/>PCBs<br/>• 8082 • 608<br/>METALS, TOTAL<br/>(List in comments below)<br/>METALS, DISSOLVED<br/>(List in comments below)<br/>TDS<br/>TOL, TBP<br/>CN<br/>METALS<br/>PHENOLS </div> <div> 3 per container </div> </div> |  |                                  |  |                                                                                                                                                                                                |  |                                  |  |                                         |  |  |  |  |  |
| 2620. GRAND ISLAND BLVD                                         |  |                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                  |  |                                                                                                                                                                                                |  |                                  |  |                                         |  |  |  |  |  |
| 612 AND ISLAND, NY 14072                                        |  |                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                  |  |                                                                                                                                                                                                |  |                                  |  |                                         |  |  |  |  |  |
| Phone #<br><b>716 773 6872</b>                                  |  | Email<br><b>SAM@DAIGENVEGR.COM</b>          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                  |  |                                                                                                                                                                                                |  |                                  |  |                                         |  |  |  |  |  |
| Sampler's Signature<br><i>[Signature]</i>                       |  | Sampler's Printed Name<br><b>SAM DAIGER</b> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                  |  |                                                                                                                                                                                                |  |                                  |  |                                         |  |  |  |  |  |
| CLIENT SAMPLE ID                                                |  |                                             |  | FOR OFFICE USE ONLY LAB ID                                                                                                                                                                                                                                                                                                                                                                                                       |  | DATE                             |  | SAMPLING TIME                                                                                                                                                                                  |  | MATRIX                           |  |                                         |  |  |  |  |  |
| MW-24                                                           |  |                                             |  | 8/26/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 9:15am                           |  | GROUND WATER                                                                                                                                                                                   |  | 6                                |  | X                                       |  |  |  |  |  |
| MW-44                                                           |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 12:40pm                          |  | GROUND WATER                                                                                                                                                                                   |  | 6                                |  | X                                       |  |  |  |  |  |
| MW-4B                                                           |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 12:50pm                          |  | GROUND WATER                                                                                                                                                                                   |  | 6                                |  | X                                       |  |  |  |  |  |
| MW-3A                                                           |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 10:30am                          |  | GROUND WATER                                                                                                                                                                                   |  | 6                                |  | X                                       |  |  |  |  |  |
| MW-3B                                                           |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 10:45am                          |  | GROUND WATER                                                                                                                                                                                   |  | 6                                |  | X                                       |  |  |  |  |  |
| MW-16A                                                          |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 3:00pm                           |  | GROUND WATER                                                                                                                                                                                   |  | 5                                |  | X                                       |  |  |  |  |  |
| MW-15B                                                          |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 3:10pm                           |  | GROUND WATER                                                                                                                                                                                   |  | 5                                |  | X                                       |  |  |  |  |  |
| SW-3A                                                           |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 9:30am                           |  | SURFACE WATER                                                                                                                                                                                  |  | 6                                |  | X                                       |  |  |  |  |  |
| SED-2                                                           |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 9:50am                           |  | SEDIMENT                                                                                                                                                                                       |  | 2                                |  | X                                       |  |  |  |  |  |
| SED-DUP                                                         |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                  |  | SEDIMENT                                                                                                                                                                                       |  | 2                                |  | X                                       |  |  |  |  |  |
| SED-M5                                                          |  |                                             |  | 8/25/16                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 9:55am                           |  | SEDIMENT                                                                                                                                                                                       |  | 1                                |  | X                                       |  |  |  |  |  |
| SPECIAL INSTRUCTIONS/COMMENTS<br>Metals                         |  |                                             |  | TURNAROUND REQUIREMENTS<br>RUSH (SURCHARGES APPLY)<br>1 day 2 day 3 day<br>4 day 5 day                                                                                                                                                                                                                                                                                                                                           |  |                                  |  | REPORT REQUIREMENTS<br>I. Results Only<br>II. Results + QC Summaries (LCS, DUP, MSN/SD as required)<br>III. Results + QC and Calibration Summaries<br>IV. Data Validation Report with Raw Data |  |                                  |  | INVOICE INFORMATION<br>PO #<br>BILL TO: |  |  |  |  |  |
| STATE WHERE SAMPLES WERE COLLECTED<br><b>MARULA ST LANDFILL</b> |  |                                             |  | RECEIVED BY<br><i>[Signature]</i>                                                                                                                                                                                                                                                                                                                                                                                                |  |                                  |  | RELINQUISHED BY<br><i>[Signature]</i>                                                                                                                                                          |  |                                  |  | RECEIVED BY<br><b>R1608965</b>          |  |  |  |  |  |
| RELINQUISHED BY                                                 |  | RECEIVED BY                                 |  | RELINQUISHED BY                                                                                                                                                                                                                                                                                                                                                                                                                  |  | RECEIVED BY                      |  | RELINQUISHED BY                                                                                                                                                                                |  | RECEIVED BY                      |  | RECEIVED BY                             |  |  |  |  |  |
| Signature<br><i>[Signature]</i>                                 |  | Signature<br><i>[Signature]</i>             |  | Signature<br><i>[Signature]</i>                                                                                                                                                                                                                                                                                                                                                                                                  |  | Signature<br><i>[Signature]</i>  |  | Signature<br><i>[Signature]</i>                                                                                                                                                                |  | Signature<br><i>[Signature]</i>  |  | Signature<br><i>[Signature]</i>         |  |  |  |  |  |
| Printed Name<br><b>SAM DAIGER</b>                               |  | Printed Name<br><b>JOE SEAY</b>             |  | Printed Name<br><b>JOE SEAY</b>                                                                                                                                                                                                                                                                                                                                                                                                  |  | Printed Name<br><b>JOE SEAY</b>  |  | Printed Name<br><b>JOE SEAY</b>                                                                                                                                                                |  | Printed Name<br><b>JOE SEAY</b>  |  | Printed Name<br><b>JOE SEAY</b>         |  |  |  |  |  |
| Firm<br><b>DAIGER ENGINEERING</b>                               |  | Firm<br><b>ALS</b>                          |  | Firm<br><b>ALS</b>                                                                                                                                                                                                                                                                                                                                                                                                               |  | Firm<br><b>ALS</b>               |  | Firm<br><b>ALS</b>                                                                                                                                                                             |  | Firm<br><b>ALS</b>               |  | Firm<br><b>ALS</b>                      |  |  |  |  |  |
| Date/Time<br><b>8/25/16 11:36am</b>                             |  | Date/Time<br><b>8/26/16 1440</b>            |  | Date/Time<br><b>8/26/16 1355</b>                                                                                                                                                                                                                                                                                                                                                                                                 |  | Date/Time<br><b>8/26/16 1355</b> |  | Date/Time<br><b>8/26/16 1355</b>                                                                                                                                                               |  | Date/Time<br><b>8/26/16 1355</b> |  | Date/Time<br><b>8/26/16 1355</b>        |  |  |  |  |  |



## Cooler Receipt and Preservation Check Form

R1608965

5

Daigler Engineering  
Surface WaterProject/Client Daigler Folder Number R16-8965Cooler received on 8/24/16 by: ECOURIER: ALS UPS FEDEX VELOCITY CLIENT

|   |                                                      |                                                            |
|---|------------------------------------------------------|------------------------------------------------------------|
| 1 | Were Custody seals on outside of cooler?             | <input checked="" type="radio"/> Y <input type="radio"/> N |
| 2 | Custody papers properly completed (ink, signed)?     | <input checked="" type="radio"/> Y <input type="radio"/> N |
| 3 | Did all bottles arrive in good condition (unbroken)? | <input checked="" type="radio"/> Y <input type="radio"/> N |
| 4 | Circle: <u>Wet Ice</u> Dry Ice Gel packs present?    | <input checked="" type="radio"/> Y <input type="radio"/> N |

|    |                                                   |                                                               |
|----|---------------------------------------------------|---------------------------------------------------------------|
| 5a | Perchlorate samples have required headspace?      | Y <input type="radio"/> N <input checked="" type="radio"/> NA |
| 5b | Did VOA vials, Alk, or Sulfide have sig* bubbles? | Y <input checked="" type="radio"/> N <input type="radio"/> NA |
| 6  | Where did the bottles originate?                  | <u>ALS/ROC</u> CLIENT                                         |
| 7  | Soil VOA received as: Bulk Encore 5035set         | <input checked="" type="radio"/> NA                           |

8. Temperature Readings Date: 8/24/16 Time: 1510 ID: IR#5 IR#6 From: Temp Blank Sample Bottle

|                               |                                                            |                                                            |                           |                           |                           |                           |                           |
|-------------------------------|------------------------------------------------------------|------------------------------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Observed Temp (°C)            | <u>1.8</u>                                                 | <u>1.9</u>                                                 |                           |                           |                           |                           |                           |
| Correction Factor (°C)        | <u>-</u>                                                   | <u>-</u>                                                   |                           |                           |                           |                           |                           |
| Corrected Temp (°C)           | <u>1.8</u>                                                 | <u>1.9</u>                                                 |                           |                           |                           |                           |                           |
| Within 0-6°C?                 | <input checked="" type="radio"/> Y <input type="radio"/> N | <input checked="" type="radio"/> Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N |
| If <0°C, were samples frozen? | Y <input type="radio"/> N                                  | Y <input type="radio"/> N                                  | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N |

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

&amp; Client Approval to Run Samples: \_\_\_\_\_ Standing Approval \_\_\_\_\_ Client aware at drop-off \_\_\_\_\_ Client notified by: \_\_\_\_\_

All samples held in storage location: R-002 by E on 8/24/16 at 1510  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_Cooler Breakdown: Date: 8/24/16 Time: 2029 by: SLW

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

Explain any discrepancies:

| pH                    | Reagent                                       | Yes                                 | No | Lot Received                                                                                   | Exp         | Sample ID | Vol. Added | Lot Added | Final pH |
|-----------------------|-----------------------------------------------|-------------------------------------|----|------------------------------------------------------------------------------------------------|-------------|-----------|------------|-----------|----------|
| ≥12                   | NaOH                                          | <input checked="" type="checkbox"/> |    | <u>WC14917713</u>                                                                              | <u>5/17</u> |           |            |           |          |
| ≤2                    | HNO <sub>3</sub>                              | <input checked="" type="checkbox"/> |    | <u>308261536</u>                                                                               | <u>6/17</u> |           |            |           |          |
| ≤2                    | H <sub>2</sub> SO <sub>4</sub>                | <input checked="" type="checkbox"/> |    | <u>WC1610017</u>                                                                               | <u>8/17</u> |           |            |           |          |
| <4                    | NaHSO <sub>4</sub>                            |                                     |    |                                                                                                |             |           |            |           |          |
| Residual Chlorine (-) | For CN Phenol and 522                         | <input checked="" type="checkbox"/> |    | If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol). |             |           |            |           |          |
|                       | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | -                                   | -  |                                                                                                |             |           |            |           |          |
|                       | ZnAcetate                                     | -                                   | -  |                                                                                                |             |           |            |           |          |
|                       | HCl                                           | **                                  | ** |                                                                                                |             |           |            |           |          |

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: \_\_\_\_\_

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

Bottle lot numbers: 8-317-002, C50916-15W, C52016-21AD  
Other Comments:

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

PC Secondary Review: \_\_\_\_\_

\*significant air bubbles: VOA &gt; 5-6 mm : WC &gt; 1 in. diameter



## Cooler Receipt and Preservation Check Form

R1608965

5

Daigler Engineering  
Surface WaterProject/Client Daigler Eng. Folder Number R16-8965Cooler received on 8/26/16 by: SLCOURIER: ALS UPS FEDEX VELOCITY CLIENT

|   |                                                       |                                       |
|---|-------------------------------------------------------|---------------------------------------|
| 1 | Were Custody seals on outside of cooler?              | <input checked="" type="checkbox"/> N |
| 2 | Custody papers properly completed (ink, signed)?      | <input checked="" type="checkbox"/> N |
| 3 | Did all bottles arrive in good condition (unbroken)?  | <input checked="" type="checkbox"/> N |
| 4 | Circle: <del>Wet Ice</del> Dry Ice Gel packs present? | <input checked="" type="checkbox"/> N |

|    |                                                   |                                                            |
|----|---------------------------------------------------|------------------------------------------------------------|
| 5a | Perchlorate samples have required headspace?      | Y N <input checked="" type="checkbox"/> NA                 |
| 5b | Did VOA vials, Alk, or Sulfide have sig* bubbles? | Y <input checked="" type="checkbox"/> NA                   |
| 6  | Where did the bottles originate?                  | AL <u>8/ROC</u> CLIENT                                     |
| 7  | Soil VOA received as:                             | Bulk Encore 5035set <input checked="" type="checkbox"/> NA |

8. Temperature Readings Date: 8/26/16 Time: 1417 ID: IR#5 IR#6 From: Temp Blank Sample Bottle

|                               |                                       |     |     |     |     |     |     |
|-------------------------------|---------------------------------------|-----|-----|-----|-----|-----|-----|
| Observed Temp (°C)            | <u>2.7</u>                            |     |     |     |     |     |     |
| Correction Factor (°C)        | <u>20.6</u>                           |     |     |     |     |     |     |
| Corrected Temp (°C)           | <u>2.7</u>                            |     |     |     |     |     |     |
| Within 0-6°C?                 | <input checked="" type="checkbox"/> 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

&amp; Client Approval to Run Samples: \_\_\_\_\_ Standing Approval Client aware at drop-off Client notified by: \_\_\_\_\_

All samples held in storage location: R-002 by SLW on 8/26/16 at 1417  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_Cooler Breakdown: Date: 8/26/16 Time: \_\_\_\_\_ by: SLW

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

Explain any discrepancies:

| pH                    | Reagent                                       | Yes | No | Lot Received                                                                                   | Exp         | Sample ID | Vol. Added | Lot Added | Final pH |
|-----------------------|-----------------------------------------------|-----|----|------------------------------------------------------------------------------------------------|-------------|-----------|------------|-----------|----------|
| ≥12                   | NaOH                                          | ✓   |    | <u>WC149177B</u>                                                                               |             |           |            |           |          |
| ≤2                    | HNO <sub>3</sub>                              | ✓   |    | <u>B28261636</u>                                                                               |             |           |            |           |          |
| ≤2                    | H <sub>2</sub> SO <sub>4</sub>                | ✓   |    | <u>WC161001A</u>                                                                               | <u>8/17</u> |           |            |           |          |
| <4                    | NaHSO <sub>4</sub>                            |     |    |                                                                                                |             |           |            |           |          |
| Residual Chlorine (-) | For CN Phenol and 522                         | ✓   |    | If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol). |             |           |            |           |          |
|                       | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | -   | -  |                                                                                                |             |           |            |           |          |
|                       | Zn Acetate                                    | -   | -  |                                                                                                |             |           |            |           |          |
|                       | HCl                                           | **  | ** |                                                                                                |             |           |            |           |          |

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: \_\_\_\_\_

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

Bottle lot numbers: 050916-1BAC, 002016-2AAC, 5-317-002  
Other Comments:

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

PC Secondary Review: \_\_\_\_\_

\*significant air bubbles: VOA &gt; 5-6 mm : WC &gt; 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](http://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.                                                                                                                       | +   | Correlation coefficient for MSA is <0.995.                                                                                                                                                                           |
| 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/Aroclors). | N   | Inorganics- Matrix spike recovery was outside laboratory limits.                                                                                                                                                     |
| B | Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.                                                                                                                                                                            | N   | Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.                                                                                                                     |
| E | Inorganics- Concentration is estimated due to the serial dilution was outside control limits.                                                                                                                                                                                                          | S   | Concentration has been determined using Method of Standard Additions (MSA).                                                                                                                                          |
| E | Organics- Concentration has exceeded the calibration range for that specific analysis.                                                                                                                                                                                                                 | W   | Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.                                                                                                   |
| 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.                                                                                            | P   | Concentration >40% (25% for CLP) difference between the two GC columns.                                                                                                                                              |
| * | Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.                                                                                                                  | C   | Confirmed by GC/MS                                                                                                                                                                                                   |
| H | Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.                                                                                                                                                                                                         | Q   | DoD reports: indicates a pesticide/Aroclor is not confirmed (100% Difference between two GC columns).                                                                                                                |
| # | Spike was diluted out.                                                                                                                                                                                                                                                                                 | X   | See Case Narrative for discussion.                                                                                                                                                                                   |
|   |                                                                                                                                                                                                                                                                                                        | MRL | Method Reporting Limit. Also known as:                                                                                                                                                                               |
|   |                                                                                                                                                                                                                                                                                                        | LOQ | Limit of Quantitation (LOQ)<br>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<sup>1</sup>

|                         |                       |                         |
|-------------------------|-----------------------|-------------------------|
| Connecticut ID # PH0556 | Maine ID #NY0032      | New Hampshire ID #      |
| Delaware Accredited     | Nebraska Accredited   | 294100 A/B              |
| 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        |

<sup>1</sup> Analyses were performed according to our laboratory's 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

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## 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.                           |

**ALS Group USA, Corp.**

dba ALS Environmental

## Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water

**Service Request:** R1608965

**Sample Name:** Batch QC  
**Lab Code:** R1608930-001  
**Sample Matrix:** Water

**Date Collected:** NA  
**Date Received:** NA

**Analysis Method**  
SM 5310 B-2000(2011)

**Extracted/Digested By**

**Analyzed By**  
MLAMBRECHT

**Sample Name:** Batch QC  
**Lab Code:** R1608930-006  
**Sample Matrix:** Water

**Date Collected:** NA  
**Date Received:** NA

**Analysis Method**  
SM 5310 B-2000(2011)

**Extracted/Digested By**

**Analyzed By**  
MLAMBRECHT

**Sample Name:** Batch QC  
**Lab Code:** R1608961-016  
**Sample Matrix:** Water

**Date Collected:** NA  
**Date Received:** NA

**Analysis Method**  
SM 5310 B-2000(2011)

**Extracted/Digested By**

**Analyzed By**  
KABBOTT

**Sample Name:** SW-1  
**Lab Code:** R1608965-001  
**Sample Matrix:** Water

**Date Collected:** 08/23/16  
**Date Received:** 08/24/16

**Analysis Method**  
335.4  
420.4  
6010C  
8260C  
SM 2540 C-1997(2011)  
SM 5310 B-2000(2011)

**Extracted/Digested By**  
KABBOTT  
  
CGILDAY

**Analyzed By**  
KABBOTT  
BBOWE  
DBOND  
FNAEGLER  
KWONG  
MLAMBRECHT

**ALS Group USA, Corp.**

dba ALS Environmental

## Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water

**Service Request:** R1608965

**Sample Name:** SW-1 Dissolved  
**Lab Code:** R1608965-002  
**Sample Matrix:** Water

**Date Collected:** 08/23/16**Date Received:** 08/24/16**Analysis Method**

6010C

**Extracted/Digested By**

CGILDAY

**Analyzed By**

DBOND

**Sample Name:** SW-2A  
**Lab Code:** R1608965-003  
**Sample Matrix:** Water

**Date Collected:** 08/22/16**Date Received:** 08/24/16**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

SM 5310 B-2000(2011)

**Extracted/Digested By**

KABBOTT

CGILDAY

**Analyzed By**

KABBOTT

BBOWE

DBOND

FNAEGLER

KWONG

MLAMBRECHT

**Sample Name:** SW-2A Dissolved  
**Lab Code:** R1608965-004  
**Sample Matrix:** Water

**Date Collected:** 08/22/16**Date Received:** 08/24/16**Analysis Method**

6010C

**Extracted/Digested By**

CGILDAY

**Analyzed By**

DBOND

**Sample Name:** SW-5  
**Lab Code:** R1608965-005  
**Sample Matrix:** Water

**Date Collected:** 08/23/16**Date Received:** 08/24/16**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

**Extracted/Digested By**

KABBOTT

CGILDAY

**Analyzed By**

KABBOTT

BBOWE

DBOND

FNAEGLER

KWONG

**ALS Group USA, Corp.**

dba ALS Environmental

## Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water

**Service Request:** R1608965

**Sample Name:** SW-5  
**Lab Code:** R1608965-005  
**Sample Matrix:** Water

**Date Collected:** 08/23/16**Date Received:** 08/24/16

**Analysis Method**  
SM 5310 B-2000(2011)

**Extracted/Digested By**

**Analyzed By**  
MLAMBRECHT

**Sample Name:** SW-5 Dissolved  
**Lab Code:** R1608965-006  
**Sample Matrix:** Water

**Date Collected:** 08/23/16**Date Received:** 08/24/16

**Analysis Method**  
6010C

**Extracted/Digested By**  
CGILDAY

**Analyzed By**  
DBOND

**Sample Name:** SW DUP  
**Lab Code:** R1608965-007  
**Sample Matrix:** Water

**Date Collected:** NA**Date Received:** 08/24/16

**Analysis Method**  
335.4  
420.4  
6010C  
8260C  
SM 2540 C-1997(2011)  
SM 5310 B-2000(2011)

**Extracted/Digested By**  
KABBOTT  
  
CGILDAY

**Analyzed By**  
KABBOTT  
BBOWE  
DBOND  
FNAEGLER  
KWONG  
MLAMBRECHT

**Sample Name:** SW DUP Dissolved  
**Lab Code:** R1608965-008  
**Sample Matrix:** Water

**Date Collected:** NA**Date Received:** 08/24/16

**Analysis Method**  
6010C

**Extracted/Digested By**  
CGILDAY

**Analyzed By**  
DBOND

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water

**Service Request:** R1608965

**Sample Name:** SW-3A  
**Lab Code:** R1608965-009  
**Sample Matrix:** Water

**Date Collected:** 08/25/16  
**Date Received:** 08/26/16

**Analysis Method**

335.4  
420.4  
6010C  
8260C  
SM 2540 C-1997(2011)  
SM 5310 B-2000(2011)

**Extracted/Digested By**

KABBOTT  
  
CBURLESON

**Analyzed By**

KABBOTT  
BBOWE  
DBOND  
KRUEST  
KWONG  
KABBOTT

**Sample Name:** SW-3A Dissolved  
**Lab Code:** R1608965-010  
**Sample Matrix:** Water

**Date Collected:** 08/25/16  
**Date Received:** 08/26/16

**Analysis Method**

6010C

**Extracted/Digested By**

CBURLESON

**Analyzed By**

DBOND



## INORGANIC PREPARATION METHODS

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**

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**ALS Group USA, Corp.**  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** 08/23/16 09:50  
**Date Received:** 08/24/16 15:00

**Sample Name:** SW-1  
**Lab Code:** R1608965-001

**Units:** ug/L  
**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    | 08/25/16 20:21 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 08/25/16 20:21 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 08/25/16 20:21 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 08/25/16 20:21 |   |
| Acetone                      | ND U   | 10  | 1    | 08/25/16 20:21 |   |
| Benzene                      | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 08/25/16 20:21 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Styrene                      | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Toluene                      | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 08/25/16 20:21 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 90    | 85 - 122       | 08/25/16 20:21 |   |
| Dibromofluoromethane | 98    | 89 - 119       | 08/25/16 20:21 |   |
| Toluene-d8           | 95    | 87 - 121       | 08/25/16 20:21 |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** 08/22/16 11:15  
**Date Received:** 08/24/16 15:00

**Sample Name:** SW-2A  
**Lab Code:** R1608965-003

**Units:** ug/L  
**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    | 08/25/16 20:45 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 08/25/16 20:45 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 08/25/16 20:45 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 08/25/16 20:45 |   |
| Acetone                      | ND U   | 10  | 1    | 08/25/16 20:45 |   |
| Benzene                      | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 08/25/16 20:45 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Styrene                      | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Toluene                      | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 08/25/16 20:45 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 92    | 85 - 122       | 08/25/16 20:45 |   |
| Dibromofluoromethane | 98    | 89 - 119       | 08/25/16 20:45 |   |
| Toluene-d8           | 95    | 87 - 121       | 08/25/16 20:45 |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** 08/23/16 09:05  
**Date Received:** 08/24/16 15:00

**Sample Name:** SW-5  
**Lab Code:** R1608965-005

**Units:** ug/L  
**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    | 08/25/16 21:10 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 08/25/16 21:10 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 08/25/16 21:10 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 08/25/16 21:10 |   |
| Acetone                      | ND U   | 10  | 1    | 08/25/16 21:10 |   |
| Benzene                      | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 08/25/16 21:10 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Styrene                      | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Toluene                      | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 08/25/16 21:10 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 93    | 85 - 122       | 08/25/16 21:10 |   |
| Dibromofluoromethane | 96    | 89 - 119       | 08/25/16 21:10 |   |
| Toluene-d8           | 96    | 87 - 121       | 08/25/16 21:10 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** 08/24/16 15:00

**Sample Name:** SW DUP  
**Lab Code:** R1608965-007

**Units:** ug/L  
**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    | 08/25/16 21:34 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 08/25/16 21:34 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 08/25/16 21:34 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 08/25/16 21:34 |   |
| Acetone                      | ND U   | 10  | 1    | 08/25/16 21:34 |   |
| Benzene                      | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 08/25/16 21:34 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Styrene                      | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Toluene                      | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 08/25/16 21:34 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 92    | 85 - 122       | 08/25/16 21:34 |   |
| Dibromofluoromethane | 95    | 89 - 119       | 08/25/16 21:34 |   |
| Toluene-d8           | 95    | 87 - 121       | 08/25/16 21:34 |   |

**ALS Group USA, Corp.**  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** 08/25/16 09:30  
**Date Received:** 08/26/16 13:55

**Sample Name:** SW-3A  
**Lab Code:** R1608965-009

**Units:** ug/L  
**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    | 09/01/16 02:30 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 09/01/16 02:30 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 09/01/16 02:30 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 09/01/16 02:30 |   |
| Acetone                      | ND U   | 10  | 1    | 09/01/16 02:30 |   |
| Benzene                      | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 09/01/16 02:30 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Styrene                      | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Toluene                      | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 09/01/16 02:30 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 110   | 85 - 122       | 09/01/16 02:30 |   |
| Dibromofluoromethane | 112   | 89 - 119       | 09/01/16 02:30 |   |
| Toluene-d8           | 115   | 87 - 121       | 09/01/16 02:30 |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW-1  
**Lab Code:** R1608965-001

**Service Request:** R1608965  
**Date Collected:** 08/23/16 09:50  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 22:35 | 08/25/16       |   |
| Cadmium, Total   | 6010C           | ND U   | ug/L  | 5.0 | 1    | 08/29/16 22:35 | 08/25/16       |   |
| Chromium, Total  | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 22:35 | 08/25/16       |   |
| Iron, Total      | 6010C           | 2270   | ug/L  | 100 | 1    | 08/29/16 22:35 | 08/25/16       |   |
| Lead, Total      | 6010C           | ND U   | ug/L  | 50  | 1    | 08/29/16 22:35 | 08/25/16       |   |
| Manganese, Total | 6010C           | 657    | ug/L  | 10  | 1    | 08/29/16 22:35 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW-1 Dissolved  
**Lab Code:** R1608965-002

**Service Request:** R1608965  
**Date Collected:** 08/23/16 09:50  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result     | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|------------|-------|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U       | ug/L  | 10  | 1    | 08/29/16 22:41 | 08/25/16       |   |
| Cadmium, Dissolved   | 6010C           | ND U       | ug/L  | 5.0 | 1    | 08/29/16 22:41 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | ND U       | ug/L  | 10  | 1    | 08/29/16 22:41 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | <b>110</b> | ug/L  | 100 | 1    | 08/29/16 22:41 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | ND U       | ug/L  | 50  | 1    | 08/29/16 22:41 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | <b>635</b> | ug/L  | 10  | 1    | 08/29/16 22:41 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
**Sample Name:** SW-2A  
**Lab Code:** R1608965-003

**Service Request:** R1608965  
**Date Collected:** 08/22/16 11:15  
**Date Received:** 08/24/16 15:00  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result     | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|------------|-------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | ND U       | ug/L  | 10  | 1    | 08/29/16 23:00 | 08/25/16       |   |
| Cadmium, Total   | 6010C           | ND U       | ug/L  | 5.0 | 1    | 08/29/16 23:00 | 08/25/16       |   |
| Chromium, Total  | 6010C           | ND U       | ug/L  | 10  | 1    | 08/29/16 23:00 | 08/25/16       |   |
| Iron, Total      | 6010C           | <b>870</b> | ug/L  | 100 | 1    | 08/29/16 23:00 | 08/25/16       |   |
| Lead, Total      | 6010C           | ND U       | ug/L  | 50  | 1    | 08/29/16 23:00 | 08/25/16       |   |
| Manganese, Total | 6010C           | <b>80</b>  | ug/L  | 10  | 1    | 08/29/16 23:00 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** 08/22/16 11:15  
**Date Received:** 08/24/16 15:00

**Sample Name:** SW-2A Dissolved  
**Lab Code:** R1608965-004

**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 23:06 | 08/25/16       |   |
| Cadmium, Dissolved   | 6010C           | ND U   | ug/L  | 5.0 | 1    | 08/29/16 23:06 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 23:06 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | ND U   | ug/L  | 100 | 1    | 08/29/16 23:06 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | ND U   | ug/L  | 50  | 1    | 08/29/16 23:06 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | 47     | ug/L  | 10  | 1    | 08/29/16 23:06 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW-5  
**Lab Code:** R1608965-005

**Service Request:** R1608965  
**Date Collected:** 08/23/16 09:05  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result      | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|-------------|-------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | ND U        | ug/L  | 10  | 1    | 08/29/16 23:12 | 08/25/16       |   |
| Cadmium, Total   | 6010C           | ND U        | ug/L  | 5.0 | 1    | 08/29/16 23:12 | 08/25/16       |   |
| Chromium, Total  | 6010C           | ND U        | ug/L  | 10  | 1    | 08/29/16 23:12 | 08/25/16       |   |
| Iron, Total      | 6010C           | <b>1480</b> | ug/L  | 100 | 1    | 08/29/16 23:12 | 08/25/16       |   |
| Lead, Total      | 6010C           | ND U        | ug/L  | 50  | 1    | 08/29/16 23:12 | 08/25/16       |   |
| Manganese, Total | 6010C           | <b>79</b>   | ug/L  | 10  | 1    | 08/29/16 23:12 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW-5 Dissolved  
**Lab Code:** R1608965-006

**Service Request:** R1608965  
**Date Collected:** 08/23/16 09:05  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 23:18 | 08/25/16       |   |
| Cadmium, Dissolved   | 6010C           | ND U   | ug/L  | 5.0 | 1    | 08/29/16 23:18 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 23:18 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | ND U   | ug/L  | 100 | 1    | 08/29/16 23:18 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | ND U   | ug/L  | 50  | 1    | 08/29/16 23:18 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 23:18 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW DUP  
**Lab Code:** R1608965-007

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result     | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|------------|-------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | ND U       | ug/L  | 10  | 1    | 08/29/16 23:24 | 08/25/16       |   |
| Cadmium, Total   | 6010C           | ND U       | ug/L  | 5.0 | 1    | 08/29/16 23:24 | 08/25/16       |   |
| Chromium, Total  | 6010C           | ND U       | ug/L  | 10  | 1    | 08/29/16 23:24 | 08/25/16       |   |
| Iron, Total      | 6010C           | <b>890</b> | ug/L  | 100 | 1    | 08/29/16 23:24 | 08/25/16       |   |
| Lead, Total      | 6010C           | ND U       | ug/L  | 50  | 1    | 08/29/16 23:24 | 08/25/16       |   |
| Manganese, Total | 6010C           | <b>79</b>  | ug/L  | 10  | 1    | 08/29/16 23:24 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW DUP Dissolved  
**Lab Code:** R1608965-008

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 23:30 | 08/25/16       |   |
| Cadmium, Dissolved   | 6010C           | ND U   | ug/L  | 5.0 | 1    | 08/29/16 23:30 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 23:30 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | ND U   | ug/L  | 100 | 1    | 08/29/16 23:30 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | ND U   | ug/L  | 50  | 1    | 08/29/16 23:30 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | 47     | ug/L  | 10  | 1    | 08/29/16 23:30 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
**Sample Name:** SW-3A  
**Lab Code:** R1608965-009

**Service Request:** R1608965  
**Date Collected:** 08/25/16 09:30  
**Date Received:** 08/26/16 13:55  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 21:21 | 08/30/16       |   |
| Cadmium, Total   | 6010C           | ND U   | ug/L  | 5.0 | 1    | 09/02/16 21:21 | 08/30/16       |   |
| Chromium, Total  | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 21:21 | 08/30/16       |   |
| Iron, Total      | 6010C           | 770    | ug/L  | 100 | 1    | 09/02/16 21:21 | 08/30/16       |   |
| Lead, Total      | 6010C           | ND U   | ug/L  | 50  | 1    | 09/02/16 21:21 | 08/30/16       |   |
| Manganese, Total | 6010C           | 159    | ug/L  | 10  | 1    | 09/02/16 21:21 | 08/30/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW-3A Dissolved  
**Lab Code:** R1608965-010

**Service Request:** R1608965  
**Date Collected:** 08/25/16 09:30  
**Date Received:** 08/26/16 13:55  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 21:25 | 08/30/16       |   |
| Cadmium, Dissolved   | 6010C           | ND U   | ug/L  | 5.0 | 1    | 09/02/16 21:25 | 08/30/16       |   |
| Chromium, Dissolved  | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 21:25 | 08/30/16       |   |
| Iron, Dissolved      | 6010C           | ND U   | ug/L  | 100 | 1    | 09/02/16 21:25 | 08/30/16       |   |
| Lead, Dissolved      | 6010C           | ND U   | ug/L  | 50  | 1    | 09/02/16 21:25 | 08/30/16       |   |
| Manganese, Dissolved | 6010C           | 31     | ug/L  | 10  | 1    | 09/02/16 21:25 | 08/30/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW-1  
**Lab Code:** R1608965-001

**Service Request:** R1608965  
**Date Collected:** 08/23/16 09:50  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 13.2   | mg/L  | 1.0    | 1    | 08/26/16 17:01 | NA                |   |
| Cyanide, Total                | 335.4                | ND U   | mg/L  | 0.010  | 1    | 08/31/16 14:11 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0072 | mg/L  | 0.0050 | 1    | 09/01/16 09:53 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 738    | mg/L  | 20     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW-2A  
**Lab Code:** R1608965-003

**Service Request:** R1608965  
**Date Collected:** 08/22/16 11:15  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 12.5   | mg/L  | 1.0    | 1    | 08/26/16 17:14 | NA                |   |
| Cyanide, Total                | 335.4                | ND U   | mg/L  | 0.010  | 1    | 08/31/16 14:11 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0061 | mg/L  | 0.0050 | 1    | 09/01/16 09:53 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 626    | mg/L  | 20     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW-5  
**Lab Code:** R1608965-005

**Service Request:** R1608965  
**Date Collected:** 08/23/16 09:05  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 12.4   | mg/L  | 1.0    | 1    | 08/26/16 17:27 | NA                |   |
| Cyanide, Total                | 335.4                | ND U   | mg/L  | 0.010  | 1    | 08/31/16 14:12 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0061 | mg/L  | 0.0050 | 1    | 09/01/16 09:53 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 1010   | mg/L  | 20     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** SW DUP  
**Lab Code:** R1608965-007

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** 08/24/16 15:00  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 12.9   | mg/L  | 1.0    | 1    | 08/26/16 17:41 | NA                |   |
| Cyanide, Total                | 335.4                | ND U   | mg/L  | 0.010  | 1    | 08/31/16 14:13 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0061 | mg/L  | 0.0050 | 1    | 09/01/16 09:53 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 635    | mg/L  | 10     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
**Sample Name:** SW-3A  
**Lab Code:** R1608965-009

**Service Request:** R1608965  
**Date Collected:** 08/25/16 09:30  
**Date Received:** 08/26/16 13:55  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 10.6   | mg/L  | 1.0    | 1    | 08/30/16 02:50 | NA                |   |
| Cyanide, Total                | 335.4                | ND U   | mg/L  | 0.010  | 1    | 08/31/16 14:14 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | ND U   | mg/L  | 0.0050 | 1    | 09/01/16 09:53 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 654    | mg/L  | 20     | 1    | 08/29/16 11:25 | NA                |   |



## QC Summary Forms

**ALS Environmental—Rochester Laboratory**

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965

**SURROGATE RECOVERY SUMMARY**  
**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C  
**Extraction Method:** EPA 5030C

| Sample Name        | Lab Code     | 4-Bromofluorobenzene | Dibromofluoromethane | Toluene-d8 |
|--------------------|--------------|----------------------|----------------------|------------|
|                    |              | 85 - 122             | 89 - 119             | 87 - 121   |
| SW-1               | R1608965-001 | 90                   | 98                   | 95         |
| SW-2A              | R1608965-003 | 92                   | 98                   | 95         |
| SW-5               | R1608965-005 | 93                   | 96                   | 96         |
| SW DUP             | R1608965-007 | 92                   | 95                   | 95         |
| SW-3A              | R1608965-009 | 110                  | 112                  | 115        |
| Method Blank       | RQ1610215-01 | 91                   | 94                   | 93         |
| Lab Control Sample | RQ1610215-02 | 94                   | 98                   | 94         |
| Lab Control Sample | RQ1610393-03 | 112                  | 111                  | 116        |
| Method Blank       | RQ1610393-04 | 108                  | 112                  | 115        |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** RQ1610215-01

**Units:** ug/L  
**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    | 08/25/16 14:26 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 08/25/16 14:26 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 08/25/16 14:26 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 08/25/16 14:26 |   |
| Acetone                      | ND U   | 10  | 1    | 08/25/16 14:26 |   |
| Benzene                      | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 08/25/16 14:26 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Styrene                      | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Toluene                      | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 08/25/16 14:26 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 91    | 85 - 122       | 08/25/16 14:26 |   |
| Dibromofluoromethane | 94    | 89 - 119       | 08/25/16 14:26 |   |
| Toluene-d8           | 93    | 87 - 121       | 08/25/16 14:26 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** RQ1610393-04

**Units:** ug/L  
**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    | 08/31/16 23:26 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 08/31/16 23:26 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 08/31/16 23:26 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 08/31/16 23:26 |   |
| Acetone                      | ND U   | 10  | 1    | 08/31/16 23:26 |   |
| Benzene                      | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 08/31/16 23:26 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Styrene                      | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Toluene                      | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 08/31/16 23:26 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 108   | 85 - 122       | 08/31/16 23:26 |   |
| Dibromofluoromethane | 112   | 89 - 119       | 08/31/16 23:26 |   |
| Toluene-d8           | 115   | 87 - 121       | 08/31/16 23:26 |   |

ALS Group USA, Corp.  
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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Analyzed:** 08/25/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
RQ1610215-02

| Analyte Name                 | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|------------------------------|-------------------|--------|--------------|-------|--------------|
| 1,1,1-Trichloroethane (TCA)  | 8260C             | 16.6   | 20.0         | 83    | 74-120       |
| 1,1,2,2-Tetrachloroethane    | 8260C             | 16.0   | 20.0         | 80    | 78-122       |
| 1,1,2-Trichloroethane        | 8260C             | 18.2   | 20.0         | 91    | 82-118       |
| 1,1-Dichloroethane (1,1-DCA) | 8260C             | 18.7   | 20.0         | 94    | 78-117       |
| 1,1-Dichloroethene (1,1-DCE) | 8260C             | 16.6   | 20.0         | 83    | 74-135       |
| 1,2-Dichloroethane           | 8260C             | 19.8   | 20.0         | 99    | 71-127       |
| 1,2-Dichloropropane          | 8260C             | 18.3   | 20.0         | 92    | 80-119       |
| 2-Butanone (MEK)             | 8260C             | 13.2   | 20.0         | 66    | 61-137       |
| 2-Hexanone                   | 8260C             | 14.5   | 20.0         | 72    | 63-124       |
| 4-Methyl-2-pentanone         | 8260C             | 13.9   | 20.0         | 70    | 66-124       |
| Acetone                      | 8260C             | 15.9   | 20.0         | 79    | 40-161       |
| Benzene                      | 8260C             | 17.4   | 20.0         | 87    | 76-118       |
| Bromodichloromethane         | 8260C             | 17.6   | 20.0         | 88    | 78-126       |
| Bromoform                    | 8260C             | 15.6   | 20.0         | 78    | 71-136       |
| Bromomethane                 | 8260C             | 12.1   | 20.0         | 60    | 42-166       |
| Carbon Disulfide             | 8260C             | 14.0   | 20.0         | 70    | 65-127       |
| Carbon Tetrachloride         | 8260C             | 13.7   | 20.0         | 69    | 68-125       |
| Chlorobenzene                | 8260C             | 17.5   | 20.0         | 87    | 80-121       |
| Chloroethane                 | 8260C             | 15.1   | 20.0         | 75    | 70-127       |
| Chloroform                   | 8260C             | 17.5   | 20.0         | 87    | 76-120       |
| Chloromethane                | 8260C             | 14.3   | 20.0         | 72    | 69-145       |
| Dibromochloromethane         | 8260C             | 15.8   | 20.0         | 79    | 77-128       |
| Dichloromethane              | 8260C             | 16.7   | 20.0         | 84    | 73-122       |
| Ethylbenzene                 | 8260C             | 16.5   | 20.0         | 82    | 76-120       |
| Styrene                      | 8260C             | 17.8   | 20.0         | 89    | 80-124       |
| Tetrachloroethene (PCE)      | 8260C             | 17.3   | 20.0         | 87    | 78-124       |
| Toluene                      | 8260C             | 17.4   | 20.0         | 87    | 77-120       |
| Trichloroethene (TCE)        | 8260C             | 18.7   | 20.0         | 93    | 78-123       |
| Vinyl Chloride               | 8260C             | 14.5   | 20.0         | 73    | 69-133       |
| cis-1,2-Dichloroethene       | 8260C             | 17.7   | 20.0         | 88    | 80-121       |
| cis-1,3-Dichloropropene      | 8260C             | 16.2   | 20.0         | 81    | 74-126       |
| m,p-Xylenes                  | 8260C             | 35.9   | 40.0         | 90    | 78-123       |
| o-Xylene                     | 8260C             | 17.6   | 20.0         | 88    | 80-120       |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Analyzed:** 08/25/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L**Basis:**NA**Lab Control Sample**

RQ1610215-02

| Analyte Name              | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---------------------------|-------------------|--------|--------------|-------|--------------|
| trans-1,2-Dichloroethene  | 8260C             | 17.3   | 20.0         | 86    | 80-120       |
| trans-1,3-Dichloropropene | 8260C             | 15.0   | 20.0         | 75    | 67-135       |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Analyzed:** 08/31/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
RQ1610393-03

| Analyte Name                 | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|------------------------------|-------------------|--------|--------------|-------|--------------|
| 1,1,1-Trichloroethane (TCA)  | 8260C             | 18.7   | 20.0         | 94    | 74-120       |
| 1,1,2,2-Tetrachloroethane    | 8260C             | 21.3   | 20.0         | 107   | 78-122       |
| 1,1,2-Trichloroethane        | 8260C             | 22.6   | 20.0         | 113   | 82-118       |
| 1,1-Dichloroethane (1,1-DCA) | 8260C             | 21.3   | 20.0         | 107   | 78-117       |
| 1,1-Dichloroethene (1,1-DCE) | 8260C             | 21.7   | 20.0         | 108   | 74-135       |
| 1,2-Dichloroethane           | 8260C             | 20.5   | 20.0         | 103   | 71-127       |
| 1,2-Dichloropropane          | 8260C             | 22.6   | 20.0         | 113   | 80-119       |
| 2-Butanone (MEK)             | 8260C             | 19.4   | 20.0         | 97    | 61-137       |
| 2-Hexanone                   | 8260C             | 19.4   | 20.0         | 97    | 63-124       |
| 4-Methyl-2-pentanone         | 8260C             | 21.5   | 20.0         | 107   | 66-124       |
| Acetone                      | 8260C             | 21.6   | 20.0         | 108   | 40-161       |
| Benzene                      | 8260C             | 22.5   | 20.0         | 112   | 76-118       |
| Bromodichloromethane         | 8260C             | 20.9   | 20.0         | 104   | 78-126       |
| Bromoform                    | 8260C             | 26.1   | 20.0         | 131   | 71-136       |
| Bromomethane                 | 8260C             | 17.6   | 20.0         | 88    | 42-166       |
| Carbon Disulfide             | 8260C             | 22.2   | 20.0         | 111   | 65-127       |
| Carbon Tetrachloride         | 8260C             | 19.4   | 20.0         | 97    | 68-125       |
| Chlorobenzene                | 8260C             | 20.9   | 20.0         | 105   | 80-121       |
| Chloroethane                 | 8260C             | 20.3   | 20.0         | 101   | 70-127       |
| Chloroform                   | 8260C             | 19.9   | 20.0         | 99    | 76-120       |
| Chloromethane                | 8260C             | 21.7   | 20.0         | 109   | 69-145       |
| Dibromochloromethane         | 8260C             | 19.6   | 20.0         | 98    | 77-128       |
| Dichloromethane              | 8260C             | 22.4   | 20.0         | 112   | 73-122       |
| Ethylbenzene                 | 8260C             | 20.5   | 20.0         | 102   | 76-120       |
| Styrene                      | 8260C             | 22.4   | 20.0         | 112   | 80-124       |
| Tetrachloroethene (PCE)      | 8260C             | 21.5   | 20.0         | 107   | 78-124       |
| Toluene                      | 8260C             | 22.8   | 20.0         | 114   | 77-120       |
| Trichloroethene (TCE)        | 8260C             | 22.3   | 20.0         | 112   | 78-123       |
| Vinyl Chloride               | 8260C             | 21.4   | 20.0         | 107   | 69-133       |
| cis-1,2-Dichloroethene       | 8260C             | 22.3   | 20.0         | 112   | 80-121       |
| cis-1,3-Dichloropropene      | 8260C             | 20.6   | 20.0         | 103   | 74-126       |
| m,p-Xylenes                  | 8260C             | 42.4   | 40.0         | 106   | 78-123       |
| o-Xylene                     | 8260C             | 21.4   | 20.0         | 107   | 80-120       |

**ALS Group USA, Corp.**

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Analyzed:** 08/31/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L**Basis:**NA**Lab Control Sample**

RQ1610393-03

| Analyte Name              | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---------------------------|-------------------|--------|--------------|-------|--------------|
| trans-1,2-Dichloroethene  | 8260C             | 21.3   | 20.0         | 106   | 80-120       |
| trans-1,3-Dichloropropene | 8260C             | 20.4   | 20.0         | 102   | 67-135       |

ALS Group USA, Corp.  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608965-MB1

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Arsenic, Total       | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Cadmium, Dissolved   | 6010C           | ND U   | ug/L  | 5.0 | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Cadmium, Total       | 6010C           | ND U   | ug/L  | 5.0 | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Chromium, Total      | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | ND U   | ug/L  | 100 | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Iron, Total          | 6010C           | ND U   | ug/L  | 100 | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | ND U   | ug/L  | 50  | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Lead, Total          | 6010C           | ND U   | ug/L  | 50  | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 20:35 | 08/25/16       |   |
| Manganese, Total     | 6010C           | ND U   | ug/L  | 10  | 1    | 08/29/16 20:35 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608965-MB2

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Arsenic, Total       | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Cadmium, Dissolved   | 6010C           | ND U   | ug/L  | 5.0 | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Cadmium, Total       | 6010C           | ND U   | ug/L  | 5.0 | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Chromium, Dissolved  | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Chromium, Total      | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Iron, Dissolved      | 6010C           | ND U   | ug/L  | 100 | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Iron, Total          | 6010C           | ND U   | ug/L  | 100 | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Lead, Dissolved      | 6010C           | ND U   | ug/L  | 50  | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Lead, Total          | 6010C           | ND U   | ug/L  | 50  | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Manganese, Dissolved | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 19:37 | 08/30/16       |   |
| Manganese, Total     | 6010C           | ND U   | ug/L  | 10  | 1    | 09/02/16 19:37 | 08/30/16       |   |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Analyzed:** 08/29/16

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
R1608965-LCS1

| Analyte Name         | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|----------------------|-------------------|--------|--------------|-------|--------------|
| Arsenic, Dissolved   | 6010C             | 43.6   | 40           | 109   | 80-120       |
| Arsenic, Total       | 6010C             | 43.6   | 40           | 109   | 80-120       |
| Cadmium, Dissolved   | 6010C             | 50.0   | 50.0         | 100   | 80-120       |
| Cadmium, Total       | 6010C             | 50.0   | 50.0         | 100   | 80-120       |
| Chromium, Dissolved  | 6010C             | 208    | 200          | 104   | 80-120       |
| Chromium, Total      | 6010C             | 208    | 200          | 104   | 80-120       |
| Iron, Dissolved      | 6010C             | 1050   | 1000         | 105   | 80-120       |
| Iron, Total          | 6010C             | 1050   | 1000         | 105   | 80-120       |
| Lead, Dissolved      | 6010C             | 515    | 500          | 103   | 80-120       |
| Lead, Total          | 6010C             | 515    | 500          | 103   | 80-120       |
| Manganese, Dissolved | 6010C             | 518    | 500          | 104   | 80-120       |
| Manganese, Total     | 6010C             | 518    | 500          | 104   | 80-120       |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Analyzed:** 09/02/16

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
R1608965-LCS2

| Analyte Name         | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|----------------------|-------------------|--------|--------------|-------|--------------|
| Arsenic, Dissolved   | 6010C             | 39.8   | 40           | 100   | 80-120       |
| Arsenic, Total       | 6010C             | 39.8   | 40           | 100   | 80-120       |
| Cadmium, Dissolved   | 6010C             | 49.9   | 50.0         | 100   | 80-120       |
| Cadmium, Total       | 6010C             | 49.9   | 50.0         | 100   | 80-120       |
| Chromium, Dissolved  | 6010C             | 200    | 200          | 100   | 80-120       |
| Chromium, Total      | 6010C             | 200    | 200          | 100   | 80-120       |
| Iron, Dissolved      | 6010C             | 984    | 1000         | 98    | 80-120       |
| Iron, Total          | 6010C             | 984    | 1000         | 98    | 80-120       |
| Lead, Dissolved      | 6010C             | 498    | 500          | 100   | 80-120       |
| Lead, Total          | 6010C             | 498    | 500          | 100   | 80-120       |
| Manganese, Dissolved | 6010C             | 492    | 500          | 98    | 80-120       |
| Manganese, Total     | 6010C             | 492    | 500          | 98    | 80-120       |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608965-MB1

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | ND U   | mg/L  | 1.0    | 1    | 08/26/16 13:17 | NA                |   |
| Cyanide, Total                | 335.4                | ND U   | mg/L  | 0.010  | 1    | 08/31/16 14:04 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | ND U   | mg/L  | 0.0050 | 1    | 09/01/16 09:53 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | ND U   | mg/L  | 10     | 1    | 08/29/16 11:25 | NA                |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1608965-MB2

**Service Request:** R1608965  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name                | Analysis Method      | Result | Units | MRL | Dil. | Date Analyzed  | Q |
|-----------------------------|----------------------|--------|-------|-----|------|----------------|---|
| Carbon, Total Organic (TOC) | SM 5310 B-2000(2011) | ND U   | mg/L  | 1.0 | 1    | 08/29/16 17:35 |   |

**ALS Group USA, Corp.**

dba ALS Environmental

## QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** 08/23/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 09/1/16

**Matrix Spike Summary**  
**Phenolics, Total Recoverable**

**Sample Name:** SW-1  
**Lab Code:** R1608965-001  
**Analysis Method:** 420.4

**Units:** mg/L  
**Basis:** NA

**Matrix Spike**  
R1608965-001MS

| <b>Analyte Name</b>          | <b>Sample Result</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|------------------------------|----------------------|---------------|---------------------|--------------|---------------------|
| Phenolics, Total Recoverable | 0.0072               | 0.0441        | 0.0400              | 92           | 90-110              |

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 St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Collected:** 08/23/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 09/01/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** SW-1  
**Lab Code:** R1608965-001

**Units:** mg/L  
**Basis:** NA

| Analyte Name                 | Analysis Method | MRL    | Sample Result | Duplicate Sample       | Average | RPD | RPD Limit |
|------------------------------|-----------------|--------|---------------|------------------------|---------|-----|-----------|
|                              |                 |        |               | R1608965-001DUP Result |         |     |           |
| Phenolics, Total Recoverable | 420.4           | 0.0050 | 0.0072        | 0.0069                 | 0.00704 | 4   | 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 St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965**Date Collected:** 08/25/16**Date Received:** 08/26/16**Date Analyzed:** 08/29/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** SW-3A**Units:** mg/L**Lab Code:** R1608965-009**Basis:** NA

|                               |                        |            |                          |                             | <b>Duplicate<br/>Sample<br/>R1608965-<br/>009DUP</b> |            |                  |
|-------------------------------|------------------------|------------|--------------------------|-----------------------------|------------------------------------------------------|------------|------------------|
| <b>Analyte Name</b>           | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample<br/>Result</b> | <b>Duplicate<br/>Result</b> | <b>Average</b>                                       | <b>RPD</b> | <b>RPD Limit</b> |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011)   | 20         | 654                      | 656                         | 655                                                  | <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  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Analyzed:** 08/26/16 - 09/01/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
R1608965-LCS1

| Analyte Name                  | Analytical Method    | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------------------|----------------------|--------|--------------|-------|--------------|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 9.51   | 10.0         | 95    | 81-118       |
| Cyanide, Total                | 335.4                | 0.104  | 0.100        | 104   | 90-110       |
| Phenolics, Total Recoverable  | 420.4                | 0.0388 | 0.0400       | 97    | 90-110       |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 906    | 914          | 99    | 90-110       |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Surface Water  
**Sample Matrix:** Water

**Service Request:** R1608965  
**Date Analyzed:** 08/29/16 - 08/31/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
R1608965-LCS2

| Analyte Name                | Analytical Method    | Result | Spike Amount | % Rec | % Rec Limits |
|-----------------------------|----------------------|--------|--------------|-------|--------------|
| Carbon, Total Organic (TOC) | SM 5310 B-2000(2011) | 11.1   | 10.0         | 111   | 81-118       |
| Cyanide, Total              | 335.4                | 0.403  | 0.400        | 101   | 90-110       |





## 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](http://www.alsglobal.com)

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil

**Service Request:** R1608966  
**Date Received:** 08/24/16 - 08/26/16

### 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

Three soil samples were received for analysis at ALS Environmental on 08/24/2016. 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  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Metals Analyses:

Method 6010C, 9/7/16, 9/12/16: The control limits for matrix spike recovery of one or more of the spiked analytes are not applicable and have been flagged with a "#". The concentration of the analyte(s) in the parent sample is more than 4x the spike concentration. No further corrective action was required.

#### General Chemistry Analyses:

No significant anomalies were noted with this analysis.

Approved by  Date 9/13/2016

# SAMPLE DETECTION SUMMARY

|                         |                             |
|-------------------------|-----------------------------|
| <b>CLIENT ID: SED-1</b> | <b>Lab ID: R1608966-001</b> |
|-------------------------|-----------------------------|

| Analyte          | Results | Flag | MDL | PQL | Units   | Method  |
|------------------|---------|------|-----|-----|---------|---------|
| Total Solids     | 65.9    |      |     |     | Percent | ALS SOP |
| Arsenic, Total   | 6.7     |      | 0.4 | 1.5 | mg/Kg   | 6010C   |
| Chromium, Total  | 21.8    |      | 0.2 | 1.5 | mg/Kg   | 6010C   |
| Iron, Total      | 29600   |      | 20  | 150 | mg/Kg   | 6010C   |
| Lead, Total      | 14.3    |      | 0.5 | 7.4 | mg/Kg   | 6010C   |
| Manganese, Total | 441     |      | 2   | 15  | mg/Kg   | 6010C   |

|                         |                             |
|-------------------------|-----------------------------|
| <b>CLIENT ID: SED-2</b> | <b>Lab ID: R1608966-002</b> |
|-------------------------|-----------------------------|

| Analyte          | Results | Flag | MDL  | PQL | Units   | Method  |
|------------------|---------|------|------|-----|---------|---------|
| Total Solids     | 85.0    |      |      |     | Percent | ALS SOP |
| Arsenic, Total   | 2.9     |      | 0.3  | 1.1 | mg/Kg   | 6010C   |
| Chromium, Total  | 21.3    |      | 0.2  | 1.1 | mg/Kg   | 6010C   |
| Iron, Total      | 18500   |      | 10   | 110 | mg/Kg   | 6010C   |
| Lead, Total      | 21.8    |      | 0.4  | 5.7 | mg/Kg   | 6010C   |
| Manganese, Total | 591     |      | 0.09 | 1.1 | mg/Kg   | 6010C   |

|                           |                             |
|---------------------------|-----------------------------|
| <b>CLIENT ID: SED-DUP</b> | <b>Lab ID: R1608966-003</b> |
|---------------------------|-----------------------------|

| Analyte          | Results | Flag | MDL  | PQL | Units   | Method  |
|------------------|---------|------|------|-----|---------|---------|
| Total Solids     | 82.9    |      |      |     | Percent | ALS SOP |
| Arsenic, Total   | 2.2     |      | 0.3  | 1.2 | mg/Kg   | 6010C   |
| Chromium, Total  | 28.9    |      | 0.2  | 1.2 | mg/Kg   | 6010C   |
| Iron, Total      | 16500   |      | 20   | 120 | mg/Kg   | 6010C   |
| Lead, Total      | 20.0    |      | 0.4  | 5.9 | mg/Kg   | 6010C   |
| Manganese, Total | 1060    |      | 0.09 | 1.2 | mg/Kg   | 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](http://www.alsglobal.com)

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment

**Service Request:**R1608966

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| R1608966-001    | SED-1                   | 8/22/2016   | 1200        |
| R1608966-002    | SED-2                   | 8/25/2016   | 0950        |
| R1608966-003    | SED-DUP                 | 8/25/2016   |             |

| ANALYSIS REQUESTED (Include Method Number and Container Preservative)                                                                                                             |                            |             |               |                 |                        |   |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|---------------|-----------------|------------------------|---|---|---|
| PRESERVATIVE                                                                                                                                                                      | 8                          | Z           | Z             | 0               | 3                      | 4 | 0 | 0 |
| GCMs VOAS<br>° 8260 • 624 • CLP                                                                                                                                                   |                            |             |               |                 |                        |   |   |   |
| GCMs SVOS<br>° 8270 • 625                                                                                                                                                         |                            |             |               |                 |                        |   |   |   |
| GC VOAS<br>° 8021 • 601/602                                                                                                                                                       |                            |             |               |                 |                        |   |   |   |
| PESTICIDES<br>° 8081 • 608                                                                                                                                                        |                            |             |               |                 |                        |   |   |   |
| PCBs<br>° 8082 • 608                                                                                                                                                              |                            |             |               |                 |                        |   |   |   |
| METALS TOTAL<br>(List in comments below)                                                                                                                                          |                            | X           | X             | X               | X                      | X | X | X |
| METALS DISSOLVED<br>(List in comments below)                                                                                                                                      |                            |             |               |                 |                        |   |   |   |
| TDS                                                                                                                                                                               |                            |             |               |                 |                        |   |   |   |
| CN                                                                                                                                                                                |                            |             |               |                 |                        |   |   |   |
| TOC/TBP                                                                                                                                                                           |                            |             |               |                 |                        |   |   |   |
| METALS                                                                                                                                                                            |                            |             |               |                 |                        |   |   |   |
| PHENOL                                                                                                                                                                            |                            |             |               |                 |                        |   |   |   |
| Preservative Key<br>0. NONE<br>1. HCL<br>2. HNO <sub>3</sub><br>3. H <sub>2</sub> SO <sub>4</sub><br>4. NaOH<br>5. Zn Acetate<br>6. MeOH<br>7. NaHSO <sub>4</sub><br>8. Other HCl |                            |             |               |                 |                        |   |   |   |
| REMARKS/<br>ALTERNATE DESCRIPTION                                                                                                                                                 |                            |             |               |                 |                        |   |   |   |
| NUMBER OF CONTAINERS                                                                                                                                                              |                            |             |               |                 |                        |   |   |   |
| CLIENT SAMPLE ID                                                                                                                                                                  | FOR OFFICE USE ONLY LAB ID | SAMPLE DATE | SAMPLING TIME | MATRIX          |                        |   |   |   |
| MW-2A                                                                                                                                                                             |                            | 8/22/16     | 1:00 PM       | AIRBORNE WATER  | 6                      | X |   |   |
| MW-16B                                                                                                                                                                            |                            | 8/22/16     | 10:15 AM      | AIRBORNE WATER  | 5                      | X |   |   |
| MW-16A                                                                                                                                                                            |                            | 8/23/16     | 12:05 PM      | AIRBORNE WATER  | 5                      | X |   |   |
| MW-18B                                                                                                                                                                            |                            | 8/22/16     | 3:45 PM       | AIRBORNE WATER  | 5                      | X |   |   |
| MW-18A                                                                                                                                                                            |                            | 8/22/16     | 4:45 PM       | AIRBORNE WATER  | 6                      | X |   |   |
| MW-6B                                                                                                                                                                             |                            | 8/23/16     | 2:15 PM       | AIRBORNE WATER  | 6                      | X |   |   |
| MW-7B                                                                                                                                                                             |                            | 8/23/16     | 10:30 AM      | AIRBORNE WATER  | 5                      | X |   |   |
| SW-1                                                                                                                                                                              |                            | 8/23/16     | 9:30 AM       | SUBMERGED WATER | 6                      | X |   |   |
| SW-2A                                                                                                                                                                             |                            | 8/22/16     | 11:15 AM      | SUBMERGED WATER | 6                      | X |   |   |
| SW-5                                                                                                                                                                              |                            | 8/23/16     | 4:05 AM       | SUBMERGED WATER | 6                      | X |   |   |
| SED-1                                                                                                                                                                             |                            | 8/22/16     | 12:00 PM      | SEDIMENT        | 2                      |   | X | X |
| SPECIAL INSTRUCTIONS/COMMENTS                                                                                                                                                     |                            |             |               |                 |                        |   |   |   |
| Metals                                                                                                                                                                            |                            |             |               |                 |                        |   |   |   |
| GW: As Cr Fe Pb Mn                                                                                                                                                                |                            |             |               |                 |                        |   |   |   |
| SW: As Co Cr Fe Pb Mn                                                                                                                                                             |                            |             |               |                 |                        |   |   |   |
| See QAPP <input type="checkbox"/>                                                                                                                                                 |                            |             |               |                 |                        |   |   |   |
| STATE WHERE SAMPLES WERE COLLECTED MARILLA ST LANDFILL                                                                                                                            |                            |             |               |                 |                        |   |   |   |
| RELINQUISHED BY                                                                                                                                                                   |                            |             |               |                 | RECEIVED BY            |   |   |   |
| Signature _____                                                                                                                                                                   |                            |             |               |                 | Signature _____        |   |   |   |
| Printed Name _____                                                                                                                                                                |                            |             |               |                 | Printed Name _____     |   |   |   |
| Firm D.E.                                                                                                                                                                         |                            |             |               |                 | Firm _____             |   |   |   |
| Date/Time 8/22/16 1500                                                                                                                                                            | Date/Time 7/24/16 1500     |             |               |                 | Date/Time 7/24/16 1500 |   |   |   |

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[illegible]



## Cooler Receipt and Preservation Check Form

R1608966

5

Dalgier Engineering  
SedimentProject/Client Daigles Folder Number R16-8966Cooler received on 8/24/16 by: ECOURIER: ALS UPS FEDEX VELOCITY CLIENT

|   |                                                      |                                                            |
|---|------------------------------------------------------|------------------------------------------------------------|
| 1 | Were Custody seals on outside of cooler?             | <input checked="" type="radio"/> Y <input type="radio"/> N |
| 2 | Custody papers properly completed (ink, signed)?     | <input checked="" type="radio"/> Y <input type="radio"/> N |
| 3 | Did all bottles arrive in good condition (unbroken)? | <input checked="" type="radio"/> Y <input type="radio"/> N |
| 4 | Circle: <u>Wet Ice</u> Dry Ice Gel packs present?    | <input checked="" type="radio"/> Y <input type="radio"/> N |

|    |                                                   |                                                               |
|----|---------------------------------------------------|---------------------------------------------------------------|
| 5a | Perchlorate samples have required headspace?      | Y <input type="radio"/> N <input checked="" type="radio"/> NA |
| 5b | Did VOA vials, Alk, or Sulfide have sig* bubbles? | Y <input type="radio"/> N <input checked="" type="radio"/> NA |
| 6  | Where did the bottles originate?                  | <u>ALS/ROC</u> CLIENT                                         |
| 7  | Soil VOA received as: Bulk Encore 5035set         | <input checked="" type="radio"/> NA                           |

8. Temperature Readings Date: 8/24/16 Time: 1510 ID: IR#5 IR#6 From: Temp Blank Sample Bottle

|                               |                                                            |                                                            |                           |                           |                           |                           |                           |
|-------------------------------|------------------------------------------------------------|------------------------------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Observed Temp (°C)            | <u>1.8</u>                                                 | <u>1.9</u>                                                 |                           |                           |                           |                           |                           |
| Correction Factor (°C)        | <u>-</u>                                                   | <u>-</u>                                                   |                           |                           |                           |                           |                           |
| Corrected Temp (°C)           | <u>1.8</u>                                                 | <u>1.9°</u>                                                |                           |                           |                           |                           |                           |
| Within 0-6°C?                 | <input checked="" type="radio"/> Y <input type="radio"/> N | <input checked="" type="radio"/> Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N |
| If <0°C, were samples frozen? | Y <input type="radio"/> N                                  | Y <input type="radio"/> N                                  | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> N | Y <input type="radio"/> 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 E on 8/24/16 at 1510  
5035 samples placed in storage location:  by  on  at Cooler Breakdown: Date: 8/24/16 Time: 2036 by: On

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

Explain any discrepancies:

| pH                    | Reagent                                       | Yes | No | Lot Received                                                                                   | Exp | Sample ID | Vol. Added | Lot Added | Final pH |
|-----------------------|-----------------------------------------------|-----|----|------------------------------------------------------------------------------------------------|-----|-----------|------------|-----------|----------|
| ≥12                   | NaOH                                          |     |    |                                                                                                |     |           |            |           |          |
| ≤2                    | HNO <sub>3</sub>                              |     |    |                                                                                                |     |           |            |           |          |
| ≤2                    | H <sub>2</sub> SO <sub>4</sub>                |     |    |                                                                                                |     |           |            |           |          |
| <4                    | NaHSO <sub>4</sub>                            |     |    |                                                                                                |     |           |            |           |          |
| Residual Chlorine (-) | For CN Phenol and 522                         |     |    | If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol). |     |           |            |           |          |
|                       | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | -   | -  |                                                                                                |     |           |            |           |          |
|                       | ZnAcetate                                     | -   | -  |                                                                                                |     |           |            |           |          |
|                       | HCl                                           | **  | ** |                                                                                                |     |           |            |           |          |

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: 

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

Bottle lot numbers: 050116-1845Other Comments: 

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

PC Secondary Review: 

\*significant air bubbles: VOA &gt; 5-6 mm : WC &gt; 1 in. diameter



## Cooler Receipt and Preservation Check Form

Project/Client Daigler Eng. Folder Number R16-8966

Cooler received on 8/26/16 by: SL COURIER: ALS UPS FEDEX VELOCITY CLIENT

|   |                                                       |                                       |
|---|-------------------------------------------------------|---------------------------------------|
| 1 | Were Custody seals on outside of cooler?              | <input checked="" type="checkbox"/> N |
| 2 | Custody papers properly completed (ink, signed)?      | <input checked="" type="checkbox"/> N |
| 3 | Did all bottles arrive in good condition (unbroken)?  | <input checked="" type="checkbox"/> N |
| 4 | Circle: <del>Wet Ice</del> Dry Ice Gel packs present? | <input checked="" type="checkbox"/> N |

|    |                                                   |                                                            |
|----|---------------------------------------------------|------------------------------------------------------------|
| 5a | Perchlorate samples have required headspace?      | Y N <input checked="" type="checkbox"/> NA                 |
| 5b | Did VOA vials, Alk, or Sulfide have sig* bubbles? | Y <input checked="" type="checkbox"/> NA                   |
| 6  | Where did the bottles originate?                  | AL <del>ROC</del> CLIENT                                   |
| 7  | Soil VOA received as:                             | Bulk Encore 5035set <input checked="" type="checkbox"/> NA |

8. Temperature Readings Date: 8/26/16 Time: 1417 ID: IR#5 IR#6 From: Temp Blank Sample ~~Bottle~~

|                               |                                       |     |     |     |     |     |     |
|-------------------------------|---------------------------------------|-----|-----|-----|-----|-----|-----|
| Observed Temp (°C)            | <u>2.7°</u>                           |     |     |     |     |     |     |
| Correction Factor (°C)        | <u>20.6°</u>                          |     |     |     |     |     |     |
| Corrected Temp (°C)           | <u>2.7°</u>                           |     |     |     |     |     |     |
| Within 0-6°C?                 | <input checked="" type="checkbox"/> 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 SLW on 8/26/16 at 1417  
 5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

Cooler Breakdown: Date: 8/26/16 Time: \_\_\_\_\_ by: SLW

- |                                                                         |                                         |                       |
|-------------------------------------------------------------------------|-----------------------------------------|-----------------------|
| 1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? | <input checked="" type="checkbox"/> YES | NO                    |
| 2. Did all bottle labels and tags agree with custody papers?            | <input checked="" type="checkbox"/> YES | NO                    |
| 3. Were correct containers used for the tests indicated?                | <input checked="" type="checkbox"/> YES | NO                    |
| 4. Were 5035 vials acceptable (no extra labels, not leaking)?           | YES                                     | NO                    |
| 5. Air Samples: Cassettes / Tubes Intact                                | Canisters Pressurized                   | Tedlar® Bags Inflated |

N/A  
N/A

Explain any discrepancies:

| pH                    | Reagent                                       | Yes | No | Lot Received                                                                                   | Exp | Sample ID | Vol. Added | Lot Added | Final pH |
|-----------------------|-----------------------------------------------|-----|----|------------------------------------------------------------------------------------------------|-----|-----------|------------|-----------|----------|
| ≥12                   | NaOH                                          |     |    |                                                                                                |     |           |            |           |          |
| ≤2                    | HNO <sub>3</sub>                              |     |    |                                                                                                |     |           |            |           |          |
| ≤2                    | H <sub>2</sub> SO <sub>4</sub>                |     |    |                                                                                                |     |           |            |           |          |
| <4                    | NaHSO <sub>4</sub>                            |     |    |                                                                                                |     |           |            |           |          |
| Residual Chlorine (-) | For CN Phenol and 522                         |     |    | If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol). |     |           |            |           |          |
|                       | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | -   | -  |                                                                                                |     |           |            |           |          |
|                       | ZnAcetate                                     | -   | -  |                                                                                                |     |           |            |           |          |
|                       | HCl                                           | **  | ** |                                                                                                |     |           |            |           |          |

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: \_\_\_\_\_

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

Bottle lot numbers: 080716-1543  
 Other Comments:

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

PC Secondary Review: \_\_\_\_\_

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



## Miscellaneous Forms

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## 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.                                                                                                                       | +   | Correlation coefficient for MSA is <0.995.                                                                                                                                                                           |
| 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/Aroclors). | N   | Inorganics- Matrix spike recovery was outside laboratory limits.                                                                                                                                                     |
| B | Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.                                                                                                                                                                            | N   | Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.                                                                                                                     |
| E | Inorganics- Concentration is estimated due to the serial dilution was outside control limits.                                                                                                                                                                                                          | S   | Concentration has been determined using Method of Standard Additions (MSA).                                                                                                                                          |
| E | Organics- Concentration has exceeded the calibration range for that specific analysis.                                                                                                                                                                                                                 | W   | Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.                                                                                                   |
| 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.                                                                                            | P   | Concentration >40% (25% for CLP) difference between the two GC columns.                                                                                                                                              |
| * | Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.                                                                                                                  | C   | Confirmed by GC/MS                                                                                                                                                                                                   |
| H | Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.                                                                                                                                                                                                         | Q   | DoD reports: indicates a pesticide/Aroclor is not confirmed (100% Difference between two GC columns).                                                                                                                |
| # | Spike was diluted out.                                                                                                                                                                                                                                                                                 | X   | See Case Narrative for discussion.                                                                                                                                                                                   |
|   |                                                                                                                                                                                                                                                                                                        | MRL | Method Reporting Limit. Also known as:                                                                                                                                                                               |
|   |                                                                                                                                                                                                                                                                                                        | LOQ | Limit of Quantitation (LOQ)<br>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<sup>1</sup>

|                         |                       |                         |
|-------------------------|-----------------------|-------------------------|
| Connecticut ID # PH0556 | Maine ID #NY0032      | New Hampshire ID #      |
| Delaware Accredited     | Nebraska Accredited   | 294100 A/B              |
| 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        |

<sup>1</sup> Analyses were performed according to our laboratory's 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

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## 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.                           |

**State Certifications, Accreditations, and Licenses**

| <b>Agency</b>                                                      | <b>Number</b> | <b>Expire Date</b> |
|--------------------------------------------------------------------|---------------|--------------------|
| Delaware Department of Natural Resources and Environmental Control | Accredited    | 12/31/2016         |

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment

**Service Request:** R1608966

**Non-Certified Analytes**

**Certifying Agency:** New York Department of Health

| Method        | Matrix | Analyte                      |
|---------------|--------|------------------------------|
| 9066 Modified | Soil   | Phenolics, Total Recoverable |
| ALS SOP       | Soil   | Total Solids                 |

**ALS Group USA, Corp.**  
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Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment

**Service Request:** R1608966

**Sample Name:** SED-1  
**Lab Code:** R1608966-001  
**Sample Matrix:** Soil

**Date Collected:** 08/22/16  
**Date Received:** 08/24/16

**Analysis Method**  
6010C  
9066 Modified  
ALS SOP

**Extracted/Digested By**  
CGILDAY  
KMENGs

**Analyzed By**  
DBOND  
BBOWE  
KWONG

**Sample Name:** SED-2  
**Lab Code:** R1608966-002  
**Sample Matrix:** Soil

**Date Collected:** 08/25/16  
**Date Received:** 08/26/16

**Analysis Method**  
6010C  
9066 Modified  
ALS SOP

**Extracted/Digested By**  
CBURLESON  
KMENGs

**Analyzed By**  
CGILDAY  
BBOWE  
KWONG

**Sample Name:** SED-DUP  
**Lab Code:** R1608966-003  
**Sample Matrix:** Soil

**Date Collected:** 08/25/16  
**Date Received:** 08/26/16

**Analysis Method**  
6010C  
9066 Modified  
ALS SOP

**Extracted/Digested By**  
CBURLESON  
KMENGs

**Analyzed By**  
CGILDAY  
BBOWE  
KWONG



## INORGANIC PREPARATION METHODS

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

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** SED-1  
**Lab Code:** R1608966-001

**Service Request:** R1608966  
**Date Collected:** 08/22/16 12:00  
**Date Received:** 08/24/16 15:00  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 6.7    | mg/Kg | 1.5  | 1    | 08/31/16 20:42 | 08/25/16       |   |
| Cadmium, Total   | 6010C           | 0.74 U | mg/Kg | 0.74 | 1    | 08/31/16 20:42 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 21.8   | mg/Kg | 1.5  | 1    | 08/31/16 20:42 | 08/25/16       |   |
| Iron, Total      | 6010C           | 29600  | mg/Kg | 150  | 10   | 09/01/16 21:24 | 08/25/16       |   |
| Lead, Total      | 6010C           | 14.3   | mg/Kg | 7.4  | 1    | 08/31/16 20:42 | 08/25/16       |   |
| Manganese, Total | 6010C           | 441    | mg/Kg | 15   | 10   | 09/01/16 21:24 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** SED-2  
**Lab Code:** R1608966-002

**Service Request:** R1608966  
**Date Collected:** 08/25/16 09:50  
**Date Received:** 08/26/16 13:55  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 2.9    | mg/Kg | 1.1  | 1    | 09/08/16 02:41 | 08/31/16       |   |
| Cadmium, Total   | 6010C           | 0.57 U | mg/Kg | 0.57 | 1    | 09/08/16 02:41 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 21.3   | mg/Kg | 1.1  | 1    | 09/08/16 02:41 | 08/31/16       |   |
| Iron, Total      | 6010C           | 18500  | mg/Kg | 110  | 10   | 09/12/16 11:36 | 08/31/16       |   |
| Lead, Total      | 6010C           | 21.8   | mg/Kg | 5.7  | 1    | 09/08/16 02:41 | 08/31/16       |   |
| Manganese, Total | 6010C           | 591    | mg/Kg | 1.1  | 1    | 09/08/16 02:41 | 08/31/16       |   |

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dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** SED-DUP  
**Lab Code:** R1608966-003

**Service Request:** R1608966  
**Date Collected:** 08/25/16  
**Date Received:** 08/26/16 13:55  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 2.2    | mg/Kg | 1.2  | 1    | 09/08/16 03:01 | 08/31/16       |   |
| Cadmium, Total   | 6010C           | 0.59 U | mg/Kg | 0.59 | 1    | 09/08/16 03:01 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 28.9   | mg/Kg | 1.2  | 1    | 09/08/16 03:01 | 08/31/16       |   |
| Iron, Total      | 6010C           | 16500  | mg/Kg | 120  | 10   | 09/12/16 11:55 | 08/31/16       |   |
| Lead, Total      | 6010C           | 20.0   | mg/Kg | 5.9  | 1    | 09/08/16 03:01 | 08/31/16       |   |
| Manganese, Total | 6010C           | 1060   | mg/Kg | 1.2  | 1    | 09/08/16 03:01 | 08/31/16       |   |



## General Chemistry

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** SED-1  
**Lab Code:** R1608966-001

**Service Request:** R1608966  
**Date Collected:** 08/22/16 12:00  
**Date Received:** 08/24/16 15:00  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name                 | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|------------------------------|-----------------|--------|-------|------|------|----------------|-------------------|---|
| Phenolics, Total Recoverable | 9066 Modified   | 0.15 U | mg/Kg | 0.15 | 1    | 08/30/16 09:15 | 08/30/16          |   |

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dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
**Sample Name:** SED-1  
**Lab Code:** R1608966-001

**Service Request:** R1608966  
**Date Collected:** 08/22/16 12:00  
**Date Received:** 08/24/16 15:00  
**Basis:** As Received

Inorganic Parameters

| Analyte Name | Analysis Method | Result | Units   | MRL | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|--------------|-----------------|--------|---------|-----|------|----------------|-------------------|---|
| Total Solids | ALS SOP         | 65.9   | Percent | -   | 1    | 08/26/16 12:25 | NA                |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** SED-2  
**Lab Code:** R1608966-002

**Service Request:** R1608966  
**Date Collected:** 08/25/16 09:50  
**Date Received:** 08/26/16 13:55  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name                 | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|------------------------------|-----------------|--------|-------|------|------|----------------|-------------------|---|
| Phenolics, Total Recoverable | 9066 Modified   | 0.12 U | mg/Kg | 0.12 | 1    | 08/30/16 09:15 | 08/30/16          |   |

**ALS Group USA, Corp.**  
**dba ALS Environmental**

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** SED-2  
**Lab Code:** R1608966-002

**Service Request:** R1608966  
**Date Collected:** 08/25/16 09:50  
**Date Received:** 08/26/16 13:55  
  
**Basis:** As Received

**Inorganic Parameters**

| <b>Analyte Name</b> | <b>Analysis Method</b> | <b>Result</b> | <b>Units</b> | <b>MRL</b> | <b>Dil.</b> | <b>Date Analyzed</b> | <b>Date<br/>Extracted</b> | <b>Q</b> |
|---------------------|------------------------|---------------|--------------|------------|-------------|----------------------|---------------------------|----------|
| Total Solids        | ALS SOP                | 85.0          | Percent      | -          | 1           | 08/30/16 12:53       | NA                        |          |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** SED-DUP  
**Lab Code:** R1608966-003

**Service Request:** R1608966  
**Date Collected:** 08/25/16  
**Date Received:** 08/26/16 13:55  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name                 | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|------------------------------|-----------------|--------|-------|------|------|----------------|-------------------|---|
| Phenolics, Total Recoverable | 9066 Modified   | 0.12 U | mg/Kg | 0.12 | 1    | 08/30/16 09:15 | 08/30/16          |   |

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dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** SED-DUP  
**Lab Code:** R1608966-003

**Service Request:** R1608966  
**Date Collected:** 08/25/16  
**Date Received:** 08/26/16 13:55  
  
**Basis:** As Received

Inorganic Parameters

| Analyte Name | Analysis Method | Result | Units   | MRL | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|--------------|-----------------|--------|---------|-----|------|----------------|-------------------|---|
| Total Solids | ALS SOP         | 82.9   | Percent | -   | 1    | 08/30/16 12:53 | NA                |   |



## QC Summary Forms

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608966-MB1

**Service Request:** R1608966  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 1.0 U  | mg/Kg | 1.0  | 1    | 08/31/16 19:29 | 08/25/16       |   |
| Cadmium, Total   | 6010C           | 0.50 U | mg/Kg | 0.50 | 1    | 08/31/16 19:29 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 1.0 U  | mg/Kg | 1.0  | 1    | 08/31/16 19:29 | 08/25/16       |   |
| Iron, Total      | 6010C           | 10 U   | mg/Kg | 10   | 1    | 09/01/16 19:51 | 08/25/16       |   |
| Lead, Total      | 6010C           | 5.0 U  | mg/Kg | 5.0  | 1    | 08/31/16 19:29 | 08/25/16       |   |
| Manganese, Total | 6010C           | 1.0 U  | mg/Kg | 1.0  | 1    | 09/01/16 19:51 | 08/25/16       |   |

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608966-MB2

**Service Request:** R1608966  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 1.0 U  | mg/Kg | 1.0  | 1    | 09/08/16 02:33 | 08/31/16       |   |
| Cadmium, Total   | 6010C           | 0.50 U | mg/Kg | 0.50 | 1    | 09/08/16 02:33 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 1.0 U  | mg/Kg | 1.0  | 1    | 09/08/16 02:33 | 08/31/16       |   |
| Iron, Total      | 6010C           | 10 U   | mg/Kg | 10   | 1    | 09/12/16 11:28 | 08/31/16       |   |
| Lead, Total      | 6010C           | 5.0 U  | mg/Kg | 5.0  | 1    | 09/08/16 02:33 | 08/31/16       |   |
| Manganese, Total | 6010C           | 1.0 U  | mg/Kg | 1.0  | 1    | 09/08/16 02:33 | 08/31/16       |   |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil

**Service Request:** R1608966  
**Date Collected:** 08/25/16  
**Date Received:** 08/26/16  
**Date Analyzed:** 09/08/16 - 09/12/16

**Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** SED-2  
**Lab Code:** R1608966-002

**Units:** mg/Kg  
**Basis:** Dry

**Matrix Spike**  
R1608966-002MS

| Analyte Name     | Method | Sample Result | Result | Spike Amount | % Rec  | % Rec Limits |
|------------------|--------|---------------|--------|--------------|--------|--------------|
| Arsenic, Total   | 6010C  | 2.9           | 7.4    | 4.5          | 100    | 75-125       |
| Cadmium, Total   | 6010C  | 0.57 U        | 4.68   | 5.66         | 83     | 75-125       |
| Chromium, Total  | 6010C  | 21.3          | 45.7   | 22.6         | 108    | 75-125       |
| Iron, Total      | 6010C  | 18500         | 19800  | 110          | 1113 # | 75-125       |
| Manganese, Total | 6010C  | 591           | 550    | 56.6         | -72 #  | 75-125       |
| Lead, Total      | 6010C  | 21.8          | 67.2   | 56.6         | 80     | 75-125       |

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 St. Landfill - Sediment  
**Sample Matrix:** Soil

**Service Request:** R1608966  
**Date Collected:** 08/25/16  
**Date Received:** 08/26/16  
**Date Analyzed:** 09/08/16 - 09/12/16

**Replicate Sample Summary****Inorganic Parameters**

**Sample Name:** SED-2  
**Lab Code:** R1608966-002

**Units:** mg/Kg  
**Basis:** Dry

| Duplicate Sample<br>R1608966-<br>002DUP |                        |            |                      |               |                |            |                  |
|-----------------------------------------|------------------------|------------|----------------------|---------------|----------------|------------|------------------|
| <b>Analyte Name</b>                     | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Result</b> | <b>Average</b> | <b>RPD</b> | <b>RPD Limit</b> |
| Arsenic, Total                          | 6010C                  | 1.1        | 2.9                  | 2.3           | 2.57           | 25 *       | 20               |
| Cadmium, Total                          | 6010C                  | 0.57       | 0.57 U               | 0.19 J        | NC             | NC         | 20               |
| Chromium, Total                         | 6010C                  | 1.1        | 21.3                 | 13.6          | 17.4           | 44 *       | 20               |
| Iron, Total                             | 6010C                  | 110        | 18500                | 15000         | 16800          | 21 *       | 20               |
| Lead, Total                             | 6010C                  | 5.7        | 21.8                 | 21.7          | 21.8           | <1         | 20               |
| Manganese, Total                        | 6010C                  | 1.1        | 591                  | 436           | 513            | 30 *       | 20               |

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

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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 St. Landfill - Sediment  
**Sample Matrix:** Soil

**Service Request:** R1608966  
**Date Analyzed:** 08/31/16 - 09/01/16

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/Kg**Basis:**Dry**Lab Control Sample**

R1608966-LCS1

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Arsenic, Total      | 6010C                    | 3.81          | 4.0                 | 95           | 80-120              |
| Cadmium, Total      | 6010C                    | 5.02          | 5.00                | 100          | 80-120              |
| Chromium, Total     | 6010C                    | 20.7          | 20.0                | 103          | 80-120              |
| Iron, Total         | 6010C                    | 100           | 100                 | 100          | 80-120              |
| Lead, Total         | 6010C                    | 50.6          | 50.0                | 101          | 80-120              |
| Manganese, Total    | 6010C                    | 50.2          | 50.0                | 100          | 80-120              |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil

**Service Request:** R1608966  
**Date Analyzed:** 09/08/16 - 09/12/16

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**mg/Kg**Basis:**Dry**Lab Control Sample**

R1608966-LCS2

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Arsenic, Total      | 6010C                    | 3.58          | 4.0                 | 90           | 80-120              |
| Cadmium, Total      | 6010C                    | 4.70          | 5.00                | 94           | 80-120              |
| Chromium, Total     | 6010C                    | 19.1          | 20.0                | 95           | 80-120              |
| Iron, Total         | 6010C                    | 94.0          | 100                 | 94           | 80-120              |
| Lead, Total         | 6010C                    | 47.0          | 50.0                | 94           | 80-120              |
| Manganese, Total    | 6010C                    | 46.6          | 50.0                | 93           | 80-120              |



## General Chemistry

**ALS Environmental—Rochester Laboratory**

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ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608966-MB

**Service Request:** R1608966  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** Dry

Inorganic Parameters

| Analyte Name                 | Analysis Method | Result | Units | MRL  | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|------------------------------|-----------------|--------|-------|------|------|----------------|-------------------|---|
| Phenolics, Total Recoverable | 9066 Modified   | 0.10 U | mg/Kg | 0.10 | 1    | 08/30/16 09:15 | 08/30/16          |   |

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## QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil

**Service Request:** R1608966  
**Date Collected:** 08/22/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 08/30/16  
**Date Extracted:** 08/30/16

**Matrix Spike Summary**  
**Phenolics, Total Recoverable**

**Sample Name:** SED-1  
**Lab Code:** R1608966-001  
**Analysis Method:** 9066 Modified  
**Prep Method:** Method

**Units:** mg/Kg  
**Basis:** Dry

**Matrix Spike**  
R1608966-001MS

| <b>Analyte Name</b>          | <b>Sample Result</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|------------------------------|----------------------|---------------|---------------------|--------------|---------------------|
| Phenolics, Total Recoverable | 0.15 U               | 1.02          | 1.18                | 86           | 72-113              |

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

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QA/QC Report

**Client:** Daigler Engineering  
**Project** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil

**Service Request:** R1608966  
**Date Collected:** 08/22/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 08/30/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** SED-1  
**Lab Code:** R1608966-001

**Units:** mg/Kg  
**Basis:** Dry

|                              |                 |      |                  |        | Duplicate<br>Sample<br>R1608966-<br>001DUP |     |           |
|------------------------------|-----------------|------|------------------|--------|--------------------------------------------|-----|-----------|
| Analyte Name                 | Analysis Method | MRL  | Sample<br>Result | Result | Average                                    | RPD | RPD Limit |
| Phenolics, Total Recoverable | 9066 Modified   | 0.14 | 0.14 U           | 0.14 U | NC                                         | NC  | 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.

**ALS Group USA, Corp.**

dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Sediment  
**Sample Matrix:** Soil

**Service Request:** R1608966  
**Date Analyzed:** 08/30/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/Kg**Basis:**Dry**Lab Control Sample**

R1608966-LCS

| <b>Analyte Name</b>          | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|------------------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Phenolics, Total Recoverable | 9066 Modified            | 0.780         | 0.80                | 97           | 59-128              |



September 13, 2016

Service Request No:R1608961

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

**Laboratory Results for: Marilla St. Landfill - Groundwater or Seeps**

Dear Ms.Zurawski,

Enclosed are the results of the sample(s) submitted to our laboratory August 26, 2016  
For your reference, these analyses have been assigned our service request number **R1608961**.

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

**ADDRESS**

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ALS Group USA, Corp.

dba ALS Environmental



## Narrative Documents

**ALS Environmental—Rochester Laboratory**

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**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Received:** 08/24/16 - 08/26/16

### 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

Twenty four water samples were received for analysis at ALS Environmental on 08/24/2016. 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  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Volatile Organic Analyses:

Method 8260C, R1608961-010, -014, -020, and -024: Sample(s) required dilution due to the foaming nature of the matrix. The reporting limits are adjusted to reflect the dilution.

#### Metals Analyses:

Method 6010C, 8/30/16: The control limits for matrix spike recovery of one or more of the spiked analytes are not applicable and have been flagged with a "#". The concentration of the analyte(s) in the parent sample is more than 4x the spike concentration. No further corrective action was required.

#### General Chemistry Analyses:

No significant anomalies were noted with this analysis.

Approved by  Date 9/13/2016

### SAMPLE DETECTION SUMMARY

| CLIENT ID: MW-2B              |         | Lab ID: R1608961-001 |       |       |       |            |
|-------------------------------|---------|----------------------|-------|-------|-------|------------|
| Analyte                       | Results | Flag                 | MDL   | PQL   | Units | Method     |
| Carbon, Total Organic (TOC)   | 16.8    |                      | 0.2   | 1.0   | mg/L  | SM 5310 B- |
| Phenolics, Total Recoverable  | 0.029   |                      | 0.002 | 0.010 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 490     |                      | 8     | 20    | mg/L  | SM 2540 C- |
| Chromium, Total               | 24      |                      | 0.3   | 10    | ug/L  | 6010C      |
| Iron, Total                   | 10800   |                      | 9     | 100   | ug/L  | 6010C      |
| Lead, Total                   | 13      | J                    | 5     | 50    | ug/L  | 6010C      |
| Manganese, Total              | 595     |                      | 1.0   | 10    | ug/L  | 6010C      |
| Acetone                       | 14      |                      | 1.3   | 10    | ug/L  | 8260C      |

| CLIENT ID: MW-16B             |         | Lab ID: R1608961-003 |        |        |       |            |
|-------------------------------|---------|----------------------|--------|--------|-------|------------|
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 16.7    |                      | 0.2    | 1.0    | mg/L  | SM 5310 B- |
| Cyanide, Total                | 0.025   |                      | 0.002  | 0.010  | mg/L  | 335.4      |
| Phenolics, Total Recoverable  | 0.0118  |                      | 0.0010 | 0.0050 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 670     |                      | 8      | 20     | mg/L  | SM 2540 C- |
| Iron, Total                   | 120     |                      | 9      | 100    | ug/L  | 6010C      |
| Manganese, Total              | 17      |                      | 1.0    | 10     | ug/L  | 6010C      |
| Trichloroethene (TCE)         | 25      |                      | 0.22   | 5.0    | ug/L  | 8260C      |
| cis-1,2-Dichloroethene        | 8.1     |                      | 0.30   | 5.0    | ug/L  | 8260C      |

| CLIENT ID: MW-16A             |         | Lab ID: R1608961-004 |     |     |       |            |
|-------------------------------|---------|----------------------|-----|-----|-------|------------|
| Analyte                       | Results | Flag                 | MDL | PQL | Units | Method     |
| Carbon, Total Organic (TOC)   | 3.5     |                      | 0.2 | 1.0 | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 642     |                      | 8   | 20  | mg/L  | SM 2540 C- |
| Iron, Total                   | 3430    |                      | 9   | 100 | ug/L  | 6010C      |
| Manganese, Total              | 130     |                      | 1.0 | 10  | ug/L  | 6010C      |

| CLIENT ID: MW-18B             |         | Lab ID: R1608961-005 |       |       |       |            |
|-------------------------------|---------|----------------------|-------|-------|-------|------------|
| Analyte                       | Results | Flag                 | MDL   | PQL   | Units | Method     |
| Carbon, Total Organic (TOC)   | 17.6    |                      | 0.2   | 1.0   | mg/L  | SM 5310 B- |
| Cyanide, Total                | 0.019   |                      | 0.002 | 0.010 | mg/L  | 335.4      |
| Solids, Total Dissolved (TDS) | 2740    |                      | 18    | 50    | mg/L  | SM 2540 C- |
| Arsenic, Total                | 16      |                      | 5     | 10    | ug/L  | 6010C      |
| Iron, Total                   | 1170    |                      | 9     | 100   | ug/L  | 6010C      |
| Manganese, Total              | 2190    |                      | 1.0   | 10    | ug/L  | 6010C      |

| CLIENT ID: MW-18A             |         | Lab ID: R1608961-006 |     |     |       |            |
|-------------------------------|---------|----------------------|-----|-----|-------|------------|
| Analyte                       | Results | Flag                 | MDL | PQL | Units | Method     |
| Carbon, Total Organic (TOC)   | 21.1    |                      | 0.2 | 1.0 | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 2050    |                      | 18  | 50  | mg/L  | SM 2540 C- |
| Chromium, Total               | 12      |                      | 0.3 | 10  | ug/L  | 6010C      |
| Iron, Total                   | 22800   |                      | 9   | 100 | ug/L  | 6010C      |
| Lead, Total                   | 44      | J                    | 5   | 50  | ug/L  | 6010C      |

### SAMPLE DETECTION SUMMARY

| CLIENT ID: MW-18A             |         | Lab ID: R1608961-006 |        |        |       |            |
|-------------------------------|---------|----------------------|--------|--------|-------|------------|
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Manganese, Total              | 1440    |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: MW-18A Dissolved   |         | Lab ID: R1608961-007 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Iron, Dissolved               | 7110    |                      | 9      | 100    | ug/L  | 6010C      |
| Manganese, Dissolved          | 890     |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: MW-6B              |         | Lab ID: R1608961-008 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 9.6     |                      | 0.2    | 1.0    | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 1160    |                      | 8      | 20     | mg/L  | SM 2540 C- |
| Iron, Total                   | 4200    |                      | 9      | 100    | ug/L  | 6010C      |
| Lead, Total                   | 6       | J                    | 5      | 50     | ug/L  | 6010C      |
| Manganese, Total              | 720     |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: MW-6B Dissolved    |         | Lab ID: R1608961-009 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Manganese, Dissolved          | 653     |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: MW-7B              |         | Lab ID: R1608961-010 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 69.0    |                      | 0.7    | 4.0    | mg/L  | SM 5310 B- |
| Cyanide, Total                | 0.035   |                      | 0.002  | 0.010  | mg/L  | 335.4      |
| Phenolics, Total Recoverable  | 0.689   |                      | 0.010  | 0.050  | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 1100    |                      | 15     | 40     | mg/L  | SM 2540 C- |
| Iron, Total                   | 460     |                      | 9      | 100    | ug/L  | 6010C      |
| Lead, Total                   | 8       | J                    | 5      | 50     | ug/L  | 6010C      |
| Manganese, Total              | 13      |                      | 1.0    | 10     | ug/L  | 6010C      |
| CLIENT ID: GW-DUP             |         | Lab ID: R1608961-011 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 16.5    |                      | 0.2    | 1.0    | mg/L  | SM 5310 B- |
| Cyanide, Total                | 0.022   |                      | 0.002  | 0.010  | mg/L  | 335.4      |
| Phenolics, Total Recoverable  | 0.0079  |                      | 0.0010 | 0.0050 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 636     |                      | 8      | 20     | mg/L  | SM 2540 C- |
| Iron, Total                   | 110     |                      | 9      | 100    | ug/L  | 6010C      |
| Manganese, Total              | 13      |                      | 1.0    | 10     | ug/L  | 6010C      |
| Trichloroethene (TCE)         | 33      |                      | 0.22   | 5.0    | ug/L  | 8260C      |
| cis-1,2-Dichloroethene        | 9.0     |                      | 0.30   | 5.0    | ug/L  | 8260C      |
| CLIENT ID: MW-2A              |         | Lab ID: R1608961-012 |        |        |       |            |
| Analyte                       | Results | Flag                 | MDL    | PQL    | Units | Method     |
| Carbon, Total Organic (TOC)   | 10.1    |                      | 0.2    | 1.0    | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 398     |                      | 4      | 10     | mg/L  | SM 2540 C- |

### SAMPLE DETECTION SUMMARY

| CLIENT ID: MW-2A              |         | Lab ID: R1608961-012 |     |      |       |            |
|-------------------------------|---------|----------------------|-----|------|-------|------------|
| Analyte                       | Results | Flag                 | MDL | PQL  | Units | Method     |
| Arsenic, Total                | 28      |                      | 5   | 10   | ug/L  | 6010C      |
| Chromium, Total               | 165     |                      | 0.3 | 10   | ug/L  | 6010C      |
| Iron, Total                   | 154000  |                      | 90  | 1000 | ug/L  | 6010C      |
| Lead, Total                   | 65      |                      | 5   | 50   | ug/L  | 6010C      |
| Manganese, Total              | 6130    |                      | 1.0 | 10   | ug/L  | 6010C      |
| CLIENT ID: MW-2A Dissolved    |         | Lab ID: R1608961-013 |     |      |       |            |
| Analyte                       | Results | Flag                 | MDL | PQL  | Units | Method     |
| Manganese, Dissolved          | 165     |                      | 1.0 | 10   | ug/L  | 6010C      |
| CLIENT ID: MW-4A              |         | Lab ID: R1608961-014 |     |      |       |            |
| Analyte                       | Results | Flag                 | MDL | PQL  | Units | Method     |
| Carbon, Total Organic (TOC)   | 10.7    |                      | 0.2 | 1.0  | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 367     |                      | 4   | 10   | mg/L  | SM 2540 C- |
| Iron, Total                   | 6700    |                      | 9   | 100  | ug/L  | 6010C      |
| Manganese, Total              | 135     |                      | 1.0 | 10   | ug/L  | 6010C      |
| CLIENT ID: MW-4A Dissolved    |         | Lab ID: R1608961-015 |     |      |       |            |
| Analyte                       | Results | Flag                 | MDL | PQL  | Units | Method     |
| Manganese, Dissolved          | 70      |                      | 1.0 | 10   | ug/L  | 6010C      |
| CLIENT ID: MW-4B              |         | Lab ID: R1608961-016 |     |      |       |            |
| Analyte                       | Results | Flag                 | MDL | PQL  | Units | Method     |
| Carbon, Total Organic (TOC)   | 7.7     |                      | 0.2 | 1.0  | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 548     |                      | 4   | 10   | mg/L  | SM 2540 C- |
| Iron, Total                   | 5710    |                      | 9   | 100  | ug/L  | 6010C      |
| Manganese, Total              | 882     |                      | 1.0 | 10   | ug/L  | 6010C      |
| CLIENT ID: MW-4B Dissolved    |         | Lab ID: R1608961-017 |     |      |       |            |
| Analyte                       | Results | Flag                 | MDL | PQL  | Units | Method     |
| Iron, Dissolved               | 530     |                      | 9   | 100  | ug/L  | 6010C      |
| Manganese, Dissolved          | 863     |                      | 1.0 | 10   | ug/L  | 6010C      |
| CLIENT ID: MW-3A              |         | Lab ID: R1608961-018 |     |      |       |            |
| Analyte                       | Results | Flag                 | MDL | PQL  | Units | Method     |
| Carbon, Total Organic (TOC)   | 7.2     |                      | 0.2 | 1.0  | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 1540    |                      | 8   | 20   | mg/L  | SM 2540 C- |
| Arsenic, Total                | 33      |                      | 5   | 10   | ug/L  | 6010C      |
| Chromium, Total               | 103     |                      | 0.3 | 10   | ug/L  | 6010C      |
| Iron, Total                   | 145000  |                      | 90  | 1000 | ug/L  | 6010C      |
| Lead, Total                   | 788     |                      | 5   | 50   | ug/L  | 6010C      |
| Manganese, Total              | 2400    |                      | 1.0 | 10   | ug/L  | 6010C      |

### SAMPLE DETECTION SUMMARY

|                                   |                             |
|-----------------------------------|-----------------------------|
| <b>CLIENT ID: MW-3A Dissolved</b> | <b>Lab ID: R1608961-019</b> |
|-----------------------------------|-----------------------------|

| Analyte              | Results | Flag | MDL | PQL | Units | Method |
|----------------------|---------|------|-----|-----|-------|--------|
| Manganese, Dissolved | 430     |      | 1.0 | 10  | ug/L  | 6010C  |

|                         |                             |
|-------------------------|-----------------------------|
| <b>CLIENT ID: MW-3B</b> | <b>Lab ID: R1608961-020</b> |
|-------------------------|-----------------------------|

| Analyte                       | Results | Flag | MDL   | PQL   | Units | Method     |
|-------------------------------|---------|------|-------|-------|-------|------------|
| Carbon, Total Organic (TOC)   | 475     |      | 0.7   | 4.0   | mg/L  | SM 5310 B- |
| Phenolics, Total Recoverable  | 0.812   |      | 0.010 | 0.050 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 2090    |      | 12    | 31    | mg/L  | SM 2540 C- |
| Arsenic, Total                | 64      |      | 5     | 10    | ug/L  | 6010C      |
| Chromium, Total               | 179     |      | 0.3   | 10    | ug/L  | 6010C      |
| Iron, Total                   | 115000  |      | 90    | 1000  | ug/L  | 6010C      |
| Lead, Total                   | 982     |      | 5     | 50    | ug/L  | 6010C      |
| Manganese, Total              | 2050    |      | 1.0   | 10    | ug/L  | 6010C      |
| Acetone                       | 710     |      | 13    | 100   | ug/L  | 8260C      |

|                                   |                             |
|-----------------------------------|-----------------------------|
| <b>CLIENT ID: MW-3B Dissolved</b> | <b>Lab ID: R1608961-021</b> |
|-----------------------------------|-----------------------------|

| Analyte              | Results | Flag | MDL | PQL | Units | Method |
|----------------------|---------|------|-----|-----|-------|--------|
| Arsenic, Dissolved   | 31      |      | 5   | 10  | ug/L  | 6010C  |
| Iron, Dissolved      | 1690    |      | 9   | 100 | ug/L  | 6010C  |
| Lead, Dissolved      | 6       | J    | 5   | 50  | ug/L  | 6010C  |
| Manganese, Dissolved | 29      |      | 1.0 | 10  | ug/L  | 6010C  |

|                          |                             |
|--------------------------|-----------------------------|
| <b>CLIENT ID: MW-15A</b> | <b>Lab ID: R1608961-022</b> |
|--------------------------|-----------------------------|

| Analyte                       | Results | Flag | MDL | PQL | Units | Method     |
|-------------------------------|---------|------|-----|-----|-------|------------|
| Carbon, Total Organic (TOC)   | 7.5     |      | 0.2 | 1.0 | mg/L  | SM 5310 B- |
| Solids, Total Dissolved (TDS) | 588     |      | 4   | 10  | mg/L  | SM 2540 C- |
| Iron, Total                   | 460     |      | 9   | 100 | ug/L  | 6010C      |
| Manganese, Total              | 22      |      | 1.0 | 10  | ug/L  | 6010C      |

|                          |                             |
|--------------------------|-----------------------------|
| <b>CLIENT ID: MW-15B</b> | <b>Lab ID: R1608961-024</b> |
|--------------------------|-----------------------------|

| Analyte                       | Results | Flag | MDL  | PQL  | Units | Method     |
|-------------------------------|---------|------|------|------|-------|------------|
| Carbon, Total Organic (TOC)   | 256     |      | 0.7  | 4.0  | mg/L  | SM 5310 B- |
| Phenolics, Total Recoverable  | 0.68    |      | 0.02 | 0.10 | mg/L  | 420.4      |
| Solids, Total Dissolved (TDS) | 1680    |      | 21   | 59   | mg/L  | SM 2540 C- |
| Arsenic, Total                | 37      |      | 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](http://www.alsglobal.com)

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps

**Service Request:**R1608961

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| R1608961-001    | MW-2B                   | 8/22/2016   | 1300        |
| R1608961-002    | MW-2B Dissolved         | 8/22/2016   | 1300        |
| R1608961-003    | MW-16B                  | 8/22/2016   | 1015        |
| R1608961-004    | MW-16A                  | 8/23/2016   | 1205        |
| R1608961-005    | MW-18B                  | 8/22/2016   | 1545        |
| R1608961-006    | MW-18A                  | 8/22/2016   | 1645        |
| R1608961-007    | MW-18A Dissolved        | 8/22/2016   | 1645        |
| R1608961-008    | MW-6B                   | 8/23/2016   | 1415        |
| R1608961-009    | MW-6B Dissolved         | 8/23/2016   | 1415        |
| R1608961-010    | MW-7B                   | 8/23/2016   | 1030        |
| R1608961-011    | GW-DUP                  |             |             |
| R1608961-012    | MW-2A                   | 8/26/2016   | 0915        |
| R1608961-013    | MW-2A Dissolved         | 8/26/2016   | 0915        |
| R1608961-014    | MW-4A                   | 8/25/2016   | 1240        |
| R1608961-015    | MW-4A Dissolved         | 8/25/2016   | 1240        |
| R1608961-016    | MW-4B                   | 8/25/2016   | 1250        |
| R1608961-017    | MW-4B Dissolved         | 8/25/2016   | 1250        |
| R1608961-018    | MW-3A                   | 8/25/2016   | 1030        |
| R1608961-019    | MW-3A Dissolved         | 8/25/2016   | 1030        |
| R1608961-020    | MW-3B                   | 8/25/2016   | 1045        |
| R1608961-021    | MW-3B Dissolved         | 8/25/2016   | 1045        |
| R1608961-022    | MW-15A                  | 8/25/2016   | 1500        |
| R1608961-024    | MW-15B                  | 8/25/2016   | 1510        |



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 2 OF 2

|                                                                                                             |                            |                                             |               |                                                                                        |                                               |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|-------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------|---------------|----------------------------------------------------------------------------------------|-----------------------------------------------|---|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|--|--------------------------------------------------------------------|--|---|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Project Name<br><b>MARULA ST CANDLE</b>                                                                     |                            | Project Number                              |               | ANALYSIS REQUESTED (Include Method Number and Container Preservation)                  |                                               |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
| Project Manager<br><b>A. ZILAVSKI</b>                                                                       |                            | Report CC                                   |               | PRESERVATIVE                                                                           |                                               | Z |  | Z                                                                                                                                                                                              |  | 0 |  | 3                                                                  |  | 4 |  | Preservative Key<br>0. NONE<br>1. HCL<br>2. HNO <sub>3</sub><br>3. H <sub>2</sub> SO <sub>4</sub><br>4. NaOH<br>5. Zn Acetate<br>6. MeOH<br>7. NaHSO <sub>4</sub><br>8. Other <b>HCl</b> |  |
| Company/Address<br><b>DAIGLER ENGINEERING<br/>2620 GRAND ISLAND BLVD<br/>GRAND ISLAND, NY 14072</b>         |                            |                                             |               | Email<br><b>Sam@DAIGLERVEG.COM</b>                                                     |                                               |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
| Phone #<br><b>716 773</b>                                                                                   |                            | Sample's Printed Name<br><b>SAM DAIGLER</b> |               |                                                                                        |                                               |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
| Sample's Signature<br><i>[Signature]</i>                                                                    |                            |                                             |               |                                                                                        |                                               |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
| CLIENT SAMPLE ID                                                                                            | FOR OFFICE USE ONLY LAB ID | DATE                                        | SAMPLING TIME | MATRIX                                                                                 | NUMBER OF CONTAINERS                          |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
| <b>GW-DUP</b>                                                                                               |                            |                                             |               | <b>GW-DUP</b>                                                                          | GC/MS VOAs<br>• 8260 • 624 • CLP              |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
| <b>SW-DUP</b>                                                                                               |                            |                                             |               | <b>SW-DUP</b>                                                                          | GC/MS SVOAs<br>• 8270 • 625                   |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | GC VOAs<br>• 8021 • 601/602                   |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | PESTICIDES<br>• 8081 • 603                    |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | PCBs<br>• 5082 • 608                          |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | METALS, TOTAL<br>(List in comments below)     |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | METALS, DISSOLVED<br>(List in comments below) |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | <b>TDS</b>                                    |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | <b>ICL TBP</b>                                |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | <b>CN</b>                                     |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
|                                                                                                             |                            |                                             |               |                                                                                        | ALTERNATE DESCRIPTION                         |   |  |                                                                                                                                                                                                |  |   |  |                                                                    |  |   |  |                                                                                                                                                                                          |  |
| SPECIAL INSTRUCTIONS/COMMENTS<br><b>Metals</b><br><b>GW: As Cr Fe Pb Mn</b><br><b>SW: As Cd Cr Fe Pb Mn</b> |                            |                                             |               | TURNAROUND REQUIREMENTS<br>RUSH (SUFCHARGES APPLY)<br>1 day 2 day 3 day<br>4 day 5 day |                                               |   |  | REPORT REQUIREMENTS<br>I. Results Only<br>II. Results + QC Summaries (LCS, DUP, MSM, SD as required)<br>III. Results + QC and Calibration Summaries<br>IV. Data Validator Report with Raw Data |  |   |  | INVOICE INFORMATION<br>PO #<br>BILL TO:                            |  |   |  |                                                                                                                                                                                          |  |
| STATE WHERE SAMPLES WERE COLLECTED <b>MARULA ST CANDLE</b>                                                  |                            |                                             |               | RECEIVED BY                                                                            |                                               |   |  | RECEIVED BY                                                                                                                                                                                    |  |   |  | RF# <b>R1608961</b><br>Daigler Engineering<br>Group/Division/Steps |  |   |  |                                                                                                                                                                                          |  |
| RELINQUISHED BY                                                                                             |                            |                                             |               | RELINQUISHED BY                                                                        |                                               |   |  | Signature                                                                                                                                                                                      |  |   |  | Signature                                                          |  |   |  |                                                                                                                                                                                          |  |
| Printed Name <b>SAM DAIGLER</b>                                                                             |                            |                                             |               | Printed Name <b>SAM DAIGLER</b>                                                        |                                               |   |  | Printed Name                                                                                                                                                                                   |  |   |  | Printed Name                                                       |  |   |  |                                                                                                                                                                                          |  |
| Firm <b>DAIGLER</b>                                                                                         |                            |                                             |               | Firm <b>DAIGLER</b>                                                                    |                                               |   |  | Firm                                                                                                                                                                                           |  |   |  | Firm                                                               |  |   |  |                                                                                                                                                                                          |  |
| Date/Time <b>11/11/12</b>                                                                                   |                            |                                             |               | Date/Time <b>11/11/12</b>                                                              |                                               |   |  | Date/Time                                                                                                                                                                                      |  |   |  | Date/Time                                                          |  |   |  |                                                                                                                                                                                          |  |



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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

Of Z

|                                                               |                            |                                             |               |                                                                                        |                      |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
|---------------------------------------------------------------|----------------------------|---------------------------------------------|---------------|----------------------------------------------------------------------------------------|----------------------|------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------|----------------------------------------------|-----------------------------------------|---------|----|--------|---------|-----------------------------------|--|
| Project Name<br><b>MARILLA ST. LANDELL</b>                    |                            | Project Number                              |               | ANALYSIS REQUESTED (Include Method Number and Container Preservative)                  |                      |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
| Project Manager<br><b>A. Zuparski</b>                         |                            | Report CC                                   |               | PRESERVATIVE                                                                           | Z Z 0 3 4 0 0        |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
| Company/Address<br><b>DAIGLER ENGINEERING P.C.</b>            |                            |                                             |               |                                                                                        |                      |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
| 2620. GRAND ISLAND BLVD                                       |                            |                                             |               |                                                                                        |                      |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
| GRAND ISLAND, NY 14072                                        |                            |                                             |               |                                                                                        |                      |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
| Phone #<br><b>716 773 6872</b>                                |                            | Email<br><b>SAM@JADENVEGR.COM</b>           |               |                                                                                        |                      |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
| Sample's Signature<br><b>SAM DAIGLER</b>                      |                            | Sample's Printed Name<br><b>SAM DAIGLER</b> |               |                                                                                        |                      |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
| CLIENT SAMPLE ID                                              | FOR OFFICE USE ONLY LAB ID | DATE                                        | SAMPLING TIME | MATRIX                                                                                 | NUMBER OF CONTAINERS | GCMS VOA CLP<br>• 8200 • 824 • CLP | GCMS VOA<br>• 8270 • 825 | PESTICIDES<br>• 8027 • 801/802                                                                                                                                                               | PCBS<br>• 8082 • 808 | METALS TOTAL<br>(List in comments below) | METALS DISSOLVED<br>(List in comments below) | TDS                                     | TC, TBP | CN | METALS | PHENOLS | REMARKS/<br>ALTERNATE DESCRIPTION |  |
| MW-2A                                                         |                            | 8/26/16                                     | 9:15am        | GROUNDWATER                                                                            | 6                    | X                                  |                          |                                                                                                                                                                                              |                      | X                                        | X                                            | X                                       |         |    |        |         |                                   |  |
| MW-4A                                                         |                            | 8/25/16                                     | 12:40pm       | GROUNDWATER                                                                            | 6                    | X                                  |                          |                                                                                                                                                                                              |                      | X                                        | X                                            | X                                       |         |    |        |         |                                   |  |
| MW-4B                                                         |                            | 8/25/16                                     | 12:50pm       | GROUNDWATER                                                                            | 6                    | X                                  |                          |                                                                                                                                                                                              |                      | X                                        | X                                            | X                                       |         |    |        |         |                                   |  |
| MW-3A                                                         |                            | 8/25/16                                     | 10:30pm       | GROUNDWATER                                                                            | 6                    | X                                  |                          |                                                                                                                                                                                              |                      | X                                        | X                                            | X                                       |         |    |        |         |                                   |  |
| MW-3B                                                         |                            | 8/25/16                                     | 10:46am       | GROUNDWATER                                                                            | 6                    | X                                  |                          |                                                                                                                                                                                              |                      | X                                        | X                                            | X                                       |         |    |        |         |                                   |  |
| MW-15A                                                        |                            | 8/25/16                                     | 3:00pm        | GROUNDWATER                                                                            | 5                    | X                                  |                          |                                                                                                                                                                                              |                      | X                                        | X                                            | X                                       |         |    |        |         |                                   |  |
| MW-15B                                                        |                            | 8/25/16                                     | 3:10pm        | GROUNDWATER                                                                            | 5                    | X                                  |                          |                                                                                                                                                                                              |                      | X                                        | X                                            | X                                       |         |    |        |         |                                   |  |
| SED-3A                                                        |                            | 8/25/16                                     | 4:30am        | SEDIMENT                                                                               | 6                    | X                                  |                          |                                                                                                                                                                                              |                      | X                                        | X                                            | X                                       |         |    |        |         |                                   |  |
| SED-2                                                         |                            | 8/25/16                                     | 9:50am        | SEDIMENT                                                                               | 2                    |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    | X      | X       |                                   |  |
| SED-DUP                                                       |                            | 8/25/16                                     |               | SEDIMENT                                                                               | 2                    |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    | X      | X       |                                   |  |
| SED-M5                                                        |                            | 8/25/16                                     | 9:55am        | SEDIMENT                                                                               | 1                    |                                    |                          |                                                                                                                                                                                              |                      |                                          |                                              |                                         |         |    |        |         |                                   |  |
| SPECIAL INSTRUCTIONS/COMMENTS<br>Metals                       |                            |                                             |               | TURNAROUND REQUIREMENTS<br>RUSH (SURCHARGES APPLY)<br>1 day 2 day 3 day<br>4 day 5 day |                      |                                    |                          | REPORT REQUIREMENTS<br>I. Results Only<br>II. Results + QC Summaries (LOS, DUP, MS/SD as required)<br>III. Results + QC and Calibration Summaries<br>IV. Data Validator Report with Raw Data |                      |                                          |                                              | INVOICE INFORMATION<br>PO #<br>BILL TO: |         |    |        |         |                                   |  |
| See QAPP <input type="checkbox"/>                             |                            |                                             |               | STATE WHERE SAMPLES WERE COLLECTED<br><b>MARILLA ST. LANDELL</b>                       |                      |                                    |                          | RECEIVED BY<br><b>[Signature]</b>                                                                                                                                                            |                      |                                          |                                              | RECEIVED BY                             |         |    |        |         |                                   |  |
| RELINQUISHED BY<br><b>[Signature]</b>                         |                            |                                             |               | RELINQUISHED BY<br><b>[Signature]</b>                                                  |                      |                                    |                          | RELINQUISHED BY<br><b>[Signature]</b>                                                                                                                                                        |                      |                                          |                                              | RELINQUISHED BY<br><b>[Signature]</b>   |         |    |        |         |                                   |  |
| Printed Name<br><b>SAM DAIGLER</b>                            |                            |                                             |               | Printed Name<br><b>[Signature]</b>                                                     |                      |                                    |                          | Printed Name<br><b>[Signature]</b>                                                                                                                                                           |                      |                                          |                                              | Printed Name<br><b>[Signature]</b>      |         |    |        |         |                                   |  |
| Firm<br><b>DAIGLER ENGINEERING</b>                            |                            |                                             |               | Firm<br><b>[Signature]</b>                                                             |                      |                                    |                          | Firm<br><b>[Signature]</b>                                                                                                                                                                   |                      |                                          |                                              | Firm<br><b>[Signature]</b>              |         |    |        |         |                                   |  |
| Date/Time<br><b>8/26/16 11:36AM</b>                           |                            |                                             |               | Date/Time<br><b>8/26/16 140</b>                                                        |                      |                                    |                          | Date/Time<br><b>8/26/16 1355</b>                                                                                                                                                             |                      |                                          |                                              | Date/Time<br><b>8/26/16 1355</b>        |         |    |        |         |                                   |  |
| Distribution: White - Lab Copy; Yellow - Return to Originator |                            |                                             |               | 12 of 121                                                                              |                      |                                    |                          | R1608961<br>Daigler Engineering<br>Groundwater or Seeps                                                                                                                                      |                      |                                          |                                              | 5                                       |         |    |        |         |                                   |  |



## Cooler Receipt and Preservation Check Form

R1608961

5

Daigler Engineering  
Groundwater or SeepsProject/Client Daigler Folder Number R16-8961Cooler received on 8/24/16 by: ECOURIER: ALS UPS FEDEX VELOCITY CLIENT

|   |                                                      |                                    |                         |
|---|------------------------------------------------------|------------------------------------|-------------------------|
| 1 | Were Custody seals on outside of cooler?             | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| 2 | Custody papers properly completed (ink, signed)?     | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| 3 | Did all bottles arrive in good condition (unbroken)? | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| 4 | Circle: <u>Wet Ice</u> Dry Ice Gel packs present?    | <input checked="" type="radio"/> Y | <input type="radio"/> N |

|    |                                                   |                       |                                    |                                             |
|----|---------------------------------------------------|-----------------------|------------------------------------|---------------------------------------------|
| 5a | Perchlorate samples have required headspace?      | Y                     | <input checked="" type="radio"/> N | <input type="radio"/> NA                    |
| 5b | Did VOA vials, Alk, or Sulfide have sig* bubbles? | Y                     | <input checked="" type="radio"/> N | <input type="radio"/> NA                    |
| 6  | Where did the bottles originate?                  | <u>ALS/ROC</u> CLIENT |                                    |                                             |
| 7  | Soil VOA received as:                             | Bulk                  | Encore                             | 5035set <input checked="" type="radio"/> NA |

8. Temperature Readings Date: 8/24/16 Time: 1510 ID: IR#5 IR#6 From: Temp Blank Sample Bottle

|                               |                                    |                                    |   |   |   |   |   |
|-------------------------------|------------------------------------|------------------------------------|---|---|---|---|---|
| Observed Temp (°C)            | <u>1.8</u>                         | <u>1.9</u>                         |   |   |   |   |   |
| Correction Factor (°C)        | <u>-</u>                           | <u>-</u>                           |   |   |   |   |   |
| Corrected Temp (°C)           | <u>1.8</u>                         | <u>1.9</u>                         |   |   |   |   |   |
| Within 0-6°C?                 | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | Y | N | Y | N | Y |
| If <0°C, were samples frozen? | Y                                  | N                                  | Y | N | Y | N | Y |

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

&amp; Client Approval to Run Samples: \_\_\_\_\_ Standing Approval \_\_\_\_\_ Client aware at drop-off \_\_\_\_\_ Client notified by: \_\_\_\_\_

All samples held in storage location: R-002 by E on 8/24/16 at 1510  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_Cooler Breakdown: Date: 8/24/16 Time: 151 by: DW

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

Explain any discrepancies:

| pH                    | Reagent                                       | Yes                                 | No | Lot Received                                                                                   | Exp         | Sample ID | Vol. Added | Lot Added | Final pH |
|-----------------------|-----------------------------------------------|-------------------------------------|----|------------------------------------------------------------------------------------------------|-------------|-----------|------------|-----------|----------|
| ≥12                   | NaOH                                          | <input checked="" type="checkbox"/> |    | <u>WC14917A3</u>                                                                               | <u>5/17</u> |           |            |           |          |
| ≤2                    | HNO <sub>3</sub>                              | <input checked="" type="checkbox"/> |    | <u>BD8261536</u>                                                                               | <u>6/17</u> |           |            |           |          |
| ≤2                    | H <sub>2</sub> SO <sub>4</sub>                | <input checked="" type="checkbox"/> |    | <u>WC161001A</u>                                                                               | <u>8/17</u> |           |            |           |          |
| <4                    | NaHSO <sub>4</sub>                            |                                     |    |                                                                                                |             |           |            |           |          |
| Residual Chlorine (-) | For CN Phenol and 522                         | <input checked="" type="checkbox"/> |    | If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol). |             |           |            |           |          |
|                       | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | -                                   | -  |                                                                                                |             |           |            |           |          |
|                       | ZnAcetate                                     | -                                   | -  |                                                                                                |             |           |            |           |          |
|                       | HCl                                           | **                                  | ** | <u>411407C</u>                                                                                 |             |           |            |           |          |

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: \_\_\_\_\_

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

Bottle lot numbers: 5-317-002, 052016-2A40, 050916-1B4C  
Other Comments:

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

PC Secondary Review: \_\_\_\_\_

\*significant air bubbles: VOA &gt; 5-6 mm : WC &gt; 1 in. diameter



# Cooler Receipt and Preservation Check Form

R1608961

Dagler Engineering  
Groundwater or Seeps

5

Project/Client Dagler Eng. Folder Number \_\_\_\_\_

Cooler received on 8/26/16 by: DL

COURIER: ALS UPS FEDEX VELOCITY CLIENT

|   |                                                       |                                       |
|---|-------------------------------------------------------|---------------------------------------|
| 1 | Were Custody seals on outside of cooler?              | <input checked="" type="checkbox"/> N |
| 2 | Custody papers properly completed (ink, signed)?      | <input checked="" type="checkbox"/> N |
| 3 | Did all bottles arrive in good condition (unbroken)?  | <input checked="" type="checkbox"/> N |
| 4 | Circle: <del>Wet Ice</del> Dry Ice Gel packs present? | <input checked="" type="checkbox"/> N |

|    |                                                   |                                                            |
|----|---------------------------------------------------|------------------------------------------------------------|
| 5a | Perchlorate samples have required headspace?      | Y N <input checked="" type="checkbox"/> NA                 |
| 5b | Did VOA vials, Alk, or Sulfide have sig* bubbles? | Y <input checked="" type="checkbox"/> NA                   |
| 6  | Where did the bottles originate?                  | AL <del>ROC</del> CLIENT                                   |
| 7  | Soil VOA received as:                             | Bulk Encore 5035set <input checked="" type="checkbox"/> NA |

8. Temperature Readings Date: 8/26/16 Time: 1417 ID: IR#5 IR#6 From: Temp Blank Sample Bottle

|                               |                                       |     |     |     |     |     |     |
|-------------------------------|---------------------------------------|-----|-----|-----|-----|-----|-----|
| Observed Temp (°C)            | <u>2.7</u>                            |     |     |     |     |     |     |
| Correction Factor (°C)        | <u>20.6</u>                           |     |     |     |     |     |     |
| Corrected Temp (°C)           | <u>2.7</u>                            |     |     |     |     |     |     |
| Within 0-6°C?                 | <input checked="" type="checkbox"/> 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 DLW on 8/26/16 at 1417  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

Cooler Breakdown: Date: 8-26-16 Time: 1553 by: TS

- Were all bottle labels complete (i.e. analysis, preservation, etc.)? ☒ YES NO
- Did all bottle labels and tags agree with custody papers? ☒ YES NO
- Were correct containers used for the tests indicated? ☒ YES NO
- Were 5035 vials acceptable (no extra labels, not leaking)? ☒ YES NO
- Air Samples: Cassettes / Tubes Intact \_\_\_\_\_ Canisters Pressurized \_\_\_\_\_ Tedlar® Bags Inflated ☒ NA

Explain any discrepancies:

| pH                    | Reagent                                       | Yes                                 | No                                  | Lot Received                                                                                   | Exp         | Sample ID  | Vol. Added | Lot Added        | Final pH     |
|-----------------------|-----------------------------------------------|-------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------|-------------|------------|------------|------------------|--------------|
| ≥12                   | NaOH                                          | <input checked="" type="checkbox"/> |                                     | <u>W6144 1773</u>                                                                              |             |            |            |                  |              |
| ≤2                    | HNO <sub>3</sub>                              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>B03 261536</u>                                                                              | <u>6/17</u> | <u>OCI</u> | <u>1ml</u> | <u>BDB261536</u> | <u>&lt;2</u> |
| ≤2                    | H <sub>2</sub> SO <sub>4</sub>                | <input checked="" type="checkbox"/> |                                     | <u>W6144 1773</u>                                                                              | <u>8/17</u> |            |            |                  |              |
| <4                    | NaHSO <sub>4</sub>                            |                                     |                                     |                                                                                                |             |            |            |                  |              |
| Residual Chlorine (-) | For CN Phenol and 522                         | <input checked="" type="checkbox"/> |                                     | If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol). |             |            |            |                  |              |
|                       | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | -                                   | -                                   |                                                                                                |             |            |            |                  |              |
|                       | ZnAcetate                                     | -                                   | -                                   |                                                                                                |             |            |            |                  |              |
|                       | HCl                                           | **                                  | **                                  |                                                                                                |             |            |            |                  |              |

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: \_\_\_\_\_

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

Bottle lot numbers: 060001, 062016-2420, 064016-1131  
Other Comments:

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

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](http://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.                                                                                                                       | +   | Correlation coefficient for MSA is <0.995.                                                                                                                                                                           |
| 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/Aroclors). | N   | Inorganics- Matrix spike recovery was outside laboratory limits.                                                                                                                                                     |
| B | Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.                                                                                                                                                                            | N   | Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.                                                                                                                     |
| E | Inorganics- Concentration is estimated due to the serial dilution was outside control limits.                                                                                                                                                                                                          | S   | Concentration has been determined using Method of Standard Additions (MSA).                                                                                                                                          |
| E | Organics- Concentration has exceeded the calibration range for that specific analysis.                                                                                                                                                                                                                 | W   | Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.                                                                                                   |
| 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.                                                                                            | P   | Concentration >40% (25% for CLP) difference between the two GC columns.                                                                                                                                              |
| * | Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.                                                                                                                  | C   | Confirmed by GC/MS                                                                                                                                                                                                   |
| H | Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.                                                                                                                                                                                                         | Q   | DoD reports: indicates a pesticide/Aroclor is not confirmed (100% Difference between two GC columns).                                                                                                                |
| # | Spike was diluted out.                                                                                                                                                                                                                                                                                 | X   | See Case Narrative for discussion.                                                                                                                                                                                   |
|   |                                                                                                                                                                                                                                                                                                        | MRL | Method Reporting Limit. Also known as:                                                                                                                                                                               |
|   |                                                                                                                                                                                                                                                                                                        | LOQ | Limit of Quantitation (LOQ)<br>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<sup>1</sup>

|                         |                       |                         |
|-------------------------|-----------------------|-------------------------|
| Connecticut ID # PH0556 | Maine ID #NY0032      | New Hampshire ID #      |
| Delaware Accredited     | Nebraska Accredited   | 294100 A/B              |
| 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        |

<sup>1</sup> Analyses were performed according to our laboratory's 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

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### 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.                           |

**ALS Group USA, Corp.**

dba ALS Environmental

## Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps

**Service Request:** R1608961

**Sample Name:** Batch QC  
**Lab Code:** R1608930-001  
**Sample Matrix:** Water

**Date Collected:** NA  
**Date Received:** NA

**Analysis Method**  
SM 5310 B-2000(2011)

**Extracted/Digested By**

**Analyzed By**  
MLAMBRECHT

**Sample Name:** Batch QC  
**Lab Code:** R1608930-006  
**Sample Matrix:** Water

**Date Collected:** NA  
**Date Received:** NA

**Analysis Method**  
SM 5310 B-2000(2011)

**Extracted/Digested By**

**Analyzed By**  
MLAMBRECHT

**Sample Name:** MW-2B  
**Lab Code:** R1608961-001  
**Sample Matrix:** Water

**Date Collected:** 08/22/16  
**Date Received:** 08/24/16

**Analysis Method**  
335.4  
420.4  
6010C  
8260C  
SM 2540 C-1997(2011)  
SM 5310 B-2000(2011)

**Extracted/Digested By**  
GNITAJOUPPI  
  
CGILDAY

**Analyzed By**  
KMENGs  
BBOWE  
DBOND  
FNAEGLER  
KWONG  
KABBOTT

**Sample Name:** MW-2B Dissolved  
**Lab Code:** R1608961-002  
**Sample Matrix:** Water

**Date Collected:** 08/22/16  
**Date Received:** 08/24/16

**Analysis Method**  
6010C

**Extracted/Digested By**  
CGILDAY

**Analyzed By**  
DBOND

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps

**Service Request:** R1608961

**Sample Name:** MW-16B  
**Lab Code:** R1608961-003  
**Sample Matrix:** Water

**Date Collected:** 08/22/16  
**Date Received:** 08/24/16

**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

SM 5310 B-2000(2011)

**Extracted/Digested By**

GNITAJOUPPI

CGILDAY

**Analyzed By**

KMENGs

BBOWE

DBOND

FNAEGLER

KWONG

KABBOTT

**Sample Name:** MW-16A  
**Lab Code:** R1608961-004  
**Sample Matrix:** Water

**Date Collected:** 08/23/16  
**Date Received:** 08/24/16

**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

SM 5310 B-2000(2011)

**Extracted/Digested By**

GNITAJOUPPI

CGILDAY

**Analyzed By**

KMENGs

BBOWE

DBOND

FNAEGLER

KWONG

KABBOTT

**Sample Name:** MW-18B  
**Lab Code:** R1608961-005  
**Sample Matrix:** Water

**Date Collected:** 08/22/16  
**Date Received:** 08/24/16

**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

SM 5310 B-2000(2011)

**Extracted/Digested By**

GNITAJOUPPI

CGILDAY

**Analyzed By**

KMENGs

BBOWE

DBOND

FNAEGLER

KWONG

MLAMBRECHT

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps

**Service Request:** R1608961

**Sample Name:** MW-18A  
**Lab Code:** R1608961-006  
**Sample Matrix:** Water

**Date Collected:** 08/22/16  
**Date Received:** 08/24/16

| Analysis Method      | Extracted/Digested By | Analyzed By |
|----------------------|-----------------------|-------------|
| 335.4                | GNITAJOUPI            | KMENG       |
| 420.4                |                       | BBOWE       |
| 6010C                | CGILDAY               | DBOND       |
| 8260C                |                       | FNAEGLER    |
| SM 2540 C-1997(2011) |                       | KWONG       |
| SM 5310 B-2000(2011) |                       | MLAMBRECHT  |

**Sample Name:** MW-18A Dissolved  
**Lab Code:** R1608961-007  
**Sample Matrix:** Water

**Date Collected:** 08/22/16  
**Date Received:** 08/24/16

| Analysis Method | Extracted/Digested By | Analyzed By |
|-----------------|-----------------------|-------------|
| 6010C           | CGILDAY               | DBOND       |

**Sample Name:** MW-6B  
**Lab Code:** R1608961-008  
**Sample Matrix:** Water

**Date Collected:** 08/23/16  
**Date Received:** 08/24/16

| Analysis Method      | Extracted/Digested By | Analyzed By |
|----------------------|-----------------------|-------------|
| 335.4                | GNITAJOUPI            | KMENG       |
| 420.4                |                       | BBOWE       |
| 6010C                | CGILDAY               | DBOND       |
| 8260C                |                       | FNAEGLER    |
| SM 2540 C-1997(2011) |                       | KWONG       |
| SM 5310 B-2000(2011) |                       | MLAMBRECHT  |

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps

**Service Request:** R1608961

**Sample Name:** MW-6B Dissolved  
**Lab Code:** R1608961-009  
**Sample Matrix:** Water

**Date Collected:** 08/23/16  
**Date Received:** 08/24/16

**Analysis Method**  
6010C

**Extracted/Digested By**  
CGILDAY

**Analyzed By**  
DBOND

**Sample Name:** MW-7B  
**Lab Code:** R1608961-010  
**Sample Matrix:** Water

**Date Collected:** 08/23/16  
**Date Received:** 08/24/16

**Analysis Method**  
335.4  
420.4  
6010C  
8260C  
SM 2540 C-1997(2011)  
SM 5310 B-2000(2011)

**Extracted/Digested By**  
GNITAJOUPPI  
  
CGILDAY

**Analyzed By**  
KMENGs  
BBOWE  
DBOND  
FNAEGLER  
KWONG  
KABBOTT

**Sample Name:** GW-DUP  
**Lab Code:** R1608961-011  
**Sample Matrix:** Water

**Date Collected:** NA  
**Date Received:** 08/24/16

**Analysis Method**  
335.4  
420.4  
6010C  
8260C  
SM 2540 C-1997(2011)  
SM 5310 B-2000(2011)

**Extracted/Digested By**  
GNITAJOUPPI  
  
CGILDAY

**Analyzed By**  
KMENGs  
BBOWE  
DBOND  
FNAEGLER  
KWONG  
MLAMBRECHT

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps

**Service Request:** R1608961

**Sample Name:** MW-2A  
**Lab Code:** R1608961-012  
**Sample Matrix:** Water

**Date Collected:** 08/26/16  
**Date Received:** 08/26/16

| Analysis Method      | Extracted/Digested By | Analyzed By |
|----------------------|-----------------------|-------------|
| 335.4                | GNITAJOUPPI           | KMENGs      |
| 420.4                |                       | BBOWE       |
| 6010C                | CBURLESON             | CGILDAY     |
| 8260C                |                       | KRUEST      |
| SM 2540 C-1997(2011) |                       | KWONG       |
| SM 5310 B-2000(2011) |                       | KABBOTT     |

**Sample Name:** MW-2A Dissolved  
**Lab Code:** R1608961-013  
**Sample Matrix:** Water

**Date Collected:** 08/26/16  
**Date Received:** 08/26/16

| Analysis Method | Extracted/Digested By | Analyzed By |
|-----------------|-----------------------|-------------|
| 6010C           | CBURLESON             | CGILDAY     |

**Sample Name:** MW-4A  
**Lab Code:** R1608961-014  
**Sample Matrix:** Water

**Date Collected:** 08/25/16  
**Date Received:** 08/26/16

| Analysis Method      | Extracted/Digested By | Analyzed By |
|----------------------|-----------------------|-------------|
| 335.4                | GNITAJOUPPI           | KMENGs      |
| 420.4                |                       | BBOWE       |
| 6010C                | CBURLESON             | CGILDAY     |
| 8260C                |                       | KRUEST      |
| SM 2540 C-1997(2011) |                       | KWONG       |
| SM 5310 B-2000(2011) |                       | KABBOTT     |

**ALS Group USA, Corp.**

dba ALS Environmental

## Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps

**Service Request:** R1608961

**Sample Name:** MW-4A Dissolved  
**Lab Code:** R1608961-015  
**Sample Matrix:** Water

**Date Collected:** 08/25/16**Date Received:** 08/26/16**Analysis Method**

6010C

**Extracted/Digested By**

CBURLESON

**Analyzed By**

CGILDAY

**Sample Name:** MW-4B  
**Lab Code:** R1608961-016  
**Sample Matrix:** Water

**Date Collected:** 08/25/16**Date Received:** 08/26/16**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

SM 5310 B-2000(2011)

**Extracted/Digested By**

GNITAJOUPPI

CBURLESON

**Analyzed By**

KMENGs

BBOWE

CGILDAY

KRUEST

KWONG

KABBOTT

**Sample Name:** MW-4B Dissolved  
**Lab Code:** R1608961-017  
**Sample Matrix:** Water

**Date Collected:** 08/25/16**Date Received:** 08/26/16**Analysis Method**

6010C

**Extracted/Digested By**

CBURLESON

**Analyzed By**

CGILDAY

**Sample Name:** MW-3A  
**Lab Code:** R1608961-018  
**Sample Matrix:** Water

**Date Collected:** 08/25/16**Date Received:** 08/26/16**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

**Extracted/Digested By**

GNITAJOUPPI

CBURLESON

**Analyzed By**

KMENGs

BBOWE

CGILDAY

KRUEST

KWONG

**ALS Group USA, Corp.**

dba ALS Environmental

## Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps

**Service Request:** R1608961

**Sample Name:** MW-3A  
**Lab Code:** R1608961-018  
**Sample Matrix:** Water

**Date Collected:** 08/25/16**Date Received:** 08/26/16

**Analysis Method**  
SM 5310 B-2000(2011)

**Extracted/Digested By****Analyzed By**  
KABBOTT

**Sample Name:** MW-3A Dissolved  
**Lab Code:** R1608961-019  
**Sample Matrix:** Water

**Date Collected:** 08/25/16**Date Received:** 08/26/16

**Analysis Method**  
6010C

**Extracted/Digested By**  
CBURLESON**Analyzed By**  
CGILDAY

**Sample Name:** MW-3B  
**Lab Code:** R1608961-020  
**Sample Matrix:** Water

**Date Collected:** 08/25/16**Date Received:** 08/26/16

**Analysis Method**  
335.4  
420.4  
6010C  
8260C  
SM 2540 C-1997(2011)  
SM 5310 B-2000(2011)

**Extracted/Digested By**  
KABBOTT  
  
CBURLESON**Analyzed By**  
KABBOTT  
BBOWE  
CGILDAY  
KRUEST  
KWONG  
KABBOTT

**Sample Name:** MW-3B Dissolved  
**Lab Code:** R1608961-021  
**Sample Matrix:** Water

**Date Collected:** 08/25/16**Date Received:** 08/26/16

**Analysis Method**  
6010C

**Extracted/Digested By**  
CBURLESON**Analyzed By**  
CGILDAY

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps

**Service Request:** R1608961

**Sample Name:** MW-15A  
**Lab Code:** R1608961-022  
**Sample Matrix:** Water

**Date Collected:** 08/25/16  
**Date Received:** 08/26/16

**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

SM 5310 B-2000(2011)

**Extracted/Digested By**

KABBOTT

CBURLESON

**Analyzed By**

KABBOTT

BBOWE

CGILDAY

KRUEST

KWONG

KABBOTT

**Sample Name:** MW-15B  
**Lab Code:** R1608961-024  
**Sample Matrix:** Water

**Date Collected:** 08/25/16  
**Date Received:** 08/26/16

**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

SM 5310 B-2000(2011)

**Extracted/Digested By**

KABBOTT

CBURLESON

**Analyzed By**

KABBOTT

BBOWE

CGILDAY

KRUEST

KWONG

KABBOTT



## INORGANIC PREPARATION METHODS

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

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## 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](http://www.alsglobal.com)

**ALS Group USA, Corp.**  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16 13:00  
**Date Received:** 08/24/16 15:05

**Sample Name:** MW-2B  
**Lab Code:** R1608961-001

**Units:** ug/L  
**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)  | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/25/16 17:05 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/25/16 17:05 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/25/16 17:05 |   |
| Acetone                      | 14     | 10  | 1    | 08/25/16 17:05 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/25/16 17:05 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/25/16 17:05 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 93    | 85 - 122       | 08/25/16 17:05 |   |
| Dibromofluoromethane | 97    | 89 - 119       | 08/25/16 17:05 |   |
| Toluene-d8           | 94    | 87 - 121       | 08/25/16 17:05 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16 10:15  
**Date Received:** 08/24/16 15:05

**Sample Name:** MW-16B  
**Lab Code:** R1608961-003

**Units:** ug/L  
**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)  | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/25/16 17:30 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/25/16 17:30 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/25/16 17:30 |   |
| Acetone                      | 10 U   | 10  | 1    | 08/25/16 17:30 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/25/16 17:30 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| Trichloroethene (TCE)        | 25     | 5.0 | 1    | 08/25/16 17:30 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| cis-1,2-Dichloroethene       | 8.1    | 5.0 | 1    | 08/25/16 17:30 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/25/16 17:30 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 94    | 85 - 122       | 08/25/16 17:30 |   |
| Dibromofluoromethane | 97    | 89 - 119       | 08/25/16 17:30 |   |
| Toluene-d8           | 95    | 87 - 121       | 08/25/16 17:30 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/23/16 12:05  
**Date Received:** 08/24/16 15:05

**Sample Name:** MW-16A  
**Lab Code:** R1608961-004

**Units:** ug/L  
**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)  | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/25/16 17:54 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/25/16 17:54 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/25/16 17:54 |   |
| Acetone                      | 10 U   | 10  | 1    | 08/25/16 17:54 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/25/16 17:54 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/25/16 17:54 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 93    | 85 - 122       | 08/25/16 17:54 |   |
| Dibromofluoromethane | 98    | 89 - 119       | 08/25/16 17:54 |   |
| Toluene-d8           | 94    | 87 - 121       | 08/25/16 17:54 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16 15:45  
**Date Received:** 08/24/16 15:05

**Sample Name:** MW-18B  
**Lab Code:** R1608961-005

**Units:** ug/L  
**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)  | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/25/16 18:19 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/25/16 18:19 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/25/16 18:19 |   |
| Acetone                      | 10 U   | 10  | 1    | 08/25/16 18:19 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/25/16 18:19 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/25/16 18:19 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 93    | 85 - 122       | 08/25/16 18:19 |   |
| Dibromofluoromethane | 98    | 89 - 119       | 08/25/16 18:19 |   |
| Toluene-d8           | 96    | 87 - 121       | 08/25/16 18:19 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16 16:45  
**Date Received:** 08/24/16 15:05

**Sample Name:** MW-18A  
**Lab Code:** R1608961-006

**Units:** ug/L  
**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)  | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/25/16 18:43 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/25/16 18:43 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/25/16 18:43 |   |
| Acetone                      | 10 U   | 10  | 1    | 08/25/16 18:43 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/25/16 18:43 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/25/16 18:43 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 91    | 85 - 122       | 08/25/16 18:43 |   |
| Dibromofluoromethane | 98    | 89 - 119       | 08/25/16 18:43 |   |
| Toluene-d8           | 95    | 87 - 121       | 08/25/16 18:43 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/23/16 14:15  
**Date Received:** 08/24/16 15:05

**Sample Name:** MW-6B  
**Lab Code:** R1608961-008

**Units:** ug/L  
**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)  | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/25/16 19:08 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/25/16 19:08 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/25/16 19:08 |   |
| Acetone                      | 10 U   | 10  | 1    | 08/25/16 19:08 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/25/16 19:08 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/25/16 19:08 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 92    | 85 - 122       | 08/25/16 19:08 |   |
| Dibromofluoromethane | 99    | 89 - 119       | 08/25/16 19:08 |   |
| Toluene-d8           | 95    | 87 - 121       | 08/25/16 19:08 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/23/16 10:30  
**Date Received:** 08/24/16 15:05

**Sample Name:** MW-7B  
**Lab Code:** R1608961-010

**Units:** ug/L  
**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)  | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| 1,1,2,2-Tetrachloroethane    | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| 1,1,2-Trichloroethane        | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| 1,1-Dichloroethane (1,1-DCA) | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| 1,1-Dichloroethene (1,1-DCE) | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| 1,2-Dichloroethane           | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| 1,2-Dichloropropane          | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| 2-Butanone (MEK)             | 100 U  | 100 | 10   | 08/25/16 19:32 |   |
| 2-Hexanone                   | 100 U  | 100 | 10   | 08/25/16 19:32 |   |
| 4-Methyl-2-pentanone         | 100 U  | 100 | 10   | 08/25/16 19:32 |   |
| Acetone                      | 100 U  | 100 | 10   | 08/25/16 19:32 |   |
| Benzene                      | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Bromodichloromethane         | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Bromoform                    | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Bromomethane                 | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Carbon Disulfide             | 100 U  | 100 | 10   | 08/25/16 19:32 |   |
| Carbon Tetrachloride         | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Chlorobenzene                | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Chloroethane                 | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Chloroform                   | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Chloromethane                | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Dibromochloromethane         | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Dichloromethane              | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Ethylbenzene                 | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Styrene                      | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Tetrachloroethene (PCE)      | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Toluene                      | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Trichloroethene (TCE)        | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| Vinyl Chloride               | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| cis-1,2-Dichloroethene       | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| cis-1,3-Dichloropropene      | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| m,p-Xylenes                  | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| o-Xylene                     | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| trans-1,2-Dichloroethene     | 50 U   | 50  | 10   | 08/25/16 19:32 |   |
| trans-1,3-Dichloropropene    | 50 U   | 50  | 10   | 08/25/16 19:32 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 90    | 85 - 122       | 08/25/16 19:32 |   |
| Dibromofluoromethane | 95    | 89 - 119       | 08/25/16 19:32 |   |
| Toluene-d8           | 94    | 87 - 121       | 08/25/16 19:32 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** 08/24/16 15:05

**Sample Name:** GW-DUP  
**Lab Code:** R1608961-011

**Units:** ug/L  
**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)  | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/25/16 19:57 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/25/16 19:57 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/25/16 19:57 |   |
| Acetone                      | 10 U   | 10  | 1    | 08/25/16 19:57 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/25/16 19:57 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| Trichloroethene (TCE)        | 33     | 5.0 | 1    | 08/25/16 19:57 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| cis-1,2-Dichloroethene       | 9.0    | 5.0 | 1    | 08/25/16 19:57 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/25/16 19:57 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 90    | 85 - 122       | 08/25/16 19:57 |   |
| Dibromofluoromethane | 97    | 89 - 119       | 08/25/16 19:57 |   |
| Toluene-d8           | 93    | 87 - 121       | 08/25/16 19:57 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/26/16 09:15  
**Date Received:** 08/26/16 13:55

**Sample Name:** MW-2A  
**Lab Code:** R1608961-012

**Units:** ug/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Analyte Name                 | Result | MRL | Dil. | Date Analyzed  | Q |
|------------------------------|--------|-----|------|----------------|---|
| 1,1,1-Trichloroethane (TCA)  | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 09/01/16 03:01 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 09/01/16 03:01 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 09/01/16 03:01 |   |
| Acetone                      | 10 U   | 10  | 1    | 09/01/16 03:01 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 09/01/16 03:01 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 09/01/16 03:01 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 109   | 85 - 122       | 09/01/16 03:01 |   |
| Dibromofluoromethane | 116   | 89 - 119       | 09/01/16 03:01 |   |
| Toluene-d8           | 114   | 87 - 121       | 09/01/16 03:01 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16 12:40  
**Date Received:** 08/26/16 13:55

**Sample Name:** MW-4A  
**Lab Code:** R1608961-014

**Units:** ug/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Analyte Name                 | Result | MRL | Dil. | Date Analyzed  | Q |
|------------------------------|--------|-----|------|----------------|---|
| 1,1,1-Trichloroethane (TCA)  | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| 1,1,2,2-Tetrachloroethane    | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| 1,1,2-Trichloroethane        | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| 1,1-Dichloroethane (1,1-DCA) | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| 1,1-Dichloroethene (1,1-DCE) | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| 1,2-Dichloroethane           | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| 1,2-Dichloropropane          | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| 2-Butanone (MEK)             | 100 U  | 100 | 10   | 09/01/16 05:04 |   |
| 2-Hexanone                   | 100 U  | 100 | 10   | 09/01/16 05:04 |   |
| 4-Methyl-2-pentanone         | 100 U  | 100 | 10   | 09/01/16 05:04 |   |
| Acetone                      | 100 U  | 100 | 10   | 09/01/16 05:04 |   |
| Benzene                      | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Bromodichloromethane         | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Bromoform                    | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Bromomethane                 | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Carbon Disulfide             | 100 U  | 100 | 10   | 09/01/16 05:04 |   |
| Carbon Tetrachloride         | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Chlorobenzene                | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Chloroethane                 | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Chloroform                   | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Chloromethane                | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Dibromochloromethane         | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Dichloromethane              | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Ethylbenzene                 | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Styrene                      | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Tetrachloroethene (PCE)      | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Toluene                      | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Trichloroethene (TCE)        | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| Vinyl Chloride               | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| cis-1,2-Dichloroethene       | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| cis-1,3-Dichloropropene      | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| m,p-Xylenes                  | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| o-Xylene                     | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| trans-1,2-Dichloroethene     | 50 U   | 50  | 10   | 09/01/16 05:04 |   |
| trans-1,3-Dichloropropene    | 50 U   | 50  | 10   | 09/01/16 05:04 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 109   | 85 - 122       | 09/01/16 05:04 |   |
| Dibromofluoromethane | 112   | 89 - 119       | 09/01/16 05:04 |   |
| Toluene-d8           | 115   | 87 - 121       | 09/01/16 05:04 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16 12:50  
**Date Received:** 08/26/16 13:55

**Sample Name:** MW-4B  
**Lab Code:** R1608961-016

**Units:** ug/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Analyte Name                 | Result | MRL | Dil. | Date Analyzed  | Q |
|------------------------------|--------|-----|------|----------------|---|
| 1,1,1-Trichloroethane (TCA)  | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 09/01/16 03:32 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 09/01/16 03:32 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 09/01/16 03:32 |   |
| Acetone                      | 10 U   | 10  | 1    | 09/01/16 03:32 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 09/01/16 03:32 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 09/01/16 03:32 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 109   | 85 - 122       | 09/01/16 03:32 |   |
| Dibromofluoromethane | 112   | 89 - 119       | 09/01/16 03:32 |   |
| Toluene-d8           | 113   | 87 - 121       | 09/01/16 03:32 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16 10:30  
**Date Received:** 08/26/16 13:55

**Sample Name:** MW-3A  
**Lab Code:** R1608961-018

**Units:** ug/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Analyte Name                 | Result | MRL | Dil. | Date Analyzed  | Q |
|------------------------------|--------|-----|------|----------------|---|
| 1,1,1-Trichloroethane (TCA)  | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 09/01/16 04:02 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 09/01/16 04:02 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 09/01/16 04:02 |   |
| Acetone                      | 10 U   | 10  | 1    | 09/01/16 04:02 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 09/01/16 04:02 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 09/01/16 04:02 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 110   | 85 - 122       | 09/01/16 04:02 |   |
| Dibromofluoromethane | 115   | 89 - 119       | 09/01/16 04:02 |   |
| Toluene-d8           | 116   | 87 - 121       | 09/01/16 04:02 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16 10:45  
**Date Received:** 08/26/16 13:55

**Sample Name:** MW-3B  
**Lab Code:** R1608961-020

**Units:** ug/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Analyte Name                 | Result | MRL | Dil. | Date Analyzed  | Q |
|------------------------------|--------|-----|------|----------------|---|
| 1,1,1-Trichloroethane (TCA)  | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| 1,1,2,2-Tetrachloroethane    | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| 1,1,2-Trichloroethane        | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| 1,1-Dichloroethane (1,1-DCA) | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| 1,1-Dichloroethene (1,1-DCE) | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| 1,2-Dichloroethane           | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| 1,2-Dichloropropane          | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| 2-Butanone (MEK)             | 100 U  | 100 | 10   | 09/01/16 05:35 |   |
| 2-Hexanone                   | 100 U  | 100 | 10   | 09/01/16 05:35 |   |
| 4-Methyl-2-pentanone         | 100 U  | 100 | 10   | 09/01/16 05:35 |   |
| Acetone                      | 710    | 100 | 10   | 09/01/16 05:35 |   |
| Benzene                      | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Bromodichloromethane         | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Bromoform                    | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Bromomethane                 | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Carbon Disulfide             | 100 U  | 100 | 10   | 09/01/16 05:35 |   |
| Carbon Tetrachloride         | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Chlorobenzene                | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Chloroethane                 | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Chloroform                   | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Chloromethane                | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Dibromochloromethane         | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Dichloromethane              | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Ethylbenzene                 | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Styrene                      | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Tetrachloroethene (PCE)      | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Toluene                      | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Trichloroethene (TCE)        | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| Vinyl Chloride               | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| cis-1,2-Dichloroethene       | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| cis-1,3-Dichloropropene      | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| m,p-Xylenes                  | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| o-Xylene                     | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| trans-1,2-Dichloroethene     | 50 U   | 50  | 10   | 09/01/16 05:35 |   |
| trans-1,3-Dichloropropene    | 50 U   | 50  | 10   | 09/01/16 05:35 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 108   | 85 - 122       | 09/01/16 05:35 |   |
| Dibromofluoromethane | 114   | 89 - 119       | 09/01/16 05:35 |   |
| Toluene-d8           | 114   | 87 - 121       | 09/01/16 05:35 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16 15:00  
**Date Received:** 08/26/16 13:55

**Sample Name:** MW-15A  
**Lab Code:** R1608961-022

**Units:** ug/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Analyte Name                 | Result | MRL | Dil. | Date Analyzed  | Q |
|------------------------------|--------|-----|------|----------------|---|
| 1,1,1-Trichloroethane (TCA)  | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 09/01/16 04:33 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 09/01/16 04:33 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 09/01/16 04:33 |   |
| Acetone                      | 10 U   | 10  | 1    | 09/01/16 04:33 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 09/01/16 04:33 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 09/01/16 04:33 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 111   | 85 - 122       | 09/01/16 04:33 |   |
| Dibromofluoromethane | 114   | 89 - 119       | 09/01/16 04:33 |   |
| Toluene-d8           | 116   | 87 - 121       | 09/01/16 04:33 |   |

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16 15:10  
**Date Received:** 08/26/16 13:55

**Sample Name:** MW-15B  
**Lab Code:** R1608961-024

**Units:** ug/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Analyte Name                 | Result | MRL | Dil. | Date Analyzed  | Q |
|------------------------------|--------|-----|------|----------------|---|
| 1,1,1-Trichloroethane (TCA)  | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| 1,1,2,2-Tetrachloroethane    | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| 1,1,2-Trichloroethane        | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| 1,1-Dichloroethane (1,1-DCA) | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| 1,1-Dichloroethene (1,1-DCE) | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| 1,2-Dichloroethane           | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| 1,2-Dichloropropane          | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| 2-Butanone (MEK)             | 200 U  | 200 | 20   | 09/01/16 06:05 |   |
| 2-Hexanone                   | 200 U  | 200 | 20   | 09/01/16 06:05 |   |
| 4-Methyl-2-pentanone         | 200 U  | 200 | 20   | 09/01/16 06:05 |   |
| Acetone                      | 200 U  | 200 | 20   | 09/01/16 06:05 |   |
| Benzene                      | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Bromodichloromethane         | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Bromoform                    | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Bromomethane                 | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Carbon Disulfide             | 200 U  | 200 | 20   | 09/01/16 06:05 |   |
| Carbon Tetrachloride         | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Chlorobenzene                | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Chloroethane                 | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Chloroform                   | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Chloromethane                | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Dibromochloromethane         | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Dichloromethane              | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Ethylbenzene                 | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Styrene                      | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Tetrachloroethene (PCE)      | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Toluene                      | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Trichloroethene (TCE)        | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| Vinyl Chloride               | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| cis-1,2-Dichloroethene       | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| cis-1,3-Dichloropropene      | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| m,p-Xylenes                  | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| o-Xylene                     | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| trans-1,2-Dichloroethene     | 100 U  | 100 | 20   | 09/01/16 06:05 |   |
| trans-1,3-Dichloropropene    | 100 U  | 100 | 20   | 09/01/16 06:05 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 106   | 85 - 122       | 09/01/16 06:05 |   |
| Dibromofluoromethane | 110   | 89 - 119       | 09/01/16 06:05 |   |
| Toluene-d8           | 115   | 87 - 121       | 09/01/16 06:05 |   |



## 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](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-2B  
**Lab Code:** R1608961-001

**Service Request:** R1608961  
**Date Collected:** 08/22/16 13:00  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 11:45 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 24     | ug/L  | 10  | 0.3 | 1    | 08/30/16 11:45 | 08/25/16       |   |
| Iron, Total      | 6010C           | 10800  | ug/L  | 100 | 9   | 1    | 08/30/16 11:45 | 08/25/16       |   |
| Lead, Total      | 6010C           | 13 J   | ug/L  | 50  | 5   | 1    | 08/30/16 11:45 | 08/25/16       |   |
| Manganese, Total | 6010C           | 595    | ug/L  | 10  | 1.0 | 1    | 08/30/16 11:45 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-2B Dissolved  
**Lab Code:** R1608961-002

**Service Request:** R1608961  
**Date Collected:** 08/22/16 13:00  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 12:05 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:05 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 08/30/16 12:05 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 12:05 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | 10 U   | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:05 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-16B  
**Lab Code:** R1608961-003

**Service Request:** R1608961  
**Date Collected:** 08/22/16 10:15  
**Date Received:** 08/24/16 15:05

**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 12:09 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:09 | 08/25/16       |   |
| Iron, Total      | 6010C           | 120    | ug/L  | 100 | 9   | 1    | 08/30/16 12:09 | 08/25/16       |   |
| Lead, Total      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 12:09 | 08/25/16       |   |
| Manganese, Total | 6010C           | 17     | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:09 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-16A  
**Lab Code:** R1608961-004

**Service Request:** R1608961  
**Date Collected:** 08/23/16 12:05  
**Date Received:** 08/24/16 15:05

**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 12:12 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:12 | 08/25/16       |   |
| Iron, Total      | 6010C           | 3430   | ug/L  | 100 | 9   | 1    | 08/30/16 12:12 | 08/25/16       |   |
| Lead, Total      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 12:12 | 08/25/16       |   |
| Manganese, Total | 6010C           | 130    | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:12 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-18B  
**Lab Code:** R1608961-005

**Service Request:** R1608961  
**Date Collected:** 08/22/16 15:45  
**Date Received:** 08/24/16 15:05

**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 16     | ug/L  | 10  | 5   | 1    | 08/30/16 12:16 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:16 | 08/25/16       |   |
| Iron, Total      | 6010C           | 1170   | ug/L  | 100 | 9   | 1    | 08/30/16 12:16 | 08/25/16       |   |
| Lead, Total      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 12:16 | 08/25/16       |   |
| Manganese, Total | 6010C           | 2190   | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:16 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-18A  
**Lab Code:** R1608961-006

**Service Request:** R1608961  
**Date Collected:** 08/22/16 16:45  
**Date Received:** 08/24/16 15:05

**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 12:28 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 12     | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:28 | 08/25/16       |   |
| Iron, Total      | 6010C           | 22800  | ug/L  | 100 | 9   | 1    | 08/30/16 12:28 | 08/25/16       |   |
| Lead, Total      | 6010C           | 44 J   | ug/L  | 50  | 5   | 1    | 08/30/16 12:28 | 08/25/16       |   |
| Manganese, Total | 6010C           | 1440   | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:28 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-18A Dissolved  
**Lab Code:** R1608961-007

**Service Request:** R1608961  
**Date Collected:** 08/22/16 16:45  
**Date Received:** 08/24/16 15:05

**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 12:32 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:32 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | 7110   | ug/L  | 100 | 9   | 1    | 08/30/16 12:32 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 12:32 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | 890    | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:32 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-6B  
**Lab Code:** R1608961-008

**Service Request:** R1608961  
**Date Collected:** 08/23/16 14:15  
**Date Received:** 08/24/16 15:05  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 12:36 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:36 | 08/25/16       |   |
| Iron, Total      | 6010C           | 4200   | ug/L  | 100 | 9   | 1    | 08/30/16 12:36 | 08/25/16       |   |
| Lead, Total      | 6010C           | 6 J    | ug/L  | 50  | 5   | 1    | 08/30/16 12:36 | 08/25/16       |   |
| Manganese, Total | 6010C           | 720    | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:36 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-6B Dissolved  
**Lab Code:** R1608961-009

**Service Request:** R1608961  
**Date Collected:** 08/23/16 14:15  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 12:40 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:40 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 08/30/16 12:40 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 12:40 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | 653    | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:40 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-7B  
**Lab Code:** R1608961-010

**Service Request:** R1608961  
**Date Collected:** 08/23/16 10:30  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 12:44 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:44 | 08/25/16       |   |
| Iron, Total      | 6010C           | 460    | ug/L  | 100 | 9   | 1    | 08/30/16 12:44 | 08/25/16       |   |
| Lead, Total      | 6010C           | 8 J    | ug/L  | 50  | 5   | 1    | 08/30/16 12:44 | 08/25/16       |   |
| Manganese, Total | 6010C           | 13     | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:44 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** GW-DUP  
**Lab Code:** R1608961-011

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result     | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|------------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U       | ug/L  | 10  | 5   | 1    | 08/30/16 12:47 | 08/25/16       |   |
| Chromium, Total  | 6010C           | 10 U       | ug/L  | 10  | 0.3 | 1    | 08/30/16 12:47 | 08/25/16       |   |
| Iron, Total      | 6010C           | <b>110</b> | ug/L  | 100 | 9   | 1    | 08/30/16 12:47 | 08/25/16       |   |
| Lead, Total      | 6010C           | 50 U       | ug/L  | 50  | 5   | 1    | 08/30/16 12:47 | 08/25/16       |   |
| Manganese, Total | 6010C           | <b>13</b>  | ug/L  | 10  | 1.0 | 1    | 08/30/16 12:47 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-2A  
**Lab Code:** R1608961-012

**Service Request:** R1608961  
**Date Collected:** 08/26/16 09:15  
**Date Received:** 08/26/16 13:55  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 28     | ug/L  | 10   | 5   | 1    | 09/06/16 20:32 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 165    | ug/L  | 10   | 0.3 | 1    | 09/06/16 20:32 | 08/31/16       |   |
| Iron, Total      | 6010C           | 154000 | ug/L  | 1000 | 90  | 10   | 09/09/16 18:52 | 08/31/16       |   |
| Lead, Total      | 6010C           | 65     | ug/L  | 50   | 5   | 1    | 09/06/16 20:32 | 08/31/16       |   |
| Manganese, Total | 6010C           | 6130   | ug/L  | 10   | 1.0 | 1    | 09/06/16 20:32 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-2A Dissolved  
**Lab Code:** R1608961-013

**Service Request:** R1608961  
**Date Collected:** 08/26/16 09:15  
**Date Received:** 08/26/16 13:55

**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 20:36 | 08/31/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 20:36 | 08/31/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 09/06/16 20:36 | 08/31/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 20:36 | 08/31/16       |   |
| Manganese, Dissolved | 6010C           | 165    | ug/L  | 10  | 1.0 | 1    | 09/06/16 20:36 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-4A  
**Lab Code:** R1608961-014

**Service Request:** R1608961  
**Date Collected:** 08/25/16 12:40  
**Date Received:** 08/26/16 13:55  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 20:40 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 20:40 | 08/31/16       |   |
| Iron, Total      | 6010C           | 6700   | ug/L  | 100 | 9   | 1    | 09/06/16 20:40 | 08/31/16       |   |
| Lead, Total      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 20:40 | 08/31/16       |   |
| Manganese, Total | 6010C           | 135    | ug/L  | 10  | 1.0 | 1    | 09/06/16 20:40 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-4A Dissolved  
**Lab Code:** R1608961-015

**Service Request:** R1608961  
**Date Collected:** 08/25/16 12:40  
**Date Received:** 08/26/16 13:55  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 20:44 | 08/31/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 20:44 | 08/31/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 09/06/16 20:44 | 08/31/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 20:44 | 08/31/16       |   |
| Manganese, Dissolved | 6010C           | 70     | ug/L  | 10  | 1.0 | 1    | 09/06/16 20:44 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-4B  
**Lab Code:** R1608961-016

**Service Request:** R1608961  
**Date Collected:** 08/25/16 12:50  
**Date Received:** 08/26/16 13:55

**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 20:48 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 20:48 | 08/31/16       |   |
| Iron, Total      | 6010C           | 5710   | ug/L  | 100 | 9   | 1    | 09/06/16 20:48 | 08/31/16       |   |
| Lead, Total      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 20:48 | 08/31/16       |   |
| Manganese, Total | 6010C           | 882    | ug/L  | 10  | 1.0 | 1    | 09/06/16 20:48 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-4B Dissolved  
**Lab Code:** R1608961-017

**Service Request:** R1608961  
**Date Collected:** 08/25/16 12:50  
**Date Received:** 08/26/16 13:55

**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 20:51 | 08/31/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 20:51 | 08/31/16       |   |
| Iron, Dissolved      | 6010C           | 530    | ug/L  | 100 | 9   | 1    | 09/06/16 20:51 | 08/31/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 20:51 | 08/31/16       |   |
| Manganese, Dissolved | 6010C           | 863    | ug/L  | 10  | 1.0 | 1    | 09/06/16 20:51 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-3A  
**Lab Code:** R1608961-018

**Service Request:** R1608961  
**Date Collected:** 08/25/16 10:30  
**Date Received:** 08/26/16 13:55  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 33     | ug/L  | 10   | 5   | 1    | 09/06/16 20:55 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 103    | ug/L  | 10   | 0.3 | 1    | 09/06/16 20:55 | 08/31/16       |   |
| Iron, Total      | 6010C           | 145000 | ug/L  | 1000 | 90  | 10   | 09/09/16 18:56 | 08/31/16       |   |
| Lead, Total      | 6010C           | 788    | ug/L  | 50   | 5   | 1    | 09/06/16 20:55 | 08/31/16       |   |
| Manganese, Total | 6010C           | 2400   | ug/L  | 10   | 1.0 | 1    | 09/06/16 20:55 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-3A Dissolved  
**Lab Code:** R1608961-019

**Service Request:** R1608961  
**Date Collected:** 08/25/16 10:30  
**Date Received:** 08/26/16 13:55  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 20:59 | 08/31/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 20:59 | 08/31/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 09/06/16 20:59 | 08/31/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 20:59 | 08/31/16       |   |
| Manganese, Dissolved | 6010C           | 430    | ug/L  | 10  | 1.0 | 1    | 09/06/16 20:59 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-3B  
**Lab Code:** R1608961-020

**Service Request:** R1608961  
**Date Collected:** 08/25/16 10:45  
**Date Received:** 08/26/16 13:55

**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 64     | ug/L  | 10   | 5   | 1    | 09/06/16 21:03 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 179    | ug/L  | 10   | 0.3 | 1    | 09/06/16 21:03 | 08/31/16       |   |
| Iron, Total      | 6010C           | 115000 | ug/L  | 1000 | 90  | 10   | 09/09/16 19:00 | 08/31/16       |   |
| Lead, Total      | 6010C           | 982    | ug/L  | 50   | 5   | 1    | 09/06/16 21:03 | 08/31/16       |   |
| Manganese, Total | 6010C           | 2050   | ug/L  | 10   | 1.0 | 1    | 09/06/16 21:03 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-3B Dissolved  
**Lab Code:** R1608961-021

**Service Request:** R1608961  
**Date Collected:** 08/25/16 10:45  
**Date Received:** 08/26/16 13:55

**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 31     | ug/L  | 10  | 5   | 1    | 09/06/16 21:07 | 08/31/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 21:07 | 08/31/16       |   |
| Iron, Dissolved      | 6010C           | 1690   | ug/L  | 100 | 9   | 1    | 09/06/16 21:07 | 08/31/16       |   |
| Lead, Dissolved      | 6010C           | 6 J    | ug/L  | 50  | 5   | 1    | 09/06/16 21:07 | 08/31/16       |   |
| Manganese, Dissolved | 6010C           | 29     | ug/L  | 10  | 1.0 | 1    | 09/06/16 21:07 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-15A  
**Lab Code:** R1608961-022

**Service Request:** R1608961  
**Date Collected:** 08/25/16 15:00  
**Date Received:** 08/26/16 13:55

**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 21:18 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 21:18 | 08/31/16       |   |
| Iron, Total      | 6010C           | 460    | ug/L  | 100 | 9   | 1    | 09/06/16 21:18 | 08/31/16       |   |
| Lead, Total      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 21:18 | 08/31/16       |   |
| Manganese, Total | 6010C           | 22     | ug/L  | 10  | 1.0 | 1    | 09/06/16 21:18 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-15B  
**Lab Code:** R1608961-024

**Service Request:** R1608961  
**Date Collected:** 08/25/16 15:10  
**Date Received:** 08/26/16 13:55  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 37     | ug/L  | 10  | 5   | 1    | 09/06/16 21:22 | 08/31/16       |   |
| Chromium, Total  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 21:22 | 08/31/16       |   |
| Iron, Total      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 09/06/16 21:22 | 08/31/16       |   |
| Lead, Total      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 21:22 | 08/31/16       |   |
| Manganese, Total | 6010C           | 10 U   | ug/L  | 10  | 1.0 | 1    | 09/06/16 21:22 | 08/31/16       |   |



## General Chemistry

**ALS Environmental—Rochester Laboratory**

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-2B  
**Lab Code:** R1608961-001

**Service Request:** R1608961  
**Date Collected:** 08/22/16 13:00  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result  | Units | MRL   | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|---------|-------|-------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 16.8    | mg/L  | 1.0   | 1    | 08/26/16 01:44 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U | mg/L  | 0.010 | 1    | 09/02/16 14:58 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.029   | mg/L  | 0.010 | 2    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 490     | mg/L  | 20    | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-16B  
**Lab Code:** R1608961-003

**Service Request:** R1608961  
**Date Collected:** 08/22/16 10:15  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 16.7   | mg/L  | 1.0    | 1    | 08/26/16 02:03 | NA                |   |
| Cyanide, Total                | 335.4                | 0.025  | mg/L  | 0.010  | 1    | 09/02/16 14:58 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0118 | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 670    | mg/L  | 20     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-16A  
**Lab Code:** R1608961-004

**Service Request:** R1608961  
**Date Collected:** 08/23/16 12:05  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|----------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 3.5      | mg/L  | 1.0    | 1    | 08/26/16 03:41 | NA             |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 09/02/16 14:59 | 09/02/16       |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA             |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 642      | mg/L  | 20     | 1    | 08/29/16 11:25 | NA             |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-18B  
**Lab Code:** R1608961-005

**Service Request:** R1608961  
**Date Collected:** 08/22/16 15:45  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 17.6     | mg/L  | 1.0    | 1    | 08/26/16 13:41 | NA                |   |
| Cyanide, Total                | 335.4                | 0.019    | mg/L  | 0.010  | 1    | 09/02/16 15:00 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 2740     | mg/L  | 50     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-18A  
**Lab Code:** R1608961-006

**Service Request:** R1608961  
**Date Collected:** 08/22/16 16:45  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 21.1     | mg/L  | 1.0    | 1    | 08/26/16 13:52 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 09/02/16 15:26 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 2050     | mg/L  | 50     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-6B  
**Lab Code:** R1608961-008

**Service Request:** R1608961  
**Date Collected:** 08/23/16 14:15  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 9.6      | mg/L  | 1.0    | 1    | 08/26/16 14:04 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 09/02/16 15:04 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 1160     | mg/L  | 20     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-7B  
**Lab Code:** R1608961-010

**Service Request:** R1608961  
**Date Collected:** 08/23/16 10:30  
**Date Received:** 08/24/16 15:05  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL   | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|-------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 69.0   | mg/L  | 4.0   | 4    | 08/29/16 19:51 | NA                |   |
| Cyanide, Total                | 335.4                | 0.035  | mg/L  | 0.010 | 1    | 09/02/16 15:05 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.689  | mg/L  | 0.050 | 10   | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 1100   | mg/L  | 40    | 1    | 08/30/16 10:40 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** GW-DUP  
**Lab Code:** R1608961-011

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** 08/24/16 15:05  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 16.5   | mg/L  | 1.0    | 1    | 08/26/16 14:28 | NA                |   |
| Cyanide, Total                | 335.4                | 0.022  | mg/L  | 0.010  | 1    | 09/02/16 15:06 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0079 | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 636    | mg/L  | 20     | 1    | 08/30/16 10:40 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-2A  
**Lab Code:** R1608961-012

**Service Request:** R1608961  
**Date Collected:** 08/26/16 09:15  
**Date Received:** 08/26/16 13:55

**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result      | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|-------------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | <b>10.1</b> | mg/L  | 1.0    | 1    | 08/29/16 23:21 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U     | mg/L  | 0.010  | 1    | 09/02/16 15:07 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U    | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | <b>398</b>  | mg/L  | 10     | 1    | 08/30/16 10:40 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-4A  
**Lab Code:** R1608961-014

**Service Request:** R1608961  
**Date Collected:** 08/25/16 12:40  
**Date Received:** 08/26/16 13:55  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 10.7     | mg/L  | 1.0    | 1    | 08/29/16 23:40 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 09/02/16 15:08 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 367      | mg/L  | 10     | 1    | 08/30/16 10:40 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-4B  
**Lab Code:** R1608961-016

**Service Request:** R1608961  
**Date Collected:** 08/25/16 12:50  
**Date Received:** 08/26/16 13:55  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|----------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 7.7      | mg/L  | 1.0    | 1    | 08/29/16 23:58 | NA             |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 09/02/16 15:08 | 09/02/16       |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA             |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 548      | mg/L  | 10     | 1    | 08/30/16 10:40 | NA             |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-3A  
**Lab Code:** R1608961-018

**Service Request:** R1608961  
**Date Collected:** 08/25/16 10:30  
**Date Received:** 08/26/16 13:55  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 7.2      | mg/L  | 1.0    | 1    | 08/30/16 01:35 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 09/02/16 15:09 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 1540     | mg/L  | 20     | 1    | 08/30/16 10:40 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-3B  
**Lab Code:** R1608961-020

**Service Request:** R1608961  
**Date Collected:** 08/25/16 10:45  
**Date Received:** 08/26/16 13:55  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL   | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|-------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 475    | mg/L  | 4.0   | 4    | 09/08/16 06:36 | NA                |   |
| Cyanide, Total                | 335.4                | 0.10 U | mg/L  | 0.10  | 1    | 08/31/16 14:08 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.812  | mg/L  | 0.050 | 10   | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 2090   | mg/L  | 31    | 1    | 08/30/16 10:40 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** MW-15A  
**Lab Code:** R1608961-022

**Service Request:** R1608961  
**Date Collected:** 08/25/16 15:00  
**Date Received:** 08/26/16 13:55

**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 7.5      | mg/L  | 1.0    | 1    | 08/30/16 02:13 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 08/31/16 14:09 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 588      | mg/L  | 10     | 1    | 08/30/16 10:40 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** MW-15B  
**Lab Code:** R1608961-024

**Service Request:** R1608961  
**Date Collected:** 08/25/16 15:10  
**Date Received:** 08/26/16 13:55  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result  | Units | MRL   | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|---------|-------|-------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 256     | mg/L  | 4.0   | 4    | 09/08/16 07:13 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U | mg/L  | 0.010 | 1    | 08/31/16 14:10 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.68    | mg/L  | 0.10  | 20   | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 1680    | mg/L  | 59    | 1    | 08/30/16 10:40 | NA                |   |



## QC Summary Forms

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## Volatile Organic Compounds by GC/MS

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961

**SURROGATE RECOVERY SUMMARY**  
**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C  
**Extraction Method:** EPA 5030C

| Sample Name        | Lab Code     | 4-Bromofluorobenzene | Dibromofluoromethane | Toluene-d8 |
|--------------------|--------------|----------------------|----------------------|------------|
|                    |              | 85 - 122             | 89 - 119             | 87 - 121   |
| MW-2B              | R1608961-001 | 93                   | 97                   | 94         |
| MW-16B             | R1608961-003 | 94                   | 97                   | 95         |
| MW-16A             | R1608961-004 | 93                   | 98                   | 94         |
| MW-18B             | R1608961-005 | 93                   | 98                   | 96         |
| MW-18A             | R1608961-006 | 91                   | 98                   | 95         |
| MW-6B              | R1608961-008 | 92                   | 99                   | 95         |
| MW-7B              | R1608961-010 | 90                   | 95                   | 94         |
| GW-DUP             | R1608961-011 | 90                   | 97                   | 93         |
| MW-2A              | R1608961-012 | 109                  | 116                  | 114        |
| MW-4A              | R1608961-014 | 109                  | 112                  | 115        |
| MW-4B              | R1608961-016 | 109                  | 112                  | 113        |
| MW-3A              | R1608961-018 | 110                  | 115                  | 116        |
| MW-3B              | R1608961-020 | 108                  | 114                  | 114        |
| MW-15A             | R1608961-022 | 111                  | 114                  | 116        |
| MW-15B             | R1608961-024 | 106                  | 110                  | 115        |
| Method Blank       | RQ1610215-01 | 91                   | 94                   | 93         |
| Lab Control Sample | RQ1610215-02 | 94                   | 98                   | 94         |
| MW-7B MS           | RQ1610215-05 | 96                   | 99                   | 95         |
| MW-7B DMS          | RQ1610215-06 | 98                   | 100                  | 97         |
| Lab Control Sample | RQ1610393-03 | 112                  | 111                  | 116        |
| Method Blank       | RQ1610393-04 | 108                  | 112                  | 115        |

**ALS Group USA, Corp.**  
dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/23/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 08/25/16  
**Date Extracted:** NA

**Duplicate Matrix Spike Summary**  
**Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-7B  
**Lab Code:** R1608961-010  
**Analysis Method:** 8260C  
**Prep Method:** EPA 5030C

**Units:** ug/L  
**Basis:** NA

| Analyte Name                 | Sample Result | Matrix Spike<br>RQ1610215-05 |              |       | Duplicate Matrix Spike<br>RQ1610215-06 |              |       | % Rec Limits | RPD | RPD Limit |
|------------------------------|---------------|------------------------------|--------------|-------|----------------------------------------|--------------|-------|--------------|-----|-----------|
|                              |               | Result                       | Spike Amount | % Rec | Result                                 | Spike Amount | % Rec |              |     |           |
| 1,1,1-Trichloroethane (TCA)  | 50 U          | 498                          | 500          | 100   | 411                                    | 500          | 82    | 74-127       | 19  | 30        |
| 1,1,2,2-Tetrachloroethane    | 50 U          | 503                          | 500          | 101   | 423                                    | 500          | 84    | 72-122       | 17  | 30        |
| 1,1,2-Trichloroethane        | 50 U          | 525                          | 500          | 105   | 435                                    | 500          | 87    | 79-119       | 19  | 30        |
| 1,1-Dichloroethane (1,1-DCA) | 50 U          | 553                          | 500          | 111   | 448                                    | 500          | 90    | 74-132       | 21  | 30        |
| 1,1-Dichloroethene (1,1-DCE) | 50 U          | 496                          | 500          | 99    | 399                                    | 500          | 80    | 74-139       | 22  | 30        |
| 1,2-Dichloroethane           | 50 U          | 585                          | 500          | 117   | 471                                    | 500          | 94    | 68-130       | 22  | 30        |
| 1,2-Dichloropropane          | 50 U          | 565                          | 500          | 113   | 454                                    | 500          | 91    | 79-124       | 22  | 30        |
| 2-Butanone (MEK)             | 100 U         | 397                          | 500          | 79    | 344                                    | 500          | 69    | 46-141       | 14  | 30        |
| 2-Hexanone                   | 100 U         | 456                          | 500          | 91    | 386                                    | 500          | 77    | 56-132       | 17  | 30        |
| 4-Methyl-2-pentanone         | 100 U         | 468                          | 500          | 94    | 389                                    | 500          | 78    | 60-141       | 18  | 30        |
| Acetone                      | 100 U         | 405                          | 500          | 81    | 349                                    | 500          | 70    | 29-151       | 15  | 30        |
| Benzene                      | 50 U          | 532                          | 500          | 106   | 426                                    | 500          | 85    | 76-129       | 22  | 30        |
| Bromodichloromethane         | 50 U          | 514                          | 500          | 103   | 422                                    | 500          | 84    | 76-127       | 20  | 30        |
| Bromoform                    | 50 U          | 502                          | 500          | 100   | 428                                    | 500          | 86    | 58-133       | 16  | 30        |
| Bromomethane                 | 50 U          | 340                          | 500          | 68    | 292                                    | 500          | 58    | 10-162       | 15  | 30        |
| Carbon Disulfide             | 100 U         | 510                          | 500          | 102   | 414                                    | 500          | 83    | 34-162       | 21  | 30        |
| Carbon Tetrachloride         | 50 U          | 460                          | 500          | 92    | 399                                    | 500          | 80    | 65-135       | 14  | 30        |
| Chlorobenzene                | 50 U          | 525                          | 500          | 105   | 430                                    | 500          | 86    | 76-125       | 20  | 30        |
| Chloroethane                 | 50 U          | 443                          | 500          | 89    | 376                                    | 500          | 75    | 70-140       | 16  | 30        |
| Chloroform                   | 50 U          | 517                          | 500          | 103   | 420                                    | 500          | 84    | 75-130       | 21  | 30        |
| Chloromethane                | 50 U          | 423                          | 500          | 85    | 345                                    | 500          | 69    | 55-160       | 20  | 30        |
| Dibromochloromethane         | 50 U          | 463                          | 500          | 93    | 399                                    | 500          | 80    | 72-128       | 15  | 30        |
| Dichloromethane              | 50 U          | 489                          | 500          | 98    | 397                                    | 500          | 79    | 75-121       | 21  | 30        |
| Ethylbenzene                 | 50 U          | 523                          | 500          | 105   | 429                                    | 500          | 86    | 72-134       | 20  | 30        |
| Styrene                      | 50 U          | 532                          | 500          | 106   | 446                                    | 500          | 89    | 34-156       | 18  | 30        |
| Tetrachloroethene (PCE)      | 50 U          | 520                          | 500          | 104   | 434                                    | 500          | 87    | 67-137       | 18  | 30        |
| Toluene                      | 50 U          | 532                          | 500          | 106   | 427                                    | 500          | 85    | 79-125       | 22  | 30        |
| Trichloroethene (TCE)        | 50 U          | 531                          | 500          | 106   | 429                                    | 500          | 86    | 62-142       | 21  | 30        |
| Vinyl Chloride               | 50 U          | 439                          | 500          | 88    | 352                                    | 500          | 70    | 60-157       | 22  | 30        |
| cis-1,2-Dichloroethene       | 50 U          | 526                          | 500          | 105   | 423                                    | 500          | 85    | 72-133       | 22  | 30        |
| cis-1,3-Dichloropropene      | 50 U          | 486                          | 500          | 97    | 388                                    | 500          | 78    | 52-134       | 22  | 30        |
| m,p-Xylenes                  | 50 U          | 1080                         | 1000         | 108   | 906                                    | 1000         | 91    | 68-138       | 18  | 30        |
| o-Xylene                     | 50 U          | 539                          | 500          | 108   | 451                                    | 500          | 90    | 68-134       | 18  | 30        |
| trans-1,2-Dichloroethene     | 50 U          | 501                          | 500          | 100   | 417                                    | 500          | 83    | 77-125       | 18  | 30        |
| trans-1,3-Dichloropropene    | 50 U          | 458                          | 500          | 92    | 376                                    | 500          | 75    | 50-142       | 20  | 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.

**ALS Group USA, Corp.**  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** RQ1610215-01

**Units:** ug/L  
**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)  | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/25/16 14:26 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/25/16 14:26 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/25/16 14:26 |   |
| Acetone                      | 10 U   | 10  | 1    | 08/25/16 14:26 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/25/16 14:26 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/25/16 14:26 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 91    | 85 - 122       | 08/25/16 14:26 |   |
| Dibromofluoromethane | 94    | 89 - 119       | 08/25/16 14:26 |   |
| Toluene-d8           | 93    | 87 - 121       | 08/25/16 14:26 |   |

**ALS Group USA, Corp.**  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** RQ1610393-04

**Units:** ug/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Analyte Name                 | Result | MRL | Dil. | Date Analyzed  | Q |
|------------------------------|--------|-----|------|----------------|---|
| 1,1,1-Trichloroethane (TCA)  | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,1,2,2-Tetrachloroethane    | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,1,2-Trichloroethane        | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,1-Dichloroethane (1,1-DCA) | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,1-Dichloroethene (1,1-DCE) | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,2-Dichloroethane           | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| 1,2-Dichloropropane          | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| 2-Butanone (MEK)             | 10 U   | 10  | 1    | 08/31/16 23:26 |   |
| 2-Hexanone                   | 10 U   | 10  | 1    | 08/31/16 23:26 |   |
| 4-Methyl-2-pentanone         | 10 U   | 10  | 1    | 08/31/16 23:26 |   |
| Acetone                      | 10 U   | 10  | 1    | 08/31/16 23:26 |   |
| Benzene                      | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Bromodichloromethane         | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Bromoform                    | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Bromomethane                 | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Carbon Disulfide             | 10 U   | 10  | 1    | 08/31/16 23:26 |   |
| Carbon Tetrachloride         | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Chlorobenzene                | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Chloroethane                 | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Chloroform                   | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Chloromethane                | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Dibromochloromethane         | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Dichloromethane              | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Ethylbenzene                 | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Styrene                      | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Tetrachloroethene (PCE)      | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Toluene                      | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Trichloroethene (TCE)        | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| Vinyl Chloride               | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| cis-1,2-Dichloroethene       | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| cis-1,3-Dichloropropene      | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| m,p-Xylenes                  | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| o-Xylene                     | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| trans-1,2-Dichloroethene     | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |
| trans-1,3-Dichloropropene    | 5.0 U  | 5.0 | 1    | 08/31/16 23:26 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 108   | 85 - 122       | 08/31/16 23:26 |   |
| Dibromofluoromethane | 112   | 89 - 119       | 08/31/16 23:26 |   |
| Toluene-d8           | 115   | 87 - 121       | 08/31/16 23:26 |   |

**ALS Group USA, Corp.**  
dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 08/25/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
RQ1610215-02

| Analyte Name                 | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|------------------------------|-------------------|--------|--------------|-------|--------------|
| 1,1,1-Trichloroethane (TCA)  | 8260C             | 16.6   | 20.0         | 83    | 74-120       |
| 1,1,2,2-Tetrachloroethane    | 8260C             | 16.0   | 20.0         | 80    | 78-122       |
| 1,1,2-Trichloroethane        | 8260C             | 18.2   | 20.0         | 91    | 82-118       |
| 1,1-Dichloroethane (1,1-DCA) | 8260C             | 18.7   | 20.0         | 94    | 78-117       |
| 1,1-Dichloroethene (1,1-DCE) | 8260C             | 16.6   | 20.0         | 83    | 74-135       |
| 1,2-Dichloroethane           | 8260C             | 19.8   | 20.0         | 99    | 71-127       |
| 1,2-Dichloropropane          | 8260C             | 18.3   | 20.0         | 92    | 80-119       |
| 2-Butanone (MEK)             | 8260C             | 13.2   | 20.0         | 66    | 61-137       |
| 2-Hexanone                   | 8260C             | 14.5   | 20.0         | 72    | 63-124       |
| 4-Methyl-2-pentanone         | 8260C             | 13.9   | 20.0         | 70    | 66-124       |
| Acetone                      | 8260C             | 15.9   | 20.0         | 79    | 40-161       |
| Benzene                      | 8260C             | 17.4   | 20.0         | 87    | 76-118       |
| Bromodichloromethane         | 8260C             | 17.6   | 20.0         | 88    | 78-126       |
| Bromoform                    | 8260C             | 15.6   | 20.0         | 78    | 71-136       |
| Bromomethane                 | 8260C             | 12.1   | 20.0         | 60    | 42-166       |
| Carbon Disulfide             | 8260C             | 14.0   | 20.0         | 70    | 65-127       |
| Carbon Tetrachloride         | 8260C             | 13.7   | 20.0         | 69    | 68-125       |
| Chlorobenzene                | 8260C             | 17.5   | 20.0         | 87    | 80-121       |
| Chloroethane                 | 8260C             | 15.1   | 20.0         | 75    | 70-127       |
| Chloroform                   | 8260C             | 17.5   | 20.0         | 87    | 76-120       |
| Chloromethane                | 8260C             | 14.3   | 20.0         | 72    | 69-145       |
| Dibromochloromethane         | 8260C             | 15.8   | 20.0         | 79    | 77-128       |
| Dichloromethane              | 8260C             | 16.7   | 20.0         | 84    | 73-122       |
| Ethylbenzene                 | 8260C             | 16.5   | 20.0         | 82    | 76-120       |
| Styrene                      | 8260C             | 17.8   | 20.0         | 89    | 80-124       |
| Tetrachloroethene (PCE)      | 8260C             | 17.3   | 20.0         | 87    | 78-124       |
| Toluene                      | 8260C             | 17.4   | 20.0         | 87    | 77-120       |
| Trichloroethene (TCE)        | 8260C             | 18.7   | 20.0         | 93    | 78-123       |
| Vinyl Chloride               | 8260C             | 14.5   | 20.0         | 73    | 69-133       |
| cis-1,2-Dichloroethene       | 8260C             | 17.7   | 20.0         | 88    | 80-121       |
| cis-1,3-Dichloropropene      | 8260C             | 16.2   | 20.0         | 81    | 74-126       |
| m,p-Xylenes                  | 8260C             | 35.9   | 40.0         | 90    | 78-123       |
| o-Xylene                     | 8260C             | 17.6   | 20.0         | 88    | 80-120       |

**ALS Group USA, Corp.**

dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 08/25/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L**Basis:**NA**Lab Control Sample**

RQ1610215-02

| Analyte Name              | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---------------------------|-------------------|--------|--------------|-------|--------------|
| trans-1,2-Dichloroethene  | 8260C             | 17.3   | 20.0         | 86    | 80-120       |
| trans-1,3-Dichloropropene | 8260C             | 15.0   | 20.0         | 75    | 67-135       |

**ALS Group USA, Corp.**  
dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 08/31/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
RQ1610393-03

| Analyte Name                 | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|------------------------------|-------------------|--------|--------------|-------|--------------|
| 1,1,1-Trichloroethane (TCA)  | 8260C             | 18.7   | 20.0         | 94    | 74-120       |
| 1,1,2,2-Tetrachloroethane    | 8260C             | 21.3   | 20.0         | 107   | 78-122       |
| 1,1,2-Trichloroethane        | 8260C             | 22.6   | 20.0         | 113   | 82-118       |
| 1,1-Dichloroethane (1,1-DCA) | 8260C             | 21.3   | 20.0         | 107   | 78-117       |
| 1,1-Dichloroethene (1,1-DCE) | 8260C             | 21.7   | 20.0         | 108   | 74-135       |
| 1,2-Dichloroethane           | 8260C             | 20.5   | 20.0         | 103   | 71-127       |
| 1,2-Dichloropropane          | 8260C             | 22.6   | 20.0         | 113   | 80-119       |
| 2-Butanone (MEK)             | 8260C             | 19.4   | 20.0         | 97    | 61-137       |
| 2-Hexanone                   | 8260C             | 19.4   | 20.0         | 97    | 63-124       |
| 4-Methyl-2-pentanone         | 8260C             | 21.5   | 20.0         | 107   | 66-124       |
| Acetone                      | 8260C             | 21.6   | 20.0         | 108   | 40-161       |
| Benzene                      | 8260C             | 22.5   | 20.0         | 112   | 76-118       |
| Bromodichloromethane         | 8260C             | 20.9   | 20.0         | 104   | 78-126       |
| Bromoform                    | 8260C             | 26.1   | 20.0         | 131   | 71-136       |
| Bromomethane                 | 8260C             | 17.6   | 20.0         | 88    | 42-166       |
| Carbon Disulfide             | 8260C             | 22.2   | 20.0         | 111   | 65-127       |
| Carbon Tetrachloride         | 8260C             | 19.4   | 20.0         | 97    | 68-125       |
| Chlorobenzene                | 8260C             | 20.9   | 20.0         | 105   | 80-121       |
| Chloroethane                 | 8260C             | 20.3   | 20.0         | 101   | 70-127       |
| Chloroform                   | 8260C             | 19.9   | 20.0         | 99    | 76-120       |
| Chloromethane                | 8260C             | 21.7   | 20.0         | 109   | 69-145       |
| Dibromochloromethane         | 8260C             | 19.6   | 20.0         | 98    | 77-128       |
| Dichloromethane              | 8260C             | 22.4   | 20.0         | 112   | 73-122       |
| Ethylbenzene                 | 8260C             | 20.5   | 20.0         | 102   | 76-120       |
| Styrene                      | 8260C             | 22.4   | 20.0         | 112   | 80-124       |
| Tetrachloroethene (PCE)      | 8260C             | 21.5   | 20.0         | 107   | 78-124       |
| Toluene                      | 8260C             | 22.8   | 20.0         | 114   | 77-120       |
| Trichloroethene (TCE)        | 8260C             | 22.3   | 20.0         | 112   | 78-123       |
| Vinyl Chloride               | 8260C             | 21.4   | 20.0         | 107   | 69-133       |
| cis-1,2-Dichloroethene       | 8260C             | 22.3   | 20.0         | 112   | 80-121       |
| cis-1,3-Dichloropropene      | 8260C             | 20.6   | 20.0         | 103   | 74-126       |
| m,p-Xylenes                  | 8260C             | 42.4   | 40.0         | 106   | 78-123       |
| o-Xylene                     | 8260C             | 21.4   | 20.0         | 107   | 80-120       |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 08/31/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L**Basis:**NA**Lab Control Sample**

RQ1610393-03

| <b>Analyte Name</b>       | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| trans-1,2-Dichloroethene  | 8260C                    | 21.3          | 20.0                | 106          | 80-120              |
| trans-1,3-Dichloropropene | 8260C                    | 20.4          | 20.0                | 102          | 67-135              |



## Metals

**ALS Environmental—Rochester Laboratory**

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608961-MB1

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Arsenic, Total       | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Chromium, Total      | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Iron, Total          | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Lead, Total          | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Manganese, Dissolved | 6010C           | 10 U   | ug/L  | 10  | 1.0 | 1    | 08/30/16 10:59 | 08/25/16       |   |
| Manganese, Total     | 6010C           | 10 U   | ug/L  | 10  | 1.0 | 1    | 08/30/16 10:59 | 08/25/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608961-MB2

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 08/30/16 11:07 | 08/25/16       |   |
| Arsenic, Total       | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 19:46 | 08/31/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 08/30/16 11:07 | 08/25/16       |   |
| Chromium, Total      | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 19:46 | 08/31/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 08/30/16 11:07 | 08/25/16       |   |
| Iron, Total          | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 09/06/16 19:46 | 08/31/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 08/30/16 11:07 | 08/25/16       |   |
| Lead, Total          | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 19:46 | 08/31/16       |   |
| Manganese, Dissolved | 6010C           | 10 U   | ug/L  | 10  | 1.0 | 1    | 08/30/16 11:07 | 08/25/16       |   |
| Manganese, Total     | 6010C           | 10 U   | ug/L  | 10  | 1.0 | 1    | 09/06/16 19:46 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1608961-MB3

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 19:46 | 08/31/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 19:46 | 08/31/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 09/06/16 19:46 | 08/31/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 19:46 | 08/31/16       |   |
| Manganese, Dissolved | 6010C           | 10 U   | ug/L  | 10  | 1.0 | 1    | 09/06/16 19:46 | 08/31/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608961-MB4

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | 10 U   | ug/L  | 10  | 5   | 1    | 09/06/16 19:54 | 08/31/16       |   |
| Chromium, Dissolved  | 6010C           | 10 U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 19:54 | 08/31/16       |   |
| Iron, Dissolved      | 6010C           | 100 U  | ug/L  | 100 | 9   | 1    | 09/06/16 19:54 | 08/31/16       |   |
| Lead, Dissolved      | 6010C           | 50 U   | ug/L  | 50  | 5   | 1    | 09/06/16 19:54 | 08/31/16       |   |
| Manganese, Dissolved | 6010C           | 10 U   | ug/L  | 10  | 1.0 | 1    | 09/06/16 19:54 | 08/31/16       |   |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 8/30/16

**Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** MW-2B  
**Lab Code:** R1608961-001

**Units:** ug/L  
**Basis:** NA

**Matrix Spike**  
R1608961-001MS

| Analyte Name     | Method | Sample Result | Result | Spike Amount | % Rec | % Rec Limits |
|------------------|--------|---------------|--------|--------------|-------|--------------|
| Arsenic, Total   | 6010C  | 10 U          | 45     | 40           | 111   | 75-125       |
| Chromium, Total  | 6010C  | 24            | 233    | 200          | 104   | 75-125       |
| Iron, Total      | 6010C  | 10800         | 13300  | 1000         | 242 # | 75-125       |
| Manganese, Total | 6010C  | 595           | 1120   | 500          | 106   | 75-125       |
| Lead, Total      | 6010C  | 13 J          | 508    | 500          | 99    | 75-125       |

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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.

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QA/QC Report

**Client:** Daigler Engineering  
**Project** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961**Date Collected:** 08/22/16**Date Received:** 08/24/16**Date Analyzed:** 08/30/16**Replicate Sample Summary****Inorganic Parameters**

**Sample Name:** MW-2B  
**Lab Code:** R1608961-001

**Units:** ug/L**Basis:** NA

| Analyte Name     | Analysis Method | MRL | MDL | Sample Result | Duplicate Sample<br>R1608961-<br>001DUP | Average | RPD | RPD Limit |
|------------------|-----------------|-----|-----|---------------|-----------------------------------------|---------|-----|-----------|
|                  |                 |     |     |               | Result                                  |         |     |           |
| Arsenic, Total   | 6010C           | 10  | 5   | 10 U          | 10 U                                    | NC      | NC  | 20        |
| Chromium, Total  | 6010C           | 10  | 0.3 | 24            | 22                                      | 23.3    | 9   | 20        |
| Iron, Total      | 6010C           | 100 | 9   | 10800         | 9910                                    | 10400   | 9   | 20        |
| Lead, Total      | 6010C           | 50  | 5   | 13 J          | 11 J                                    | 12.0    | 12  | 20        |
| Manganese, Total | 6010C           | 10  | 1.0 | 595           | 590                                     | 592     | <1  | 20        |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 08/30/16

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
R1608961-LCS1

| Analyte Name         | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|----------------------|-------------------|--------|--------------|-------|--------------|
| Arsenic, Dissolved   | 6010C             | 40.1   | 40           | 100   | 80-120       |
| Arsenic, Total       | 6010C             | 40.1   | 40           | 100   | 80-120       |
| Chromium, Dissolved  | 6010C             | 209    | 200          | 104   | 80-120       |
| Chromium, Total      | 6010C             | 209    | 200          | 104   | 80-120       |
| Iron, Dissolved      | 6010C             | 1030   | 1000         | 103   | 80-120       |
| Iron, Total          | 6010C             | 1030   | 1000         | 103   | 80-120       |
| Lead, Dissolved      | 6010C             | 518    | 500          | 104   | 80-120       |
| Lead, Total          | 6010C             | 518    | 500          | 104   | 80-120       |
| Manganese, Dissolved | 6010C             | 515    | 500          | 103   | 80-120       |
| Manganese, Total     | 6010C             | 515    | 500          | 103   | 80-120       |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 09/06/16

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
R1608961-LCS2

| Analyte Name         | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|----------------------|-------------------|--------|--------------|-------|--------------|
| Arsenic, Dissolved   | 6010C             | 40.8   | 40           | 102   | 80-120       |
| Arsenic, Total       | 6010C             | 40.8   | 40           | 102   | 80-120       |
| Chromium, Dissolved  | 6010C             | 208    | 200          | 104   | 80-120       |
| Chromium, Total      | 6010C             | 208    | 200          | 104   | 80-120       |
| Iron, Dissolved      | 6010C             | 1030   | 1000         | 103   | 80-120       |
| Iron, Total          | 6010C             | 1030   | 1000         | 103   | 80-120       |
| Lead, Dissolved      | 6010C             | 517    | 500          | 103   | 80-120       |
| Lead, Total          | 6010C             | 517    | 500          | 103   | 80-120       |
| Manganese, Dissolved | 6010C             | 511    | 500          | 102   | 80-120       |
| Manganese, Total     | 6010C             | 511    | 500          | 102   | 80-120       |



## General Chemistry

**ALS Environmental—Rochester Laboratory**

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1608961-MB1

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 1.0 U    | mg/L  | 1.0    | 1    | 08/26/16 13:17 | NA                |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 08/31/16 14:04 | 08/30/16          |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 10 U     | mg/L  | 10     | 1    | 08/29/16 11:25 | NA                |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1608961-MB2

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result   | Units | MRL    | Dil. | Date Analyzed  | Date Extracted | Q |
|-------------------------------|----------------------|----------|-------|--------|------|----------------|----------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 1.0 U    | mg/L  | 1.0    | 1    | 08/29/16 17:35 | NA             |   |
| Cyanide, Total                | 335.4                | 0.010 U  | mg/L  | 0.010  | 1    | 09/02/16 14:46 | 09/02/16       |   |
| Phenolics, Total Recoverable  | 420.4                | 0.0050 U | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA             |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 10 U     | mg/L  | 10     | 1    | 08/30/16 10:40 | NA             |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1608961-MB3

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL | Dil. | Date Analyzed  | Q |
|-------------------------------|----------------------|--------|-------|-----|------|----------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 1.0 U  | mg/L  | 1.0 | 1    | 09/07/16 15:43 |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 10 U   | mg/L  | 10  | 1    | 08/30/16 10:40 |   |

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## QA/QC Report

**Client:** Daigler Engineering  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 08/26/16

**Matrix Spike Summary**  
**Carbon, Total Organic (TOC)**

**Sample Name:** MW-16B  
**Lab Code:** R1608961-003  
**Analysis Method:** SM 5310 B-2000(2011)

**Units:** mg/L  
**Basis:** NA

**Matrix Spike**  
R1608961-003MS

| <b>Analyte Name</b>         | <b>Sample Result</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|-----------------------------|----------------------|---------------|---------------------|--------------|---------------------|
| Carbon, Total Organic (TOC) | 16.7                 | 26.6          | 10.0                | 98           | 48-135              |

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.

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## QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 09/2/16  
**Date Extracted:** 09/2/16

**Matrix Spike Summary**  
**Cyanide, Total**

**Sample Name:** MW-18A  
**Lab Code:** R1608961-006  
**Analysis Method:** 335.4  
**Prep Method:** Method

**Units:** mg/L  
**Basis:** NA

**Matrix Spike**  
R1608961-006MS

| <b>Analyte Name</b> | <b>Sample Result</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|----------------------|---------------|---------------------|--------------|---------------------|
| Cyanide, Total      | 0.010 U              | 0.099         | 0.100               | 99           | 90-110              |

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## QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/23/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 09/6/16

**Matrix Spike Summary**  
**Phenolics, Total Recoverable**

**Sample Name:** MW-6B  
**Lab Code:** R1608961-008  
**Analysis Method:** 420.4

**Units:** mg/L  
**Basis:** NA

**Matrix Spike**  
R1608961-008MS

| <b>Analyte Name</b>          | <b>Sample Result</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|------------------------------|----------------------|---------------|---------------------|--------------|---------------------|
| Phenolics, Total Recoverable | 0.0050 U             | 0.0400        | 0.0400              | 100          | 90-110              |

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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.

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## QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16  
**Date Received:** 08/26/16  
**Date Analyzed:** 08/30/16

**Matrix Spike Summary**  
**Carbon, Total Organic (TOC)**

**Sample Name:** MW-4B  
**Lab Code:** R1608961-016  
**Analysis Method:** SM 5310 B-2000(2011)

**Units:** mg/L  
**Basis:** NA

**Matrix Spike**  
R1608961-016MS

| <b>Analyte Name</b>         | <b>Sample Result</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|-----------------------------|----------------------|---------------|---------------------|--------------|---------------------|
| Carbon, Total Organic (TOC) | 7.7                  | 18.3          | 10.0                | 106          | 48-135              |

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QA/QC Report

**Client:** Daigler Engineering  
**Project** Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 08/26/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** MW-16B  
**Lab Code:** R1608961-003

**Units:** mg/L  
**Basis:** NA

|                             |                      |     |                  | Duplicate<br>Sample<br>R1608961-<br>003DUP |         |     |           |
|-----------------------------|----------------------|-----|------------------|--------------------------------------------|---------|-----|-----------|
| Analyte Name                | Analysis Method      | MRL | Sample<br>Result | Result                                     | Average | RPD | RPD Limit |
| Carbon, Total Organic (TOC) | SM 5310 B-2000(2011) | 1.0 | 16.7             | 16.5                                       | 16.6    | 1   | 20        |

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## QA/QC Report

**Client:** Daigler Engineering  
**Project** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/22/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 09/02/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** MW-18A  
**Lab Code:** R1608961-006

**Units:** mg/L  
**Basis:** NA

| Duplicate Sample<br>R1608961-<br>006DUP |                        |            |                      |                                |                |            |                  |
|-----------------------------------------|------------------------|------------|----------------------|--------------------------------|----------------|------------|------------------|
| <b>Analyte Name</b>                     | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>RPD</b> | <b>RPD Limit</b> |
| Cyanide, Total                          | 335.4                  | 0.010      | 0.010 U              | 0.010 U                        | NC             | NC         | 20               |

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QA/QC Report

**Client:** Daigler Engineering  
**Project** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/23/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 08/29/16 - 09/06/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** MW-6B  
**Lab Code:** R1608961-008

**Units:** mg/L  
**Basis:** NA

|                               |                        |            |                          | <b>Duplicate<br/>Sample<br/>R1608961-<br/>008DUP</b> |                |            |                  |
|-------------------------------|------------------------|------------|--------------------------|------------------------------------------------------|----------------|------------|------------------|
| <b>Analyte Name</b>           | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample<br/>Result</b> | <b>Result</b>                                        | <b>Average</b> | <b>RPD</b> | <b>RPD Limit</b> |
| Phenolics, Total Recoverable  | 420.4                  | 0.0050     | 0.0050 U                 | 0.0050 U                                             | NC             | NC         | 20               |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011)   | 20         | 1160                     | 1160                                                 | 1160           | <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  
**Project** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/23/16  
**Date Received:** 08/24/16  
**Date Analyzed:** 08/30/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** MW-7B  
**Lab Code:** R1608961-010

**Units:** mg/L  
**Basis:** NA

|                               |                        |            |                          |                             | <b>Duplicate<br/>Sample<br/>R1608961-<br/>010DUP</b> |            |                  |
|-------------------------------|------------------------|------------|--------------------------|-----------------------------|------------------------------------------------------|------------|------------------|
| <b>Analyte Name</b>           | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample<br/>Result</b> | <b>Duplicate<br/>Result</b> | <b>Average</b>                                       | <b>RPD</b> | <b>RPD Limit</b> |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011)   | 40         | 1100                     | 1100                        | 1100                                                 | <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  
**Project** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** NA  
**Date Received:** 08/24/16  
**Date Analyzed:** 08/30/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** GW-DUP  
**Lab Code:** R1608961-011

**Units:** mg/L  
**Basis:** NA

| <b>Analyte Name</b>           | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample R1608961-011DUP Result</b> | <b>Average</b> | <b>RPD</b> | <b>RPD Limit</b> |
|-------------------------------|------------------------|------------|----------------------|------------------------------------------------|----------------|------------|------------------|
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011)   | 20         | 636                  | 692                                            | 664            | 8          | 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  
**Project** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16  
**Date Received:** 08/26/16  
**Date Analyzed:** 08/30/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** MW-4B  
**Lab Code:** R1608961-016

**Units:** mg/L  
**Basis:** NA

| <b>Analyte Name</b>         | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample R1608961-016DUP Result</b> | <b>Average</b> | <b>RPD</b> | <b>RPD Limit</b> |
|-----------------------------|------------------------|------------|----------------------|------------------------------------------------|----------------|------------|------------------|
| Carbon, Total Organic (TOC) | SM 5310 B-2000(2011)   | 1.0        | 7.7                  | 7.8                                            | 7.72           | <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 St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Collected:** 08/25/16  
**Date Received:** 08/26/16  
**Date Analyzed:** 08/30/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** MW-15B  
**Lab Code:** R1608961-024

**Units:** mg/L  
**Basis:** NA

|                               |                        |            |                          | <b>Duplicate<br/>Sample<br/>R1608961-<br/>024DUP</b> |                |            |                  |
|-------------------------------|------------------------|------------|--------------------------|------------------------------------------------------|----------------|------------|------------------|
| <b>Analyte Name</b>           | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample<br/>Result</b> | <b>Result</b>                                        | <b>Average</b> | <b>RPD</b> | <b>RPD Limit</b> |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011)   | 59         | 1680                     | 1620                                                 | 1650           | 4          | 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  
**Project:** Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 08/26/16 - 09/06/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
R1608961-LCS1

| Analyte Name                  | Analytical Method    | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------------------|----------------------|--------|--------------|-------|--------------|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 9.51   | 10.0         | 95    | 81-118       |
| Cyanide, Total                | 335.4                | 0.104  | 0.100        | 104   | 90-110       |
| Phenolics, Total Recoverable  | 420.4                | 0.0389 | 0.0400       | 97    | 90-110       |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 906    | 914          | 99    | 90-110       |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 08/29/16 - 09/06/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
R1608961-LCS2

| Analyte Name                  | Analytical Method    | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------------------|----------------------|--------|--------------|-------|--------------|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 11.1   | 10.0         | 111   | 81-118       |
| Cyanide, Total                | 335.4                | 0.403  | 0.400        | 101   | 90-110       |
| Phenolics, Total Recoverable  | 420.4                | 0.0389 | 0.0400       | 97    | 90-110       |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 896    | 914          | 98    | 90-110       |

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 08/30/16 - 09/07/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
R1608961-LCS3

| Analyte Name                  | Analytical Method    | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------------------|----------------------|--------|--------------|-------|--------------|
| Carbon, Total Organic (TOC)   | SM 5310 B-2000(2011) | 9.70   | 10.0         | 97    | 81-118       |
| Cyanide, Total                | 335.4                | 0.0985 | 0.100        | 98    | 90-110       |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 884    | 914          | 97    | 90-110       |

**ALS Group USA, Corp.**

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** Marilla St. Landfill - Groundwater or Seeps  
**Sample Matrix:** Water

**Service Request:** R1608961  
**Date Analyzed:** 09/02/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L**Basis:**NA**Lab Control Sample**

R1608961-LCS4

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Cyanide, Total      | 335.4                    | 0.385         | 0.400               | 96           | 90-110              |



September 13, 2016

Service Request No:R1609144

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

**Laboratory Results for: MARILLA ST LANDFILL**

Dear Ms.Zurawski,

Enclosed are the results of the sample(s) submitted to our laboratory August 30, 2016  
For your reference, these analyses have been assigned our service request number **R1609144**.

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

**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**

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Phone (585) 288-5380 Fax (585) 288-8475

[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Received:** 8/30/16

### 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

Two water samples were received for analysis at ALS Environmental on 08/30/2016. 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  $\leq 6^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

#### Volatile Organic Analyses:

No significant anomalies were noted with this analysis.

#### Metals Analyses:

No significant anomalies were noted with this analysis.

#### General Chemistry Analyses:

No significant anomalies were noted with this analysis.

Approved by  Date 9/13/2016

### SAMPLE DETECTION SUMMARY

| CLIENT ID: MW-6A              |         | Lab ID: R1609144-001 |      |      |       |            |
|-------------------------------|---------|----------------------|------|------|-------|------------|
| Analyte                       | Results | Flag                 | MDL  | PQL  | Units | Method     |
| Carbon, Total Organic (TOC)   | 3.4     |                      | 0.05 | 1.0  | mg/L  | SM 5310 C- |
| Solids, Total Dissolved (TDS) | 726     |                      | 8    | 20   | mg/L  | SM 2540 C- |
| Arsenic, Total                | 65      |                      | 5    | 10   | ug/L  | 6010C      |
| Chromium, Total               | 76      |                      | 0.3  | 10   | ug/L  | 6010C      |
| Iron, Total                   | 91600   |                      | 90   | 1000 | ug/L  | 6010C      |
| Lead, Total                   | 62      |                      | 5    | 50   | ug/L  | 6010C      |
| Manganese, Total              | 1800    |                      | 1.0  | 10   | ug/L  | 6010C      |
| CLIENT ID: MW-6A Dissolved    |         | Lab ID: R1609144-002 |      |      |       |            |
| Analyte                       | Results | Flag                 | MDL  | PQL  | Units | Method     |
| Manganese, Dissolved          | 75      |                      | 1.0  | 10   | ug/L  | 6010C      |



## Sample Receipt Information

**ALS Environmental—Rochester Laboratory**

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[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL

**Service Request:**R1609144

**SAMPLE CROSS-REFERENCE**

| <u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>DATE</u> | <u>TIME</u> |
|-----------------|-------------------------|-------------|-------------|
| R1609144-001    | MW-6A                   | 8/28/2016   | 1145        |
| R1609144-002    | MW-6A Dissolved         | 8/28/2016   | 1145        |

[illegible]



## Cooler Receipt and Preservation Check Form

R1609144

5

Daigler Engineering  
MARILLA ST LANDFILL

Project/Client \_\_\_\_\_ Folder Number \_\_\_\_\_

Cooler received on 8-30-16 by: T.SCOURIER: ALS UPS FEDEX VELOCITY CLIENT

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

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

8. Temperature Readings Date: 8-30-16 Time: 1450 ID: IR#5 IR#6 From: Temp Blank Sample Bottle

|                               |             |     |     |     |     |     |     |
|-------------------------------|-------------|-----|-----|-----|-----|-----|-----|
| Observed Temp (°C)            | <u>1.1</u>  |     |     |     |     |     |     |
| Correction Factor (°C)        | <u>-1.8</u> |     |     |     |     |     |     |
| Corrected Temp (°C)           | <u>0.3</u>  |     |     |     |     |     |     |
| Within 0-6°C?                 | <u>Y</u> 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 \_\_\_\_\_

&amp; Client Approval to Run Samples: \_\_\_\_\_ Standing Approval \_\_\_\_\_ Client aware at drop-off \_\_\_\_\_ Client notified by: \_\_\_\_\_

All samples held in storage location: ROCZ by T.S on 8-30-16 at 1450  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_Cooler Breakdown: Date: 8-31-16 Time: 0900 by: T.S

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

Explain any discrepancies: \_\_\_\_\_

| pH                    | Reagent                                       | Yes      | No | Lot Received                                                                                   | Exp         | Sample ID | Vol. Added | Lot Added | Final pH |
|-----------------------|-----------------------------------------------|----------|----|------------------------------------------------------------------------------------------------|-------------|-----------|------------|-----------|----------|
| ≥12                   | NaOH                                          | <u>Y</u> |    | <u>WC14917713</u>                                                                              | <u>5/17</u> |           |            |           |          |
| ≤2                    | HNO <sub>3</sub>                              | <u>Y</u> |    | <u>BP132615361</u>                                                                             | <u>6/17</u> |           |            |           |          |
| ≤2                    | H <sub>2</sub> SO <sub>4</sub>                | <u>Y</u> |    | <u>WC161001A</u>                                                                               | <u>8/17</u> |           |            |           |          |
| <4                    | NaHSO <sub>4</sub>                            |          |    |                                                                                                |             |           |            |           |          |
| Residual Chlorine (-) | For CN Phenol and 522                         | <u>Y</u> |    | If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol). |             |           |            |           |          |
|                       | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | -        | -  |                                                                                                |             |           |            |           |          |
|                       | ZnAcetate                                     | -        | -  |                                                                                                |             |           |            |           |          |
|                       | HCl                                           | **       | ** |                                                                                                |             |           |            |           |          |

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: \_\_\_\_\_

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

Bottle lot numbers: 062016-2440, 050916-13ML, 5317002  
Other Comments: \_\_\_\_\_

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

PC Secondary Review: \_\_\_\_\_

\*significant air bubbles: VOA &gt; 5-6 mm : WC &gt; 1 in. diameter



## Miscellaneous Forms

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## 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.                                                                                                                       | +   | Correlation coefficient for MSA is <0.995.                                                                                                                                                                           |
| 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/Aroclors). | N   | Inorganics- Matrix spike recovery was outside laboratory limits.                                                                                                                                                     |
| B | Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.                                                                                                                                                                            | N   | Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.                                                                                                                     |
| E | Inorganics- Concentration is estimated due to the serial dilution was outside control limits.                                                                                                                                                                                                          | S   | Concentration has been determined using Method of Standard Additions (MSA).                                                                                                                                          |
| E | Organics- Concentration has exceeded the calibration range for that specific analysis.                                                                                                                                                                                                                 | W   | Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.                                                                                                   |
| 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.                                                                                            | P   | Concentration >40% (25% for CLP) difference between the two GC columns.                                                                                                                                              |
| * | Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.                                                                                                                  | C   | Confirmed by GC/MS                                                                                                                                                                                                   |
| H | Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.                                                                                                                                                                                                         | Q   | DoD reports: indicates a pesticide/Aroclor is not confirmed (100% Difference between two GC columns).                                                                                                                |
| # | Spike was diluted out.                                                                                                                                                                                                                                                                                 | X   | See Case Narrative for discussion.                                                                                                                                                                                   |
|   |                                                                                                                                                                                                                                                                                                        | MRL | Method Reporting Limit. Also known as:                                                                                                                                                                               |
|   |                                                                                                                                                                                                                                                                                                        | LOQ | Limit of Quantitation (LOQ)<br>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<sup>1</sup>

|                         |                       |                         |
|-------------------------|-----------------------|-------------------------|
| Connecticut ID # PH0556 | Maine ID #NY0032      | New Hampshire ID #      |
| Delaware Accredited     | Nebraska Accredited   | 294100 A/B              |
| 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        |

<sup>1</sup> Analyses were performed according to our laboratory's 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

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## 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.                           |

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Analyst Summary report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL

**Service Request:** R1609144

**Sample Name:** MW-6A  
**Lab Code:** R1609144-001  
**Sample Matrix:** Water

**Date Collected:** 08/28/16  
**Date Received:** 08/30/16

**Analysis Method**

335.4

420.4

6010C

8260C

SM 2540 C-1997(2011)

SM 5310 C-2000(2011)

**Extracted/Digested By**

GNITAJOUPPI

CBURLESON

**Analyzed By**

KMENGs

BBOWE

CGILDAY

FNAEGLER

KWONG

KABBOTT

**Sample Name:** MW-6A Dissolved  
**Lab Code:** R1609144-002  
**Sample Matrix:** Water

**Date Collected:** 08/28/16  
**Date Received:** 08/30/16

**Analysis Method**

6010C

**Extracted/Digested By**

CBURLESON

**Analyzed By**

CGILDAY



## INORGANIC PREPARATION METHODS

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

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## Volatile Organic Compounds by GC/MS

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**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Collected:** 08/28/16 11:45  
**Date Received:** 08/30/16 14:50

**Sample Name:** MW-6A  
**Lab Code:** R1609144-001

**Units:** ug/L  
**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    | 09/02/16 14:51 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 09/02/16 14:51 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 09/02/16 14:51 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 09/02/16 14:51 |   |
| Acetone                      | ND U   | 10  | 1    | 09/02/16 14:51 |   |
| Benzene                      | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 09/02/16 14:51 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Styrene                      | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Toluene                      | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 09/02/16 14:51 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 98    | 85 - 122       | 09/02/16 14:51 |   |
| Dibromofluoromethane | 102   | 89 - 119       | 09/02/16 14:51 |   |
| Toluene-d8           | 101   | 87 - 121       | 09/02/16 14:51 |   |



## Metals

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Analytical Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water  
  
**Sample Name:** MW-6A  
**Lab Code:** R1609144-001

**Service Request:** R1609144  
**Date Collected:** 08/28/16 11:45  
**Date Received:** 08/30/16 14:50  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name     | Analysis Method | Result | Units | MRL  | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|------------------|-----------------|--------|-------|------|-----|------|----------------|----------------|---|
| Arsenic, Total   | 6010C           | 65     | ug/L  | 10   | 5   | 1    | 09/06/16 19:04 | 09/01/16       |   |
| Chromium, Total  | 6010C           | 76     | ug/L  | 10   | 0.3 | 1    | 09/06/16 19:04 | 09/01/16       |   |
| Iron, Total      | 6010C           | 91600  | ug/L  | 1000 | 90  | 10   | 09/09/16 18:22 | 09/01/16       |   |
| Lead, Total      | 6010C           | 62     | ug/L  | 50   | 5   | 1    | 09/06/16 19:04 | 09/01/16       |   |
| Manganese, Total | 6010C           | 1800   | ug/L  | 10   | 1.0 | 1    | 09/06/16 19:04 | 09/01/16       |   |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water  
  
**Sample Name:** MW-6A Dissolved  
**Lab Code:** R1609144-002

**Service Request:** R1609144  
**Date Collected:** 08/28/16 11:45  
**Date Received:** 08/30/16 14:50  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U   | ug/L  | 10  | 5   | 1    | 09/06/16 19:07 | 09/01/16       |   |
| Chromium, Dissolved  | 6010C           | ND U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 19:07 | 09/01/16       |   |
| Iron, Dissolved      | 6010C           | ND U   | ug/L  | 100 | 9   | 1    | 09/06/16 19:07 | 09/01/16       |   |
| Lead, Dissolved      | 6010C           | ND U   | ug/L  | 50  | 5   | 1    | 09/06/16 19:07 | 09/01/16       |   |
| Manganese, Dissolved | 6010C           | 75     | ug/L  | 10  | 1.0 | 1    | 09/06/16 19:07 | 09/01/16       |   |



## General Chemistry

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Analytical Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water  
  
**Sample Name:** MW-6A  
**Lab Code:** R1609144-001

**Service Request:** R1609144  
**Date Collected:** 08/28/16 11:45  
**Date Received:** 08/30/16 14:50  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 C-2000(2011) | 3.4    | mg/L  | 1.0    | 1    | 09/07/16 05:03 | NA                |   |
| Cyanide, Total                | 335.4                | ND U   | mg/L  | 0.010  | 1    | 09/02/16 15:19 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | ND U   | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 726    | mg/L  | 20     | 1    | 09/01/16 14:35 | NA                |   |



## QC Summary Forms

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## Volatile Organic Compounds by GC/MS

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144

**SURROGATE RECOVERY SUMMARY**  
**Volatile Organic Compounds by GC/MS**

**Analysis Method:** 8260C

| Sample Name        | Lab Code     | 4-Bromofluorobenzene | Dibromofluoromethane | Toluene-d8 |
|--------------------|--------------|----------------------|----------------------|------------|
|                    |              | 85 - 122             | 89 - 119             | 87 - 121   |
| MW-6A              | R1609144-001 | 98                   | 102                  | 101        |
| Method Blank       | RQ1610598-01 | 98                   | 102                  | 102        |
| Lab Control Sample | RQ1610598-02 | 101                  | 103                  | 101        |

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Analytical Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** RQ1610598-01

**Units:** ug/L  
**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    | 09/02/16 12:09 |   |
| 1,1,2,2-Tetrachloroethane    | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| 1,1,2-Trichloroethane        | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| 1,1-Dichloroethane (1,1-DCA) | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| 1,1-Dichloroethene (1,1-DCE) | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| 1,2-Dichloroethane           | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| 1,2-Dichloropropane          | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| 2-Butanone (MEK)             | ND U   | 10  | 1    | 09/02/16 12:09 |   |
| 2-Hexanone                   | ND U   | 10  | 1    | 09/02/16 12:09 |   |
| 4-Methyl-2-pentanone         | ND U   | 10  | 1    | 09/02/16 12:09 |   |
| Acetone                      | ND U   | 10  | 1    | 09/02/16 12:09 |   |
| Benzene                      | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Bromodichloromethane         | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Bromoform                    | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Bromomethane                 | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Carbon Disulfide             | ND U   | 10  | 1    | 09/02/16 12:09 |   |
| Carbon Tetrachloride         | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Chlorobenzene                | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Chloroethane                 | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Chloroform                   | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Chloromethane                | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Dibromochloromethane         | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Dichloromethane              | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Ethylbenzene                 | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Styrene                      | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Tetrachloroethene (PCE)      | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Toluene                      | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Trichloroethene (TCE)        | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| Vinyl Chloride               | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| cis-1,2-Dichloroethene       | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| cis-1,3-Dichloropropene      | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| m,p-Xylenes                  | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| o-Xylene                     | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| trans-1,2-Dichloroethene     | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |
| trans-1,3-Dichloropropene    | ND U   | 5.0 | 1    | 09/02/16 12:09 |   |

| Surrogate Name       | % Rec | Control Limits | Date Analyzed  | Q |
|----------------------|-------|----------------|----------------|---|
| 4-Bromofluorobenzene | 98    | 85 - 122       | 09/02/16 12:09 |   |
| Dibromofluoromethane | 102   | 89 - 119       | 09/02/16 12:09 |   |
| Toluene-d8           | 102   | 87 - 121       | 09/02/16 12:09 |   |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Analyzed:** 09/02/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
RQ1610598-02

| Analyte Name                 | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|------------------------------|-------------------|--------|--------------|-------|--------------|
| 1,1,1-Trichloroethane (TCA)  | 8260C             | 19.6   | 20.0         | 98    | 74-120       |
| 1,1,2,2-Tetrachloroethane    | 8260C             | 19.8   | 20.0         | 99    | 78-122       |
| 1,1,2-Trichloroethane        | 8260C             | 20.0   | 20.0         | 100   | 82-118       |
| 1,1-Dichloroethane (1,1-DCA) | 8260C             | 19.8   | 20.0         | 99    | 78-117       |
| 1,1-Dichloroethene (1,1-DCE) | 8260C             | 19.8   | 20.0         | 99    | 74-135       |
| 1,2-Dichloroethane           | 8260C             | 19.7   | 20.0         | 98    | 71-127       |
| 1,2-Dichloropropane          | 8260C             | 19.6   | 20.0         | 98    | 80-119       |
| 2-Butanone (MEK)             | 8260C             | 18.2   | 20.0         | 91    | 61-137       |
| 2-Hexanone                   | 8260C             | 18.8   | 20.0         | 94    | 63-124       |
| 4-Methyl-2-pentanone         | 8260C             | 18.5   | 20.0         | 92    | 66-124       |
| Acetone                      | 8260C             | 18.3   | 20.0         | 92    | 40-161       |
| Benzene                      | 8260C             | 19.5   | 20.0         | 97    | 76-118       |
| Bromodichloromethane         | 8260C             | 18.9   | 20.0         | 95    | 78-126       |
| Bromoform                    | 8260C             | 19.8   | 20.0         | 99    | 71-136       |
| Bromomethane                 | 8260C             | 21.5   | 20.0         | 108   | 42-166       |
| Carbon Disulfide             | 8260C             | 14.4   | 20.0         | 72    | 65-127       |
| Carbon Tetrachloride         | 8260C             | 21.5   | 20.0         | 108   | 68-125       |
| Chlorobenzene                | 8260C             | 19.8   | 20.0         | 99    | 80-121       |
| Chloroethane                 | 8260C             | 19.7   | 20.0         | 99    | 70-127       |
| Chloroform                   | 8260C             | 19.3   | 20.0         | 96    | 76-120       |
| Chloromethane                | 8260C             | 19.0   | 20.0         | 95    | 69-145       |
| Dibromochloromethane         | 8260C             | 19.2   | 20.0         | 96    | 77-128       |
| Dichloromethane              | 8260C             | 19.2   | 20.0         | 96    | 73-122       |
| Ethylbenzene                 | 8260C             | 19.8   | 20.0         | 99    | 76-120       |
| Styrene                      | 8260C             | 21.2   | 20.0         | 106   | 80-124       |
| Tetrachloroethene (PCE)      | 8260C             | 20.4   | 20.0         | 102   | 78-124       |
| Toluene                      | 8260C             | 19.9   | 20.0         | 99    | 77-120       |
| Trichloroethene (TCE)        | 8260C             | 20.0   | 20.0         | 100   | 78-123       |
| Vinyl Chloride               | 8260C             | 21.3   | 20.0         | 106   | 69-133       |
| cis-1,2-Dichloroethene       | 8260C             | 20.6   | 20.0         | 103   | 80-121       |
| cis-1,3-Dichloropropene      | 8260C             | 19.2   | 20.0         | 96    | 74-126       |
| m,p-Xylenes                  | 8260C             | 41.4   | 40.0         | 103   | 78-123       |
| o-Xylene                     | 8260C             | 20.6   | 20.0         | 103   | 80-120       |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Analyzed:** 09/02/16

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Units:**ug/L**Basis:**NA**Lab Control Sample**

RQ1610598-02

| Analyte Name              | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|---------------------------|-------------------|--------|--------------|-------|--------------|
| trans-1,2-Dichloroethene  | 8260C             | 20.2   | 20.0         | 101   | 80-120       |
| trans-1,3-Dichloropropene | 8260C             | 19.0   | 20.0         | 95    | 67-135       |



## Metals

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Analytical Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1609144-MB

**Service Request:** R1609144  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name         | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed  | Date Extracted | Q |
|----------------------|-----------------|--------|-------|-----|-----|------|----------------|----------------|---|
| Arsenic, Dissolved   | 6010C           | ND U   | ug/L  | 10  | 5   | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Arsenic, Total       | 6010C           | ND U   | ug/L  | 10  | 5   | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Chromium, Dissolved  | 6010C           | ND U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Chromium, Total      | 6010C           | ND U   | ug/L  | 10  | 0.3 | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Iron, Dissolved      | 6010C           | ND U   | ug/L  | 100 | 9   | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Iron, Total          | 6010C           | ND U   | ug/L  | 100 | 9   | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Lead, Dissolved      | 6010C           | ND U   | ug/L  | 50  | 5   | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Lead, Total          | 6010C           | ND U   | ug/L  | 50  | 5   | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Manganese, Dissolved | 6010C           | ND U   | ug/L  | 10  | 1.0 | 1    | 09/06/16 18:10 | 09/01/16       |   |
| Manganese, Total     | 6010C           | ND U   | ug/L  | 10  | 1.0 | 1    | 09/06/16 18:10 | 09/01/16       |   |

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Analyzed:** 09/06/16

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
R1609144-LCS

| Analyte Name         | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|----------------------|-------------------|--------|--------------|-------|--------------|
| Arsenic, Dissolved   | 6010C             | 39.3   | 40           | 98    | 80-120       |
| Arsenic, Total       | 6010C             | 39.3   | 40           | 98    | 80-120       |
| Chromium, Dissolved  | 6010C             | 210    | 200          | 105   | 80-120       |
| Chromium, Total      | 6010C             | 210    | 200          | 105   | 80-120       |
| Iron, Dissolved      | 6010C             | 1040   | 1000         | 104   | 80-120       |
| Iron, Total          | 6010C             | 1040   | 1000         | 104   | 80-120       |
| Lead, Dissolved      | 6010C             | 523    | 500          | 105   | 80-120       |
| Lead, Total          | 6010C             | 523    | 500          | 105   | 80-120       |
| Manganese, Dissolved | 6010C             | 517    | 500          | 103   | 80-120       |
| Manganese, Total     | 6010C             | 517    | 500          | 103   | 80-120       |



## General Chemistry

**ALS Environmental—Rochester Laboratory**

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ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** R1609144-MB

**Service Request:** R1609144  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

Inorganic Parameters

| Analyte Name                  | Analysis Method      | Result | Units | MRL    | Dil. | Date Analyzed  | Date<br>Extracted | Q |
|-------------------------------|----------------------|--------|-------|--------|------|----------------|-------------------|---|
| Carbon, Total Organic (TOC)   | SM 5310 C-2000(2011) | ND U   | mg/L  | 1.0    | 1    | 09/07/16 01:55 | NA                |   |
| Cyanide, Total                | 335.4                | ND U   | mg/L  | 0.010  | 1    | 09/02/16 15:10 | 09/02/16          |   |
| Phenolics, Total Recoverable  | 420.4                | ND U   | mg/L  | 0.0050 | 1    | 09/06/16 09:30 | NA                |   |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | ND U   | mg/L  | 10     | 1    | 09/01/16 14:35 | NA                |   |

**ALS Group USA, Corp.**

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QA/QC Report

**Client:** Daigler Engineering  
**Project** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Collected:** 08/28/16  
**Date Received:** 08/30/16  
**Date Analyzed:** 09/01/16

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** MW-6A  
**Lab Code:** R1609144-001

**Units:** mg/L  
**Basis:** NA

|                               |                        |            |                          |               | <b>Duplicate<br/>Sample<br/>R1609144-<br/>001DUP</b> |            |                  |
|-------------------------------|------------------------|------------|--------------------------|---------------|------------------------------------------------------|------------|------------------|
| <b>Analyte Name</b>           | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample<br/>Result</b> | <b>Result</b> | <b>Average</b>                                       | <b>RPD</b> | <b>RPD Limit</b> |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011)   | 20         | 726                      | 726           | 726                                                  | <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.

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Analyzed:** 09/01/16 - 09/07/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
R1609144-LCS1

| Analyte Name                  | Analytical Method    | Result | Spike Amount | % Rec | % Rec Limits |
|-------------------------------|----------------------|--------|--------------|-------|--------------|
| Carbon, Total Organic (TOC)   | SM 5310 C-2000(2011) | 10.3   | 10.0         | 103   | 81-118       |
| Cyanide, Total                | 335.4                | 0.101  | 0.100        | 101   | 90-110       |
| Phenolics, Total Recoverable  | 420.4                | 0.0389 | 0.0400       | 97    | 90-110       |
| Solids, Total Dissolved (TDS) | SM 2540 C-1997(2011) | 876    | 914          | 96    | 90-110       |

**ALS Group USA, Corp.**

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QA/QC Report

**Client:** Daigler Engineering  
**Project:** MARILLA ST LANDFILL  
**Sample Matrix:** Water

**Service Request:** R1609144  
**Date Analyzed:** 09/02/16

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L**Basis:**NA**Lab Control Sample**

R1609144-LCS2

| <b>Analyte Name</b> | <b>Analytical Method</b> | <b>Result</b> | <b>Spike Amount</b> | <b>% Rec</b> | <b>% Rec Limits</b> |
|---------------------|--------------------------|---------------|---------------------|--------------|---------------------|
| Cyanide, Total      | 335.4                    | 0.405         | 0.400               | 101          | 90-110              |



## **APPENDIX D**

# **Historic Data for Shallow Overburden Background Well MW-6B**

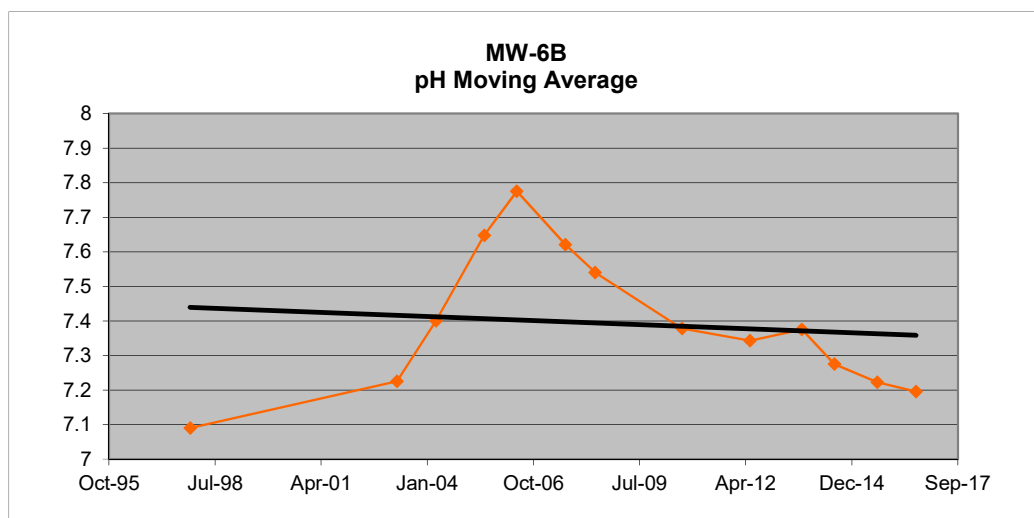


**Appendix D**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Shallow Overburden Well MW-6B**

**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         |

**Background Mean Concentration (BMC)= 7.31**  
**3 S.D.= 0.873**  
**BMC + 3 S.D.= 8.19**  
**BMC - 3 S.D.= 6.44**



**Appendix D**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Shallow Overburden Well MW-6B**

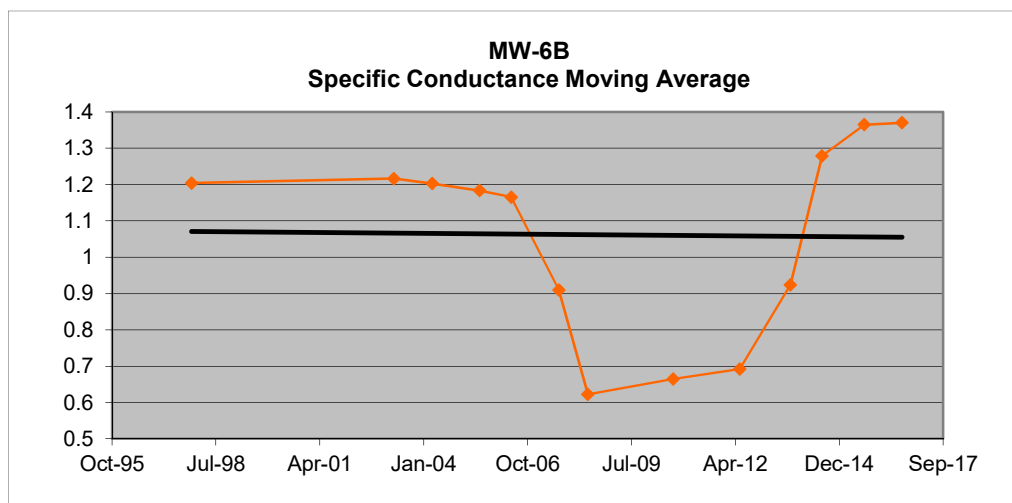
**Specific Conductance**

| 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         |

**Background Mean Concentration (BMC)= 1.107**

**3 S.D.= 1.153**

**BMC + 3 S.D.= 2.260**



**Appendix D**  
**Marilla Street Landfill**  
**August 2016 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        |

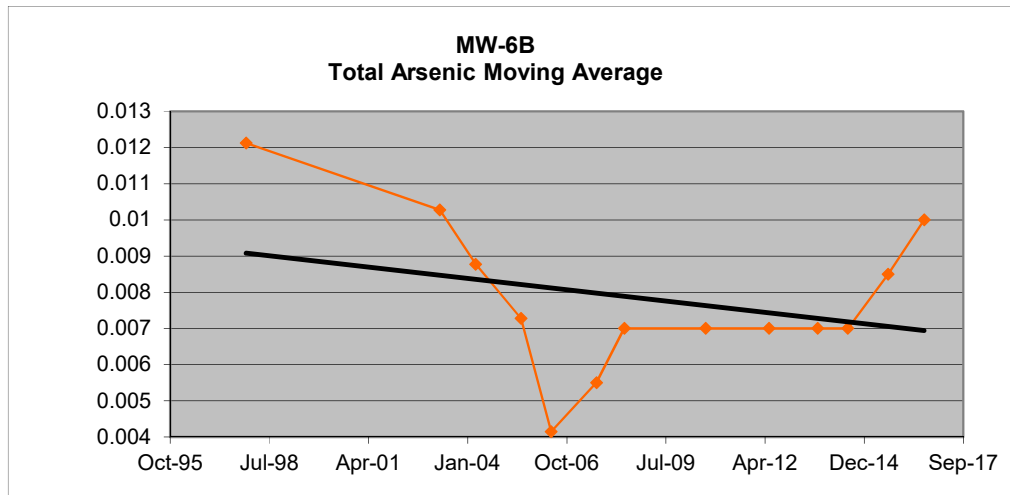
**Background Mean Concentration (BMC)= 0.00776**

**3 S.D.= 0.0106**

**BMC + 3 S.D.= 0.0184**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Shallow Overburden Well MW-6B**

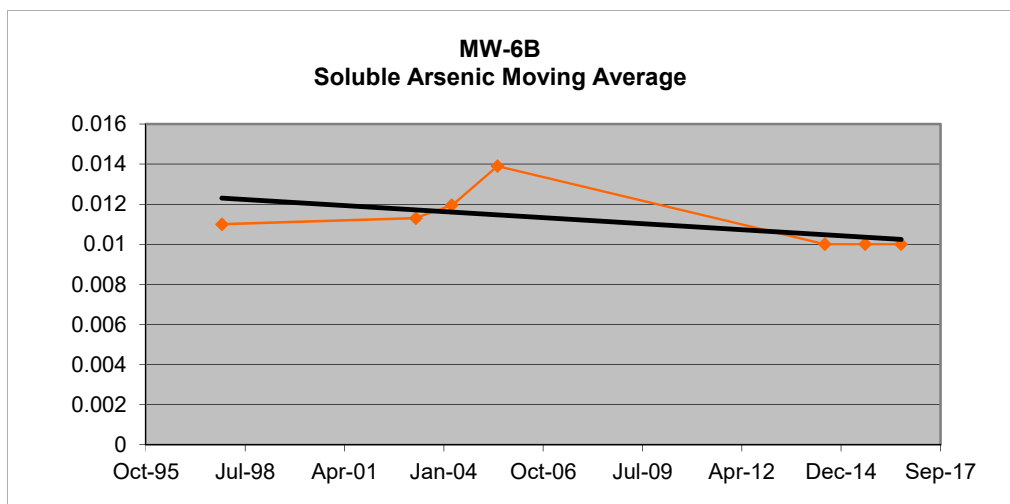
**Soluble Arsenic**

| 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        |

**Background Mean Concentration (BMC)= 0.00855**

**3 S.D.= 0.0091**

**BMC+3 S.D.= 0.0176**



**Appendix D**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Shallow Overburden Well MW-6B**

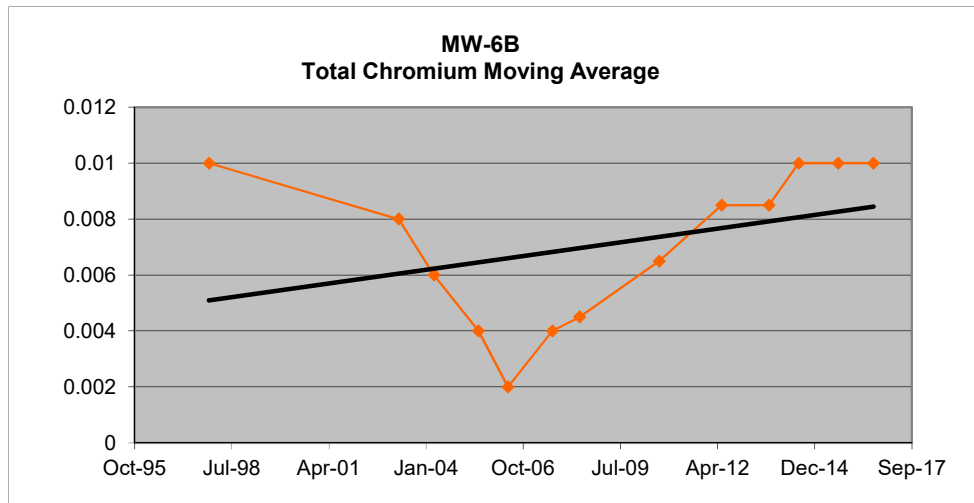
**Total Chromium**

| 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        |

**Background Mean Concentration (BMC)= 0.00830**

**3 S.D.= 0.0106**

**BMC+3 S.D.= 0.0189**



**Appendix D**  
**Marilla Street Landfill**  
**August 2016 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        |

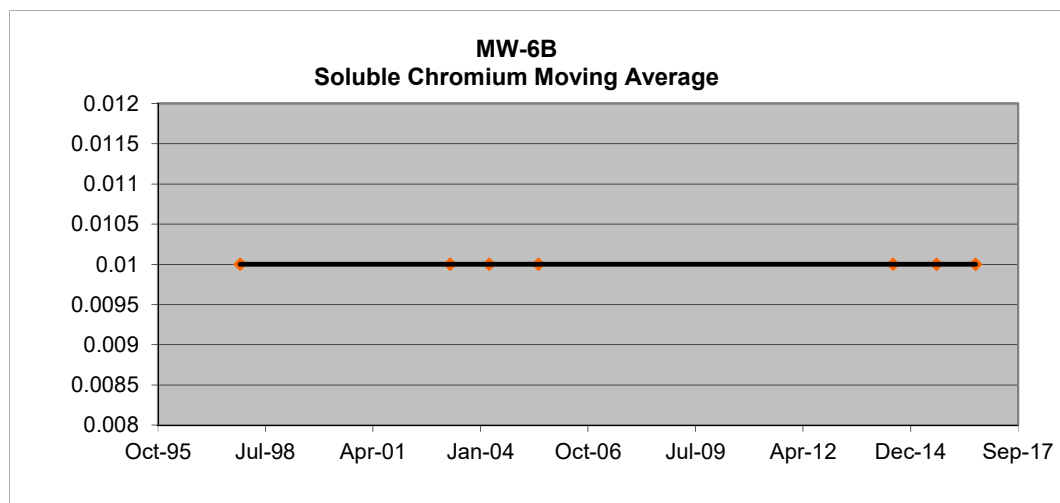
**Background Mean Concentration (BMC)= 0.0104**

**3 S.D.= 0.00151**

**BMC+3 S.D.= 0.0119**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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         |

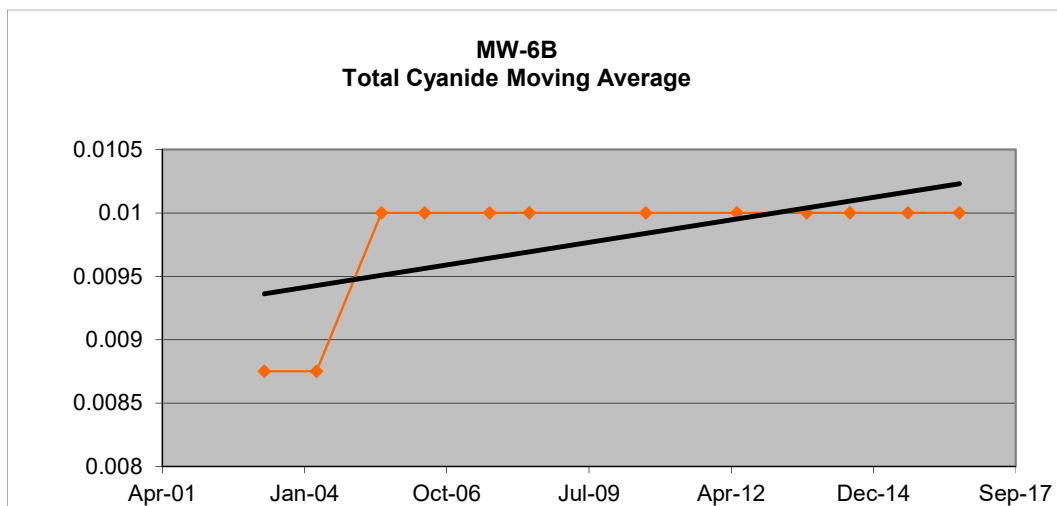
**Background Mean Concentration (BMC)= 0.0097**

**3 S.D.= 0.0039**

**BMC+3 S.D.= 0.014**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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         |

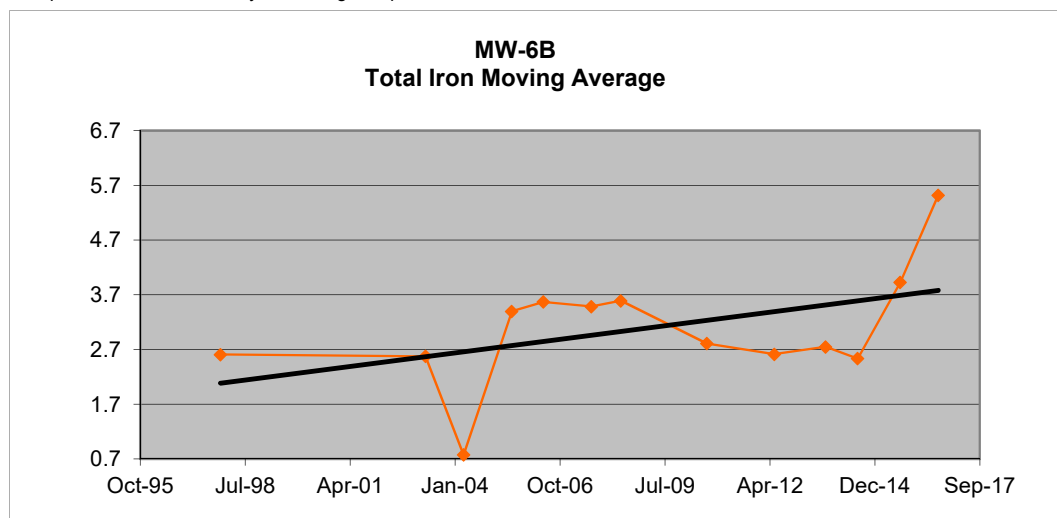
**Background Mean Concentration (BMC)= 1.427**

**3 S.D.= 3.827**

**BMC+3 S.D.= 5.254**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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         |

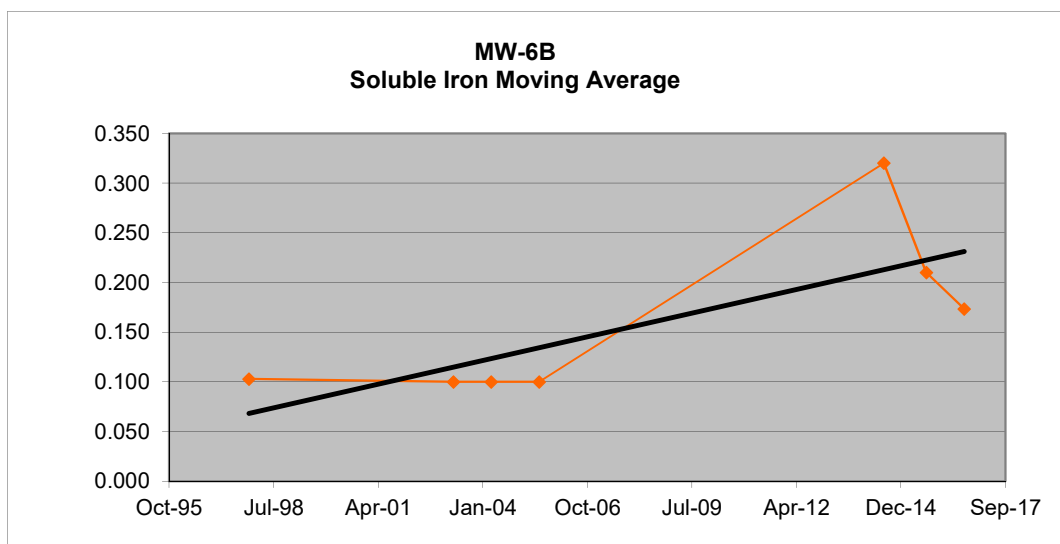
**Background Mean Concentration (BMC)= 0.388**

**3 S.D.= 2.504**

**BMC+3 S.D.= 2.892**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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         |   | 0.0275                | 0.0260                           | 0.0779   | 0.1054        |
| 20        | Aug-16     | 0.0060         |   | 0.0278                | 0.0257                           | 0.0771   | 0.1048        |

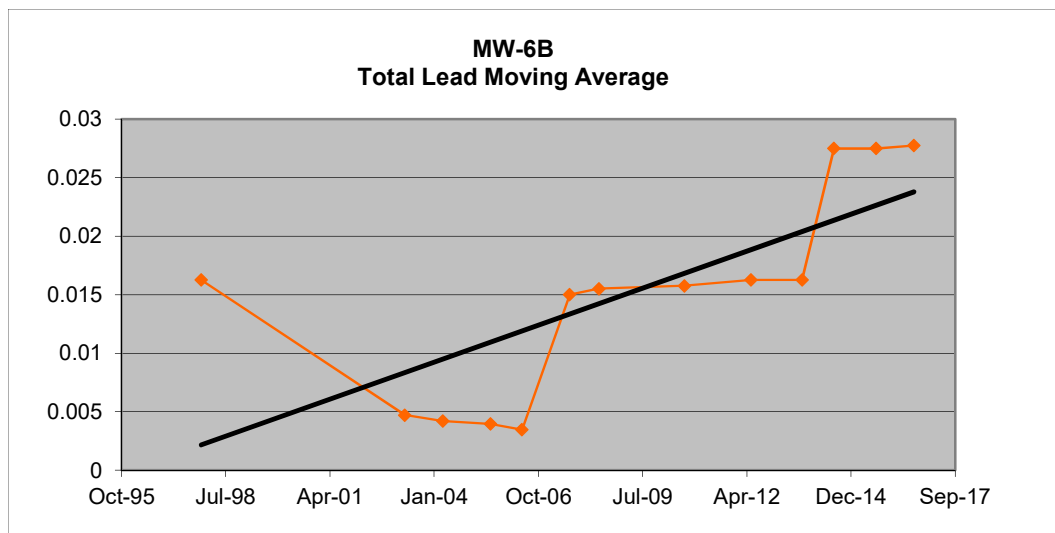
**Background Mean Concentration (BMC)= 0.0136**

**3 S.D.= 0.0561**

**BMC+3 S.D.= 0.0697**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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        |

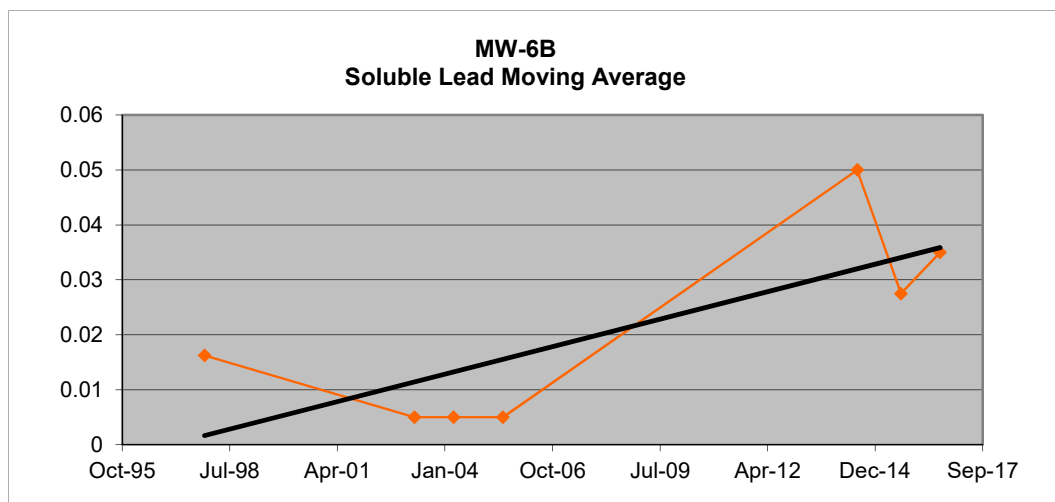
**Background Mean Concentration (BMC)= 0.0171**

**3 S.D.= 0.0634**

**BMC+3 S.D.= 0.0805**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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       |

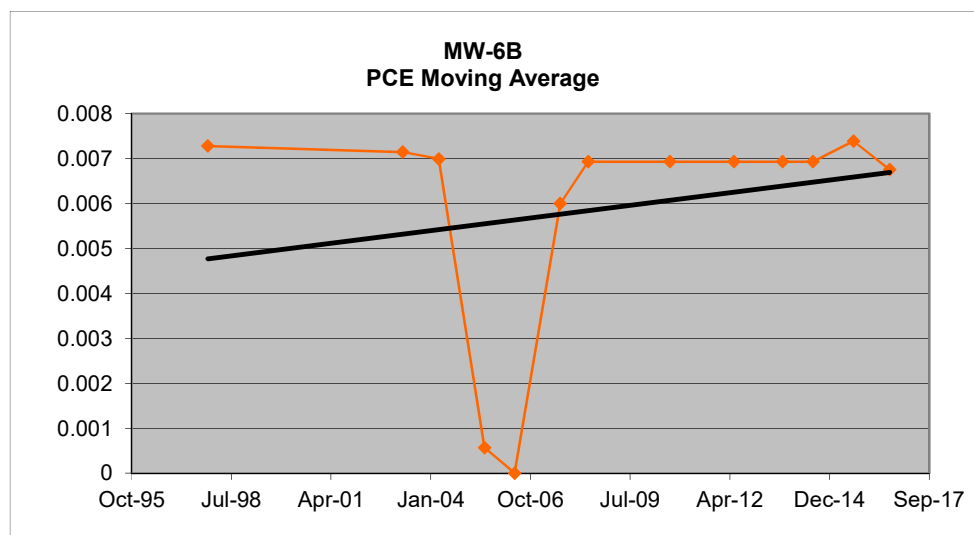
**Background Mean Concentration (BMC)= 0.00213**

**3 S.D.= 0.00598**

**BMC+3 S.D.= 0.00811**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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        |

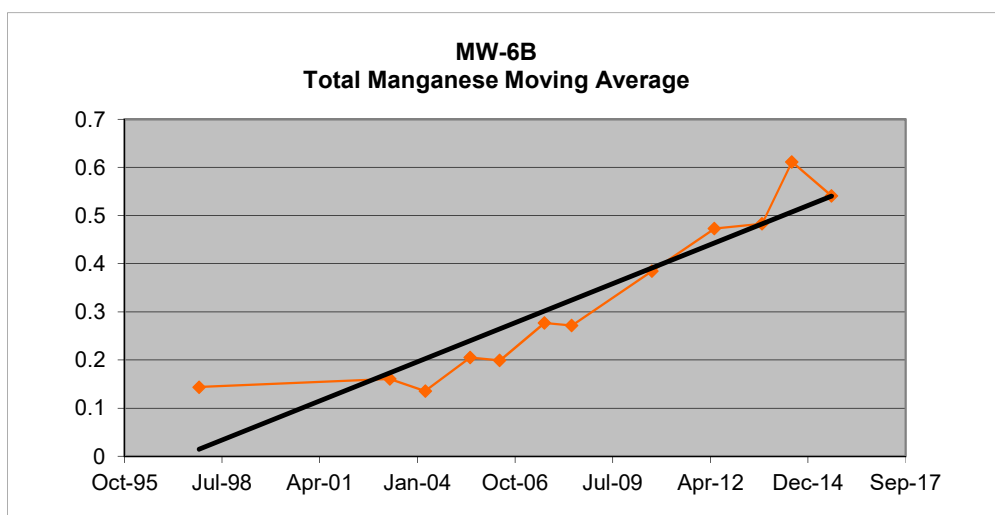
**Background Mean Concentration (BMC)= 0.3217**

**3 S.D.= 0.7227**

**BMC+3 S.D.= 1.0444**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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        |

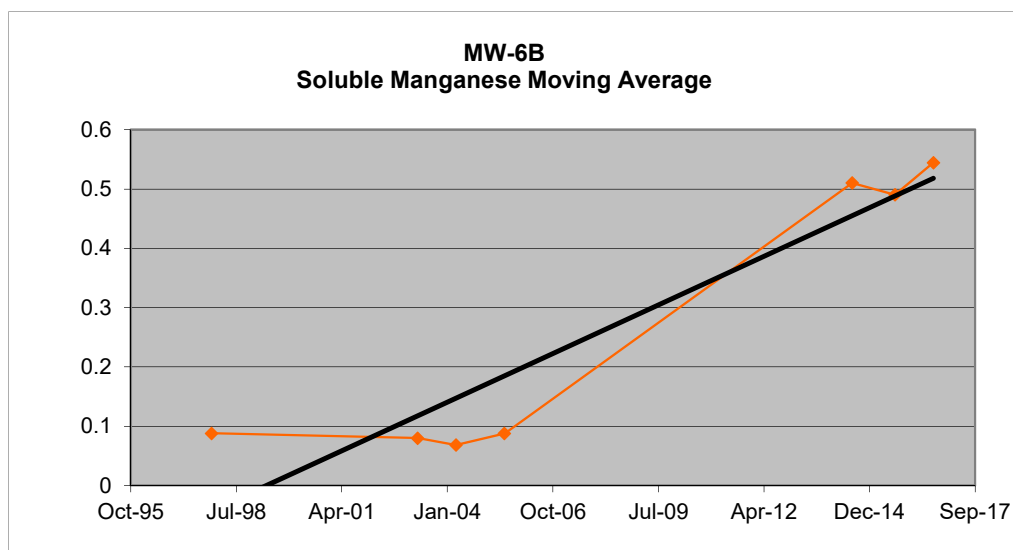
**Background Mean Concentration (BMC)= 0.2328**

**3 S.D.= 0.6395**

**BMC+3 S.D.= 0.8723**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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          |

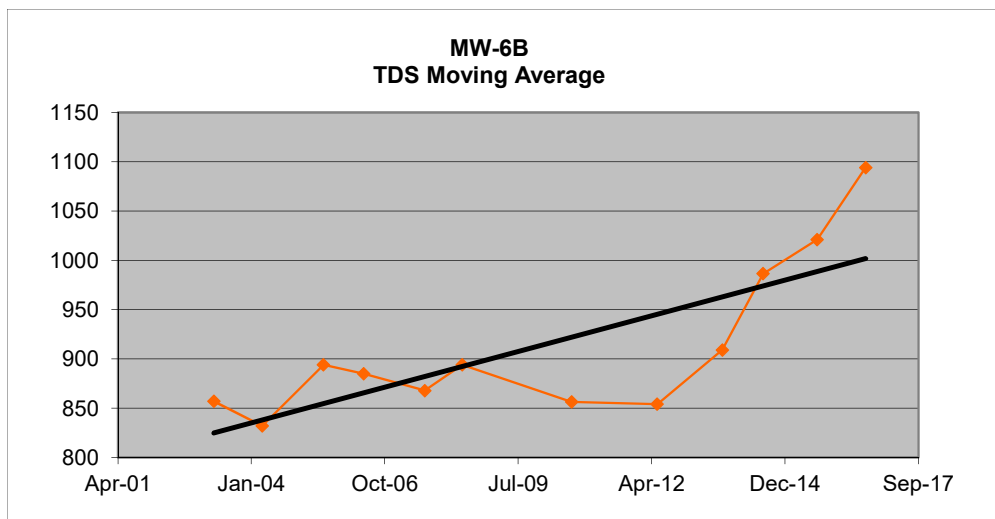
**Background Mean Concentration (BMC)= 924**

**3 S.D.= 389**

**BMC+3 S.D.= 1314**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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         |

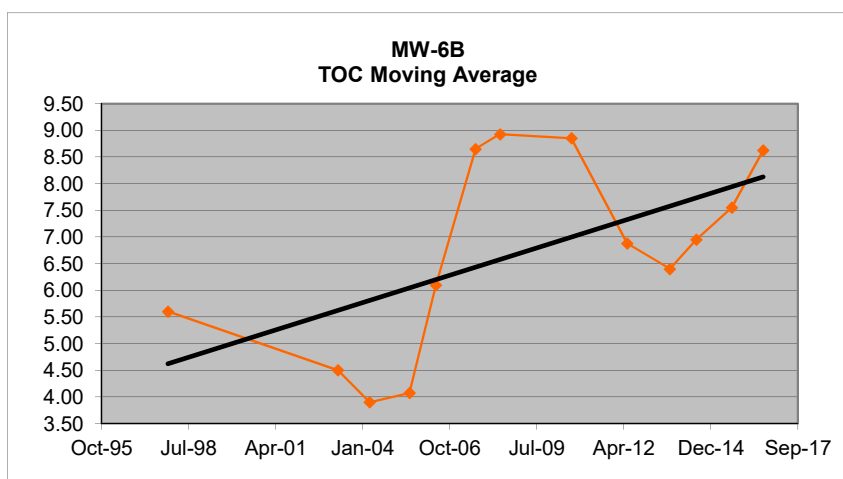
**Background Mean Concentration (BMC)= 6.51**

**3 S.D.= 8.07**

**BMC+3 S.D.= 14.58**

\* = 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 D**  
**Marilla Street Landfill**  
**August 2016 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         |

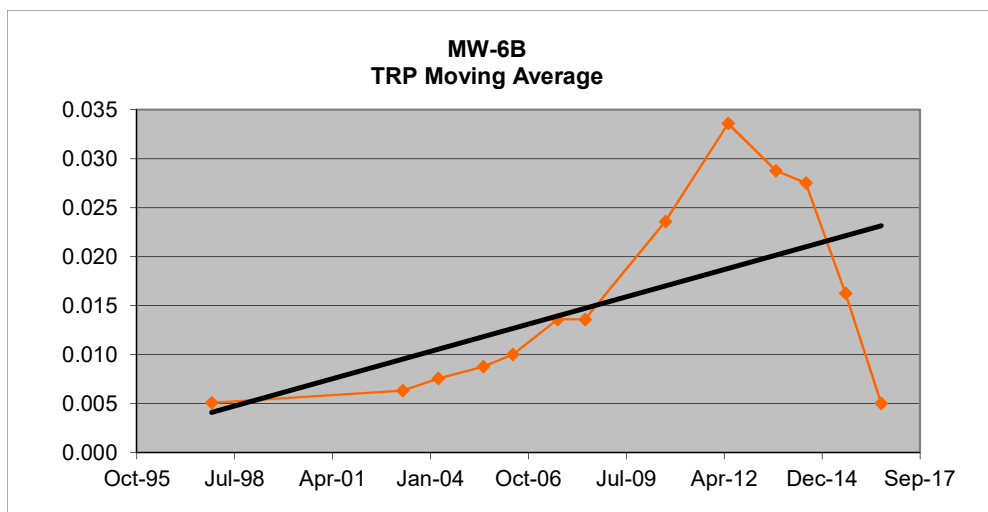
**Background Mean Concentration (BMC)= 0.0117**

**3 S.D.= 0.0415**

**BMC+3 S.D.= 0.0533**

\* = 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**

# **Historic Data for Deep Overburden Background Well MW-6A**



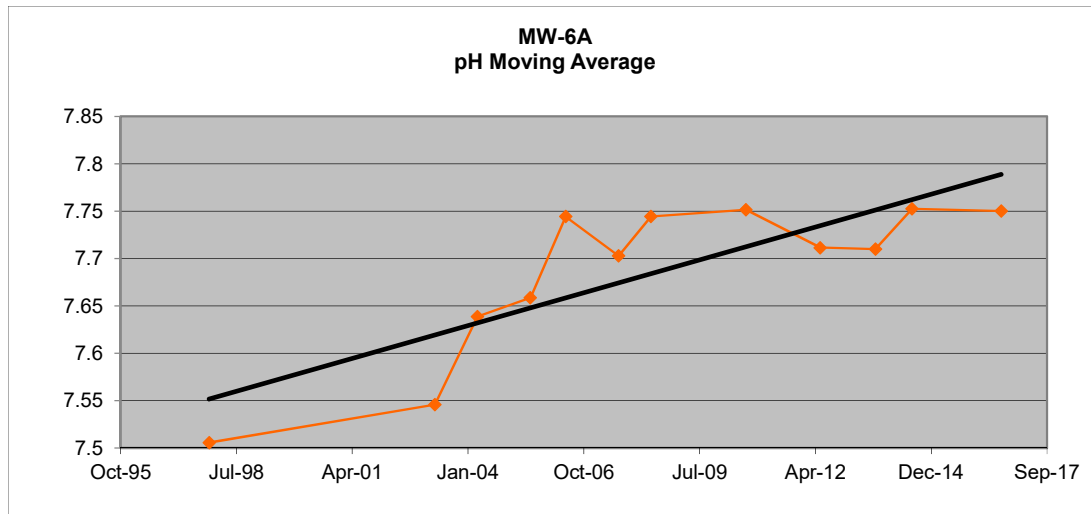
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**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     | 7.60 |                       |                                  |          |               |               |
| 2         | Jun-96     | 7.57 |                       |                                  |          |               |               |
| 3         | Oct-96     | 7.51 |                       |                                  |          |               |               |
| 4         | Dec-96     | 7.21 |                       |                                  |          |               |               |
| 5         | Mar-97     | 7.48 |                       |                                  |          |               |               |
| 6         | Jun-97     | NA   |                       |                                  |          |               |               |
| 7         | Sep-97     | 7.44 |                       |                                  |          |               |               |
| 8         | Dec-97     | 7.73 | 7.506                 | 0.161                            | 0.483    | 7.989         | 7.022         |
| 9         | Apr-03     | 7.88 | 7.546                 | 0.214                            | 0.643    | 8.189         | 6.903         |
| 10        | Apr-04     | 8.22 | 7.639                 | 0.334                            | 1.002    | 8.641         | 6.636         |
| 11        | Jul-05     | 7.65 | 7.659                 | 0.329                            | 0.988    | 8.646         | 6.671         |
| 12        | May-06     | 7.81 | 7.744                 | 0.265                            | 0.794    | 8.539         | 6.950         |
| 13        | Aug-07     | 7.19 | 7.703                 | 0.328                            | 0.984    | 8.687         | 6.719         |
| 14        | May-08     | 7.73 | 7.744                 | 0.304                            | 0.912    | 8.656         | 6.833         |
| 15        | Aug-10     | 7.78 | 7.751                 | 0.285                            | 0.854    | 8.605         | 6.898         |
| 16        | May-12     | 7.6  | 7.711                 | 0.289                            | 0.868    | 8.580         | 6.843         |
| 17        | Sep-13     | 7.73 | 7.710                 | 0.077                            | 0.231    | 7.941         | 7.479         |
| 18        | Jul-14     | 7.9  | 7.753                 | 0.124                            | 0.373    | 8.125         | 7.380         |
| 19        | Aug-16     | 7.77 | 7.750                 | 0.124                            | 0.371    | 8.121         | 7.379         |

**Background Mean Concentration (BMC)= 7.66**  
**3 S.D.= 0.737**  
**BMC + 3 S.D.= 8.39**  
**BMC - 3 S.D.= 6.92**

\* = 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.



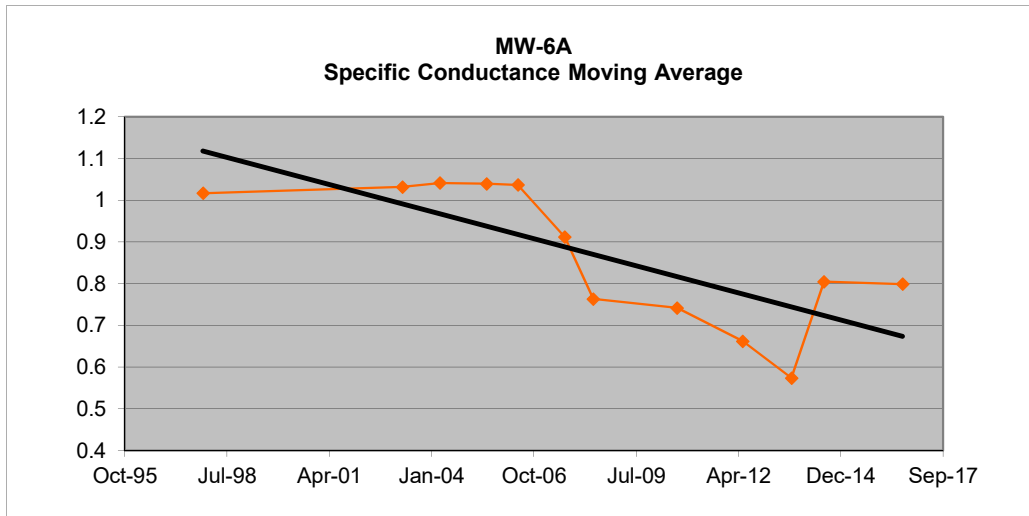
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Specific Conductance**

| Event No. | Event Date | Specific Conductance (Umhos/cm) | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|---------------------------------|-----------------------|---------------------------|----------|---------------|
| 1         | Mar-96     | 1.009                           |                       |                           |          |               |
| 2         | Jun-96     | 0.963                           |                       |                           |          |               |
| 3         | Oct-96     | 0.994                           |                       |                           |          |               |
| 4         | Dec-96     | 1.008                           |                       |                           |          |               |
| 5         | Mar-97     | 0.975                           |                       |                           |          |               |
| 6         | Jun-97     | NA                              |                       |                           |          |               |
| 7         | Sep-97     | 1.076                           |                       |                           |          |               |
| 8         | Dec-97     | 1.093                           | 1.017                 | 0.049                     | 0.148    | 1.165         |
| 9         | Apr-03     | 1.114                           | 1.032                 | 0.061                     | 0.183    | 1.215         |
| 10        | Apr-04     | 1.029                           | 1.041                 | 0.053                     | 0.160    | 1.201         |
| 11        | Jul-05     | 0.980                           | 1.039                 | 0.056                     | 0.167    | 1.206         |
| 12        | May-06     | 0.989                           | 1.037                 | 0.058                     | 0.173    | 1.210         |
| 13        | Aug-07     | 0.100                           | 0.912                 | 0.361                     | 1.084    | 1.996         |
| 14        | May-08     | 0.037                           | 0.763                 | 0.456                     | 1.367    | 2.130         |
| 15        | Aug-10     | 0.943                           | 0.742                 | 0.447                     | 1.340    | 2.081         |
| 16        | May-12     | 0.555                           | 0.662                 | 0.434                     | 1.302    | 1.964         |
| 17        | Sep-13     | 0.760                           | 0.574                 | 0.391                     | 1.174    | 1.748         |
| 18        | Jul-14     | 0.960                           | 0.805                 | 0.189                     | 0.568    | 1.373         |
| 19        | Aug-16     | 0.920                           | 0.799                 | 0.184                     | 0.552    | 1.351         |

**Background Mean Concentration (BMC)= 0.861**  
**3 S.D.= 0.946**  
**BMC + 3 S.D.= 1.807**

\* = 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 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

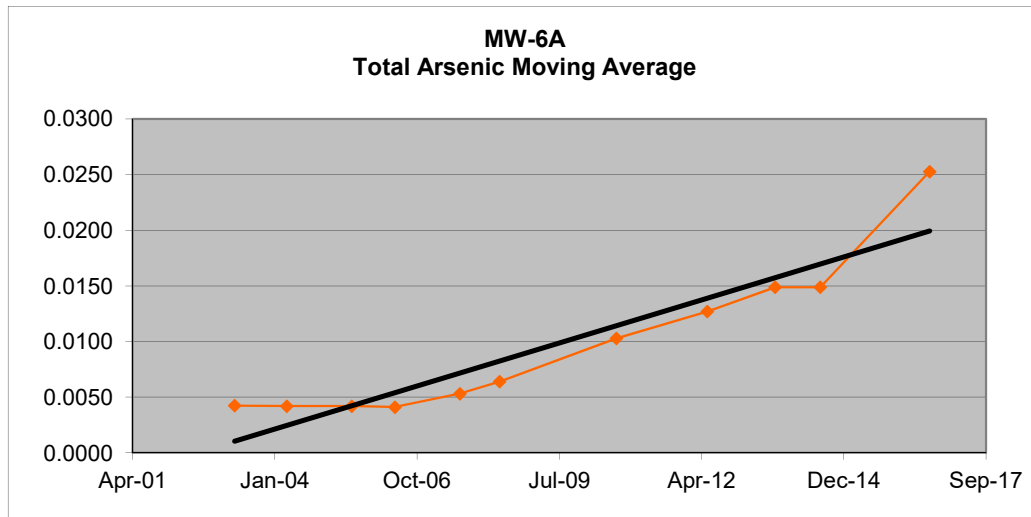
**Total Arsenic**

| Event No. | Event Date | Arsenic, T (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|-------------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | May-01     | 0.0040            | * |                       |                           |          |               |
| 2         | Oct-01     | 0.0044            | * |                       |                           |          |               |
| 3         | Apr-02     | 0.0040            | * |                       |                           |          |               |
| 4         | Apr-03     | 0.0046            | * | 0.0043                | 0.0003                    | 0.0009   | 0.0052        |
| 5         | Apr-04     | 0.0040            | * | 0.0042                | 0.0003                    | 0.0008   | 0.0050        |
| 6         | Jul-05     | 0.0040            | * | 0.0042                | 0.0003                    | 0.0008   | 0.0050        |
| 7         | May-06     | 0.0040            | * | 0.0041                | 0.0003                    | 0.0008   | 0.0049        |
| 8         | Aug-07     | 0.0100            | * | 0.0053                | 0.0026                    | 0.0079   | 0.0132        |
| 9         | May-08     | 0.0100            | * | 0.0064                | 0.0033                    | 0.0099   | 0.0163        |
| 10        | Aug-10     | 0.0234            |   | 0.0103                | 0.0079                    | 0.0238   | 0.0341        |
| 11        | May-12     | 0.0161            |   | 0.0127                | 0.0074                    | 0.0221   | 0.0348        |
| 12        | Sep-13     | 0.010             | * | 0.0149                | 0.0064                    | 0.0191   | 0.0340        |
| 13        | Jul-14     | 0.010             | * | 0.0149                | 0.0064                    | 0.0191   | 0.0340        |
| 14        | Aug-16     | 0.065             |   | 0.0253                | 0.0266                    | 0.0799   | 0.1052        |

**Background Mean Concentration (BMC)= 0.01239**  
**3 S.D.= 0.0485**  
**BMC + 3 S.D.= 0.0609**

\* = 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 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

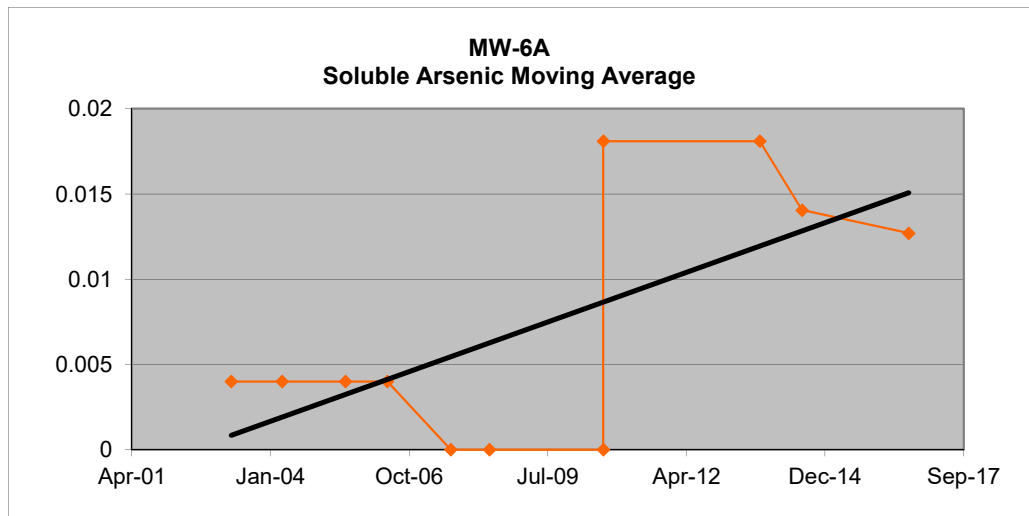
**Soluble Arsenic**

| Event No. | Event Date | Arsenic, S (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|-------------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | May-01     | 0.0040            | * |                       |                           |          |               |
| 2         | Oct-01     | NA                |   |                       |                           |          |               |
| 3         | Apr-02     | NA                |   |                       |                           |          |               |
| 4         | Apr-03     | NA                |   | 0.0040                | 0.0000                    | 0.0000   | 0.0040        |
| 5         | Apr-04     | NA                |   | 0.0040                | 0.0000                    | 0.0000   | 0.0040        |
| 6         | Jul-05     | NA                |   | 0.0040                | 0.0000                    | 0.0000   | 0.0040        |
| 7         | May-06     | NA                |   | 0.0040                | 0.0000                    | 0.0000   | 0.0040        |
| 8         | Aug-07     | NA                |   | 0.0000                | 0.0000                    | 0.0000   | 0.0000        |
| 9         | May-08     | NA                |   | 0.0000                | 0.0000                    | 0.0000   | 0.0000        |
| 10        | Aug-10     | NA                |   | 0.0000                | 0.0000                    | 0.0000   | 0.0000        |
| 10        | Aug-10     | 0.0181            |   | 0.0181                | 0.0000                    | 0.0000   | 0.0181        |
| 11        | Sep-13     | NA                |   | 0.0181                | 0.0000                    | 0.0000   | 0.0181        |
| 12        | Jul-14     | 0.0100            | * | 0.0141                | 0.0041                    | 0.0122   | 0.0262        |
| 13        | Aug-16     | 0.0100            | * | 0.0127                | 0.0038                    | 0.0115   | 0.0242        |

**Background Mean Concentration (BMC)= 0.0105**  
**3 S.D.= 0.0174**  
**BMC + 3 S.D.= 0.0279**

\* = 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.



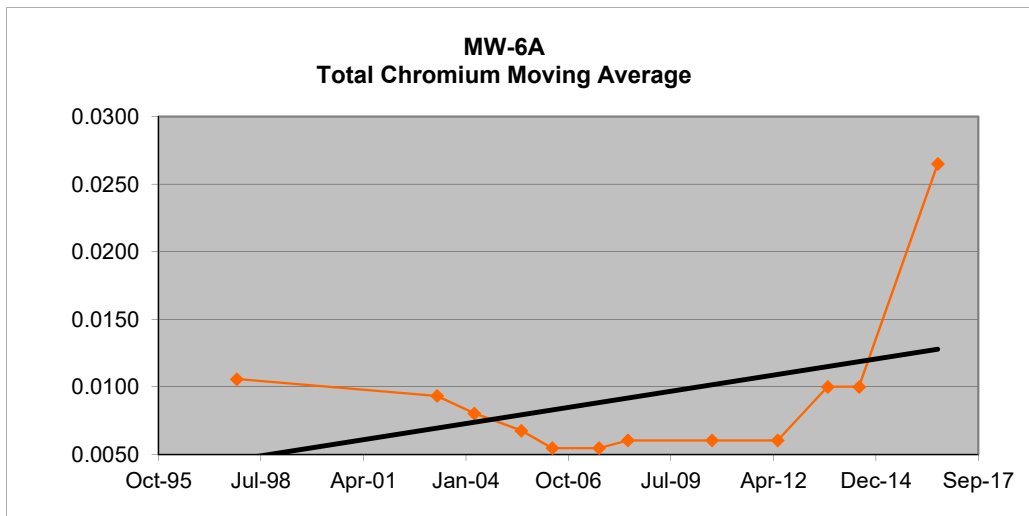
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Total Chromium**

| Event No. | Event Date | Chromium, T (mg/L) | * | Moving Average (M.A.) | 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     | NA                 |   |                       |                           |          |               |
| 7         | Sep-97     | 0.0100             | * |                       |                           |          |               |
| 8         | Dec-97     | 0.0100             | * | 0.0106                | 0.0005                    | 0.0016   | 0.0122        |
| 9         | Apr-03     | 0.0023             | * | 0.0093                | 0.0031                    | 0.0094   | 0.0187        |
| 10        | Apr-04     | 0.0020             | * | 0.0080                | 0.0041                    | 0.0122   | 0.0202        |
| 11        | Jul-05     | 0.0020             | * | 0.0068                | 0.0044                    | 0.0131   | 0.0199        |
| 12        | May-06     | 0.0020             | * | 0.0055                | 0.0042                    | 0.0127   | 0.0182        |
| 13        | Aug-07     | 0.0100             | * | 0.0055                | 0.0042                    | 0.0127   | 0.0182        |
| 14        | May-08     | 0.0100             | * | 0.0060                | 0.0042                    | 0.0127   | 0.0187        |
| 15        | Aug-10     | 0.0100             | * | 0.0060                | 0.0042                    | 0.0127   | 0.0187        |
| 16        | May-12     | 0.0100             | * | 0.0060                | 0.0042                    | 0.0127   | 0.0187        |
| 17        | Sep-13     | 0.0100             | * | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 18        | Jul-14     | 0.0100             | * | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 19        | Aug-16     | 0.0760             |   | 0.0265                | 0.0330                    | 0.0990   | 0.1255        |

**Background Mean Concentration (BMC)= 0.01213**  
**3 S.D.= 0.0490**  
**BMC + 3 S.D.= 0.0611**

\* = 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.



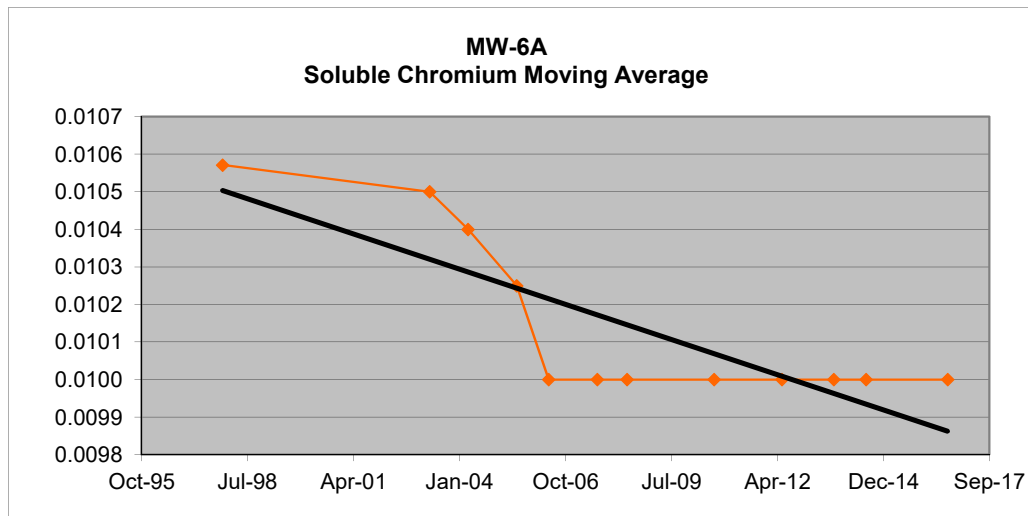
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Soluble Chromium**

| Event No. | Event Date | Chromium, S (mg/L) | * | Moving Average (M.A.) | 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     | NA                 |   |                       |                           |          |               |
| 7         | Sep-97     | 0.0100             | * |                       |                           |          |               |
| 8         | Dec-97     | 0.0100             | * | 0.0106                | 0.0005                    | 0.0016   | 0.0122        |
| 9         | Apr-03     | NA                 |   | 0.0105                | 0.0005                    | 0.0016   | 0.0121        |
| 10        | Apr-04     | NA                 |   | 0.0104                | 0.0005                    | 0.0016   | 0.0120        |
| 11        | Jul-05     | NA                 |   | 0.0103                | 0.0005                    | 0.0015   | 0.0118        |
| 12        | May-06     | NA                 |   | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 13        | Aug-07     | NA                 |   | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 14        | May-08     | NA                 |   | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 15        | Aug-10     | NA                 |   | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 16        | May-12     | 0.0100             | * | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 17        | Sep-13     | NA                 | * | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 18        | Jul-14     | 0.0100             | * | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |
| 19        | Aug-16     | 0.0100             | * | 0.0100                | 0.0000                    | 0.0000   | 0.0100        |

**Background Mean Concentration (BMC)= 0.0104**  
**3 S.D.= 0.00155**  
**BMC + 3 S.D.= 0.0119**

\* = 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 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

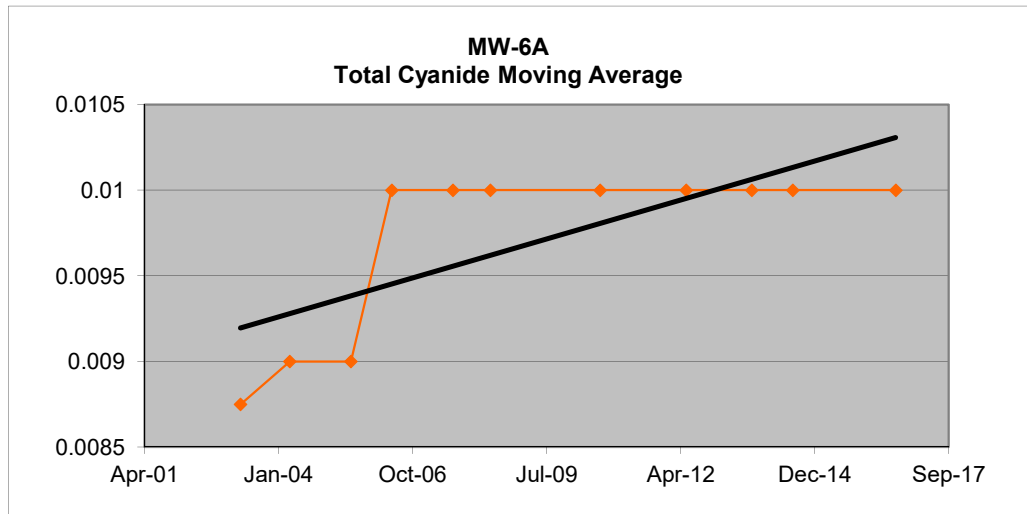
**Total Cyanide**

| Event No. | Event Date | Cyanide, T (mg/L) | * | Moving Average (M.A.) | 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                 | 0.002                     | 0.007    | 0.016         |
| 6         | Jul-05     | 0.010             | * | 0.009                 | 0.002                     | 0.007    | 0.016         |
| 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-16     | 0.010             | * | 0.010                 | 0.000                     | 0.000    | 0.010         |

**Background Mean Concentration (BMC)= 0.00964**  
**3 S.D.= 0.00401**  
**BMC + 3 S.D.= 0.0137**

\* = 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.



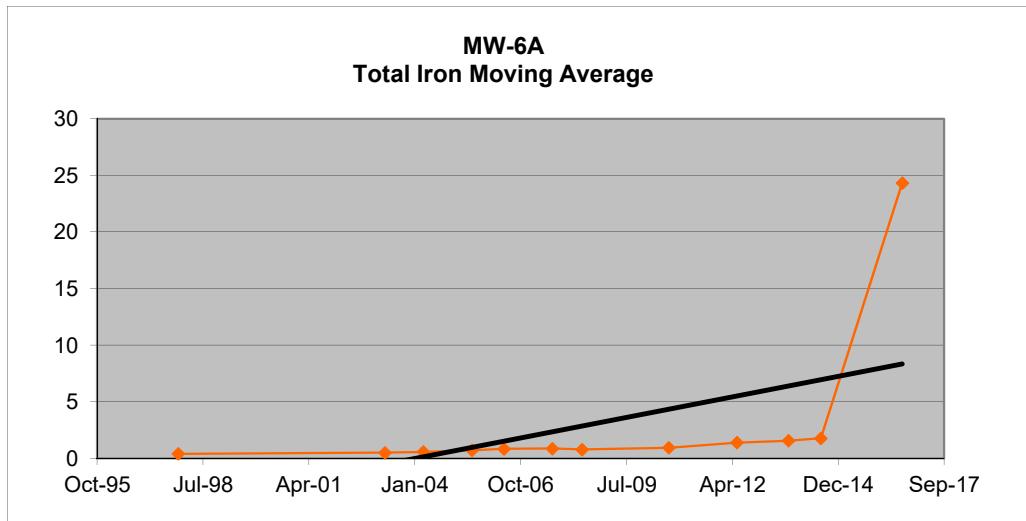
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Total Iron**

| Event No. | Event Date | Iron, T (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|----------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | Mar-96     | 0.561          |   |                       |                           |          |               |
| 2         | Jun-96     | 0.086          |   |                       |                           |          |               |
| 3         | Oct-96     | 0.342          |   |                       |                           |          |               |
| 4         | Dec-96     | 0.208          |   |                       |                           |          |               |
| 5         | Mar-97     | 0.780          |   |                       |                           |          |               |
| 6         | Jun-97     | NA             |   |                       |                           |          |               |
| 7         | Sep-97     | 0.228          |   |                       |                           |          |               |
| 8         | Dec-97     | 0.584          |   | 0.398                 | 0.249                     | 0.748    | 1.146         |
| 9         | Apr-03     | 1.300          |   | 0.504                 | 0.424                     | 1.273    | 1.777         |
| 10        | Apr-04     | 0.507          |   | 0.564                 | 0.383                     | 1.150    | 1.714         |
| 11        | Jul-05     | 1.400          |   | 0.715                 | 0.478                     | 1.434    | 2.149         |
| 12        | May-06     | 1.100          |   | 0.843                 | 0.437                     | 1.312    | 2.155         |
| 13        | Aug-07     | 0.916          |   | 0.862                 | 0.437                     | 1.311    | 2.173         |
| 14        | May-08     | 0.260          |   | 0.787                 | 0.457                     | 1.372    | 2.159         |
| 15        | Aug-10     | 1.440          |   | 0.938                 | 0.446                     | 1.339    | 2.277         |
| 16        | May-12     | 4.120          |   | 1.392                 | 1.185                     | 3.555    | 4.947         |
| 17        | Sep-13     | 0.420          |   | 1.560                 | 1.785                     | 5.355    | 6.915         |
| 18        | Jul-14     | 1.130          |   | 1.778                 | 1.619                     | 4.857    | 6.634         |
| 19        | Aug-16     | 91.600         |   | 24.318                | 44.884                    | 134.651  | 158.968       |

**Background Mean Concentration (BMC)= 5.943**  
**3 S.D.= 64.189**  
**BMC + 3 S.D.= 70.133**

\* = 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.



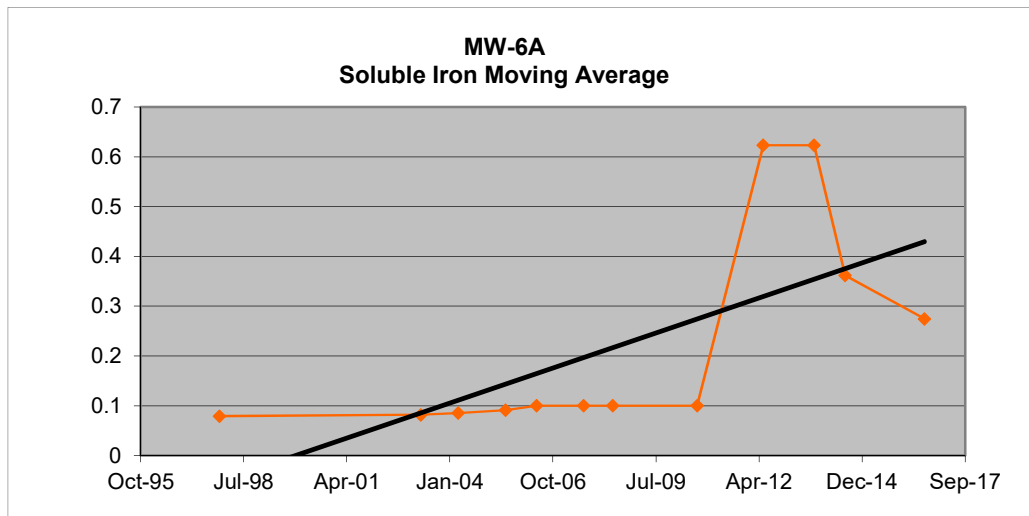
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Soluble Iron**

| Event No. | Event Date | Iron, S (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|----------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | Mar-96     | 0.063          | * |                       |                           |          |               |
| 2         | Jun-96     | 0.063          | * |                       |                           |          |               |
| 3         | Oct-96     | 0.063          | * |                       |                           |          |               |
| 4         | Dec-96     | 0.063          | * |                       |                           |          |               |
| 5         | Mar-97     | 0.100          | * |                       |                           |          |               |
| 6         | Jun-97     | NA             |   |                       |                           |          |               |
| 7         | Sep-97     | 0.100          | * |                       |                           |          |               |
| 8         | Dec-97     | 0.100          | * | 0.079                 | 0.020                     | 0.059    | 0.138         |
| 9         | Apr-03     | NA             |   | 0.082                 | 0.020                     | 0.061    | 0.142         |
| 10        | Apr-04     | NA             |   | 0.085                 | 0.020                     | 0.061    | 0.146         |
| 11        | Jul-05     | NA             |   | 0.091                 | 0.019                     | 0.056    | 0.146         |
| 12        | May-06     | NA             |   | 0.100                 | 0.000                     | 0.000    | 0.100         |
| 13        | Aug-07     | NA             |   | 0.100                 | 0.000                     | 0.000    | 0.100         |
| 14        | May-08     | NA             |   | 0.100                 | 0.000                     | 0.000    | 0.100         |
| 15        | Aug-10     | NA             |   | 0.100                 | 0.000                     | 0.000    | 0.100         |
| 16        | May-12     | 0.623          |   | 0.623                 | 0.000                     | 0.000    | 0.623         |
| 17        | Sep-13     | NA             |   | 0.623                 | 0.000                     | 0.000    | 0.623         |
| 18        | Jul-14     | 0.1            | * | 0.362                 | 0.370                     | 1.109    | 1.471         |
| 19        | Aug-16     | 0.1            | * | 0.274                 | 0.302                     | 0.906    | 1.180         |

**Background Mean Concentration (BMC)= 0.138**  
**3 S.D.= 0.515**  
**BMC + 3 S.D.= 0.652**

\* = 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.



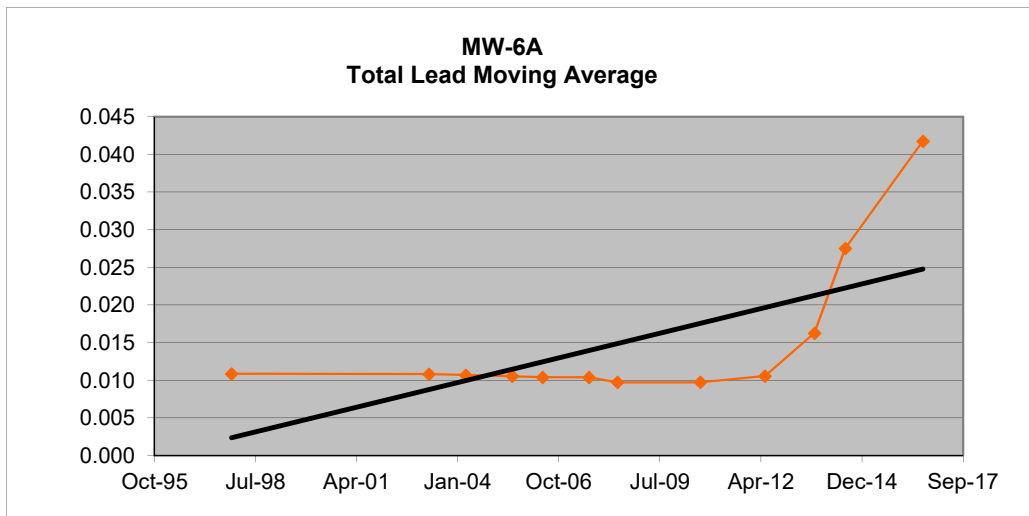
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Total Lead**

| Event No. | Event Date | Lead, T (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|----------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | Mar-96     | 0.0040         | * |                       |                           |          |               |
| 2         | Jun-96     | 0.0040         | * |                       |                           |          |               |
| 3         | Oct-96     | 0.0040         | * |                       |                           |          |               |
| 4         | Dec-96     | 0.0040         | * |                       |                           |          |               |
| 5         | Mar-97     | 0.0500         | * |                       |                           |          |               |
| 6         | Jun-97     | NA             |   |                       |                           |          |               |
| 7         | Sep-97     | 0.0050         | * |                       |                           |          |               |
| 8         | Dec-97     | 0.0050         | * | 0.0109                | 0.0173                    | 0.0518   | 0.0627        |
| 9         | Apr-03     | 0.0038         | * | 0.0108                | 0.0173                    | 0.0518   | 0.0627        |
| 10        | Apr-04     | 0.0030         | * | 0.0107                | 0.0174                    | 0.0521   | 0.0627        |
| 11        | Jul-05     | 0.0030         | * | 0.0105                | 0.0174                    | 0.0523   | 0.0628        |
| 12        | May-06     | 0.0030         | * | 0.0104                | 0.0175                    | 0.0525   | 0.0629        |
| 13        | Aug-07     | 0.0500         | * | 0.0104                | 0.0175                    | 0.0525   | 0.0629        |
| 14        | May-08     | 0.0050         | * | 0.0097                | 0.0163                    | 0.0489   | 0.0586        |
| 15        | Aug-10     | 0.0050         | * | 0.0097                | 0.0163                    | 0.0489   | 0.0586        |
| 16        | May-12     | 0.0050         | * | 0.0106                | 0.0163                    | 0.0489   | 0.0595        |
| 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-16     | 0.0620         |   | 0.0418                | 0.0251                    | 0.0754   | 0.1172        |

**Background Mean Concentration (BMC)= 0.0175**  
**3 S.D.= 0.0672**  
**BMC + 3 S.D.= 0.0848**

\* = 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.



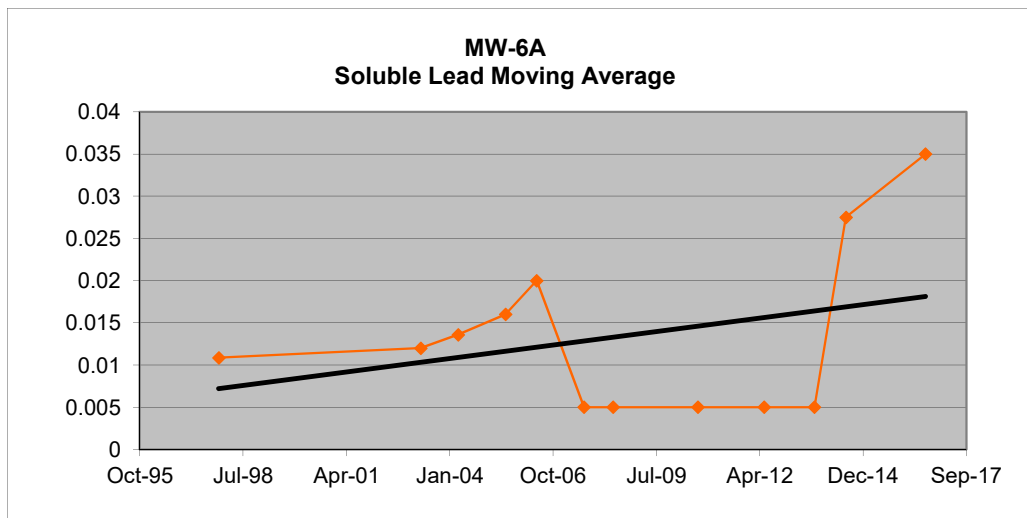
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Soluble Lead**

| Event No. | Event Date | Lead, S (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|----------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | Mar-96     | 0.0040         | * |                       |                           |          |               |
| 2         | Jun-96     | 0.0040         | * |                       |                           |          |               |
| 3         | Oct-96     | 0.0040         | * |                       |                           |          |               |
| 4         | Dec-96     | 0.0040         | * |                       |                           |          |               |
| 5         | Mar-97     | 0.0500         | * |                       |                           |          |               |
| 6         | Jun-97     | NA             |   |                       |                           |          |               |
| 7         | Sep-97     | 0.0050         | * |                       |                           |          |               |
| 8         | Dec-97     | 0.0050         | * | 0.0109                | 0.0173                    | 0.0518   | 0.0627        |
| 9         | Apr-03     | NA             |   | 0.0120                | 0.0186                    | 0.0559   | 0.0679        |
| 10        | Apr-04     | NA             |   | 0.0136                | 0.0204                    | 0.0611   | 0.0747        |
| 11        | Jul-05     | NA             |   | 0.0160                | 0.0227                    | 0.0680   | 0.0840        |
| 12        | May-06     | NA             |   | 0.0200                | 0.0260                    | 0.0779   | 0.0979        |
| 13        | Aug-07     | NA             |   | 0.0050                | 0.0000                    | 0.0000   | 0.0050        |
| 14        | May-08     | NA             |   | 0.0050                | 0.0000                    | 0.0000   | 0.0050        |
| 15        | Aug-10     | NA             |   | 0.0050                | 0.0000                    | 0.0000   | 0.0050        |
| 16        | May-12     | 0.0050         | * | 0.0050                | 0.0000                    | 0.0000   | 0.0050        |
| 17        | Sep-13     | NA             | * | 0.0050                | 0.0000                    | 0.0000   | 0.0050        |
| 18        | Jul-14     | 0.0500         | * | 0.0275                | 0.0318                    | 0.0955   | 0.1230        |
| 19        | Aug-16     | 0.0500         | * | 0.0350                | 0.0260                    | 0.0779   | 0.1129        |

**Background Mean Concentration (BMC)= 0.0181**  
**3 S.D.= 0.0661**  
**BMC + 3 S.D.= 0.0842**

\* = 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 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

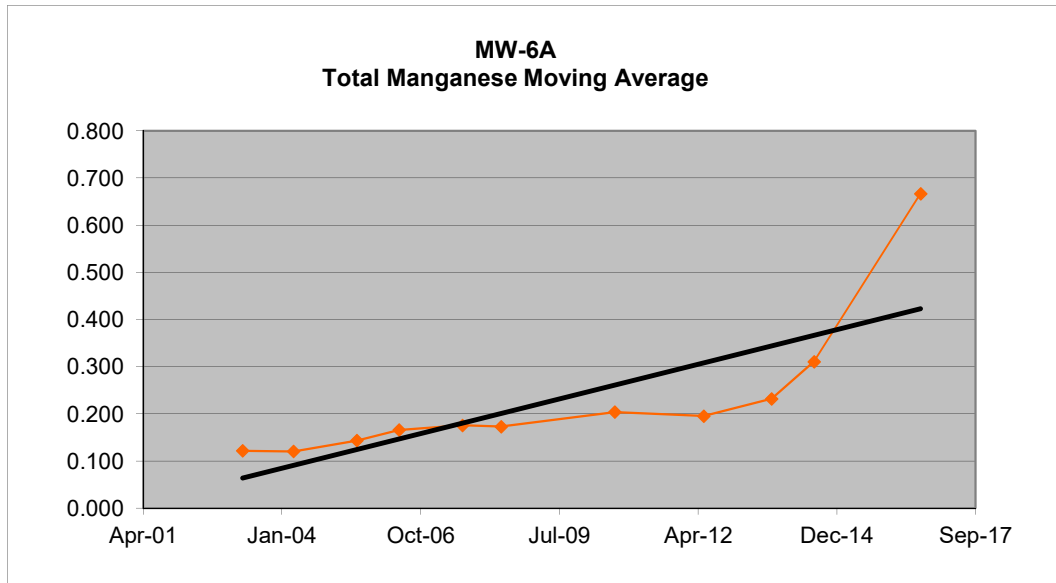
**Total Manganese**

| Event No. | Event Date | Manganese, T (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|---------------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | May-01     | 0.049               |   |                       |                           |          |               |
| 2         | Oct-01     | 0.057               |   |                       |                           |          |               |
| 3         | Apr-02     | 0.160               |   |                       |                           |          |               |
| 4         | Apr-03     | 0.220               |   | 0.122                 | 0.083                     | 0.249    | 0.370         |
| 5         | Apr-04     | 0.115               |   | 0.120                 | 0.069                     | 0.207    | 0.327         |
| 6         | Jul-05     | 0.260               |   | 0.144                 | 0.064                     | 0.192    | 0.336         |
| 7         | May-06     | 0.300               |   | 0.166                 | 0.080                     | 0.239    | 0.404         |
| 8         | Aug-07     | 0.117               |   | 0.176                 | 0.096                     | 0.288    | 0.464         |
| 9         | May-08     | 0.039               |   | 0.173                 | 0.122                     | 0.366    | 0.539         |
| 10        | Aug-10     | 0.375               |   | 0.204                 | 0.156                     | 0.469    | 0.672         |
| 11        | May-12     | 0.160               |   | 0.195                 | 0.144                     | 0.432    | 0.627         |
| 12        | Sep-13     | 0.354               |   | 0.232                 | 0.161                     | 0.483    | 0.715         |
| 13        | Jul-14     | 0.353               |   | 0.311                 | 0.101                     | 0.303    | 0.613         |
| 14        | Aug-16     | 1.800               |   | 0.667                 | 0.761                     | 2.283    | 2.950         |

**Background Mean Concentration (BMC)= 0.311**  
**3 S.D.= 1.332**  
**BMC + 3 S.D.= 1.644**

\* = 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.



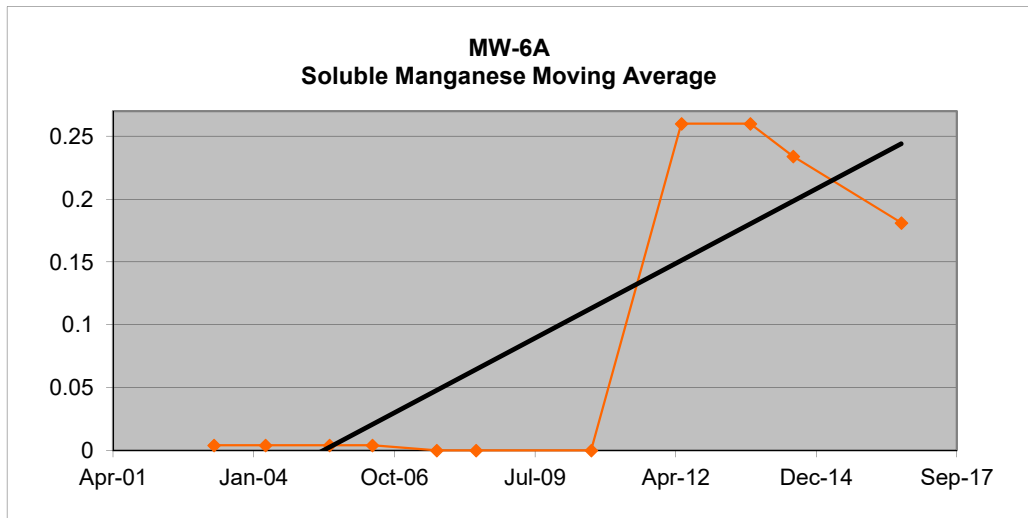
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Soluble Manganese**

| Event No. | Event Date | Manganese, S (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|---------------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | May-01     | 0.0041              |   |                       |                           |          |               |
| 2         | Oct-01     | NA                  |   |                       |                           |          |               |
| 3         | Apr-02     | NA                  |   |                       |                           |          |               |
| 4         | Apr-03     | NA                  |   | 0.0041                | 0.0000                    | 0.0000   | 0.0041        |
| 5         | Apr-04     | NA                  |   | 0.0041                | 0.0000                    | 0.0000   | 0.0041        |
| 6         | Jul-05     | NA                  |   | 0.0041                | 0.0000                    | 0.0000   | 0.0041        |
| 7         | May-06     | NA                  |   | 0.0041                | 0.0000                    | 0.0000   | 0.0041        |
| 8         | Aug-07     | NA                  |   | 0.0000                | 0.0000                    | 0.0000   | 0.0000        |
| 9         | May-08     | NA                  |   | 0.0000                | 0.0000                    | 0.0000   | 0.0000        |
| 10        | Aug-10     | NA                  |   | 0.0000                | 0.0000                    | 0.0000   | 0.0000        |
| 11        | May-12     | 0.260               |   | 0.2600                | 0.0000                    | 0.0000   | 0.2600        |
| 12        | Sep-13     | NA                  |   | 0.2600                | 0.0000                    | 0.0000   | 0.2600        |
| 13        | Jul-14     | 0.208               |   | 0.2340                | 0.0260                    | 0.0780   | 0.3120        |
| 14        | Aug-16     | 0.075               |   | 0.1810                | 0.0954                    | 0.2862   | 0.4672        |

**Background Mean Concentration (BMC)= 0.137**  
**3 S.D.= 0.354**  
**BMC + 3 S.D.= 0.490**

\* = 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.



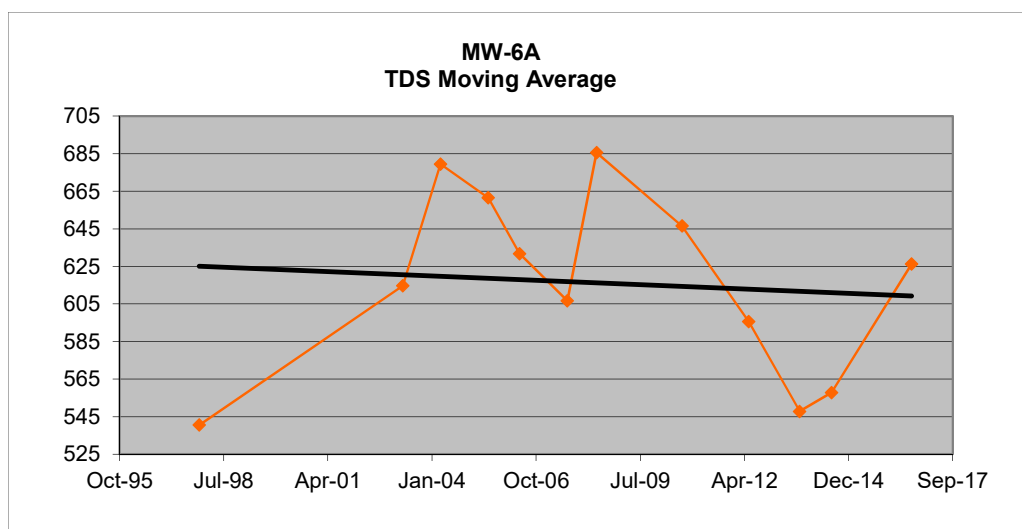
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Total Dissolved Solids**

| Event No. | Event Date | TDS (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | Mar-96     | 136        |   |                       |                           |          |               |
| 2         | Jun-96     | 153        |   |                       |                           |          |               |
| 3         | Oct-96     | 806        |   |                       |                           |          |               |
| 4         | Dec-96     | 930        |   |                       |                           |          |               |
| 5         | Mar-97     | 764        |   |                       |                           |          |               |
| 6         | Jun-97     | 2          | * |                       |                           |          |               |
| 7         | Sep-97     | 764        |   |                       |                           |          |               |
| 8         | Dec-97     | 769        |   | 541                   | 374                       | 1121     | 1662          |
| 9         | Apr-03     | 729        |   | 615                   | 339                       | 1018     | 1633          |
| 10        | Apr-04     | 672        |   | 680                   | 283                       | 850      | 1530          |
| 11        | Jul-05     | 662        |   | 662                   | 279                       | 837      | 1498          |
| 12        | May-06     | 691        |   | 632                   | 258                       | 774      | 1406          |
| 13        | Aug-07     | 564        |   | 607                   | 253                       | 759      | 1366          |
| 14        | May-08     | 633        |   | 686                   | 69                        | 207      | 892           |
| 15        | Aug-10     | 452        |   | 647                   | 100                       | 299      | 945           |
| 15        | May-12     | 361        |   | 596                   | 128                       | 385      | 980           |
| 16        | Sep-13     | 745        |   | 548                   | 173                       | 520      | 1068          |
| 17        | Jul-14     | 673        |   | 558                   | 181                       | 543      | 1101          |
| 18        | Aug-16     | 726        |   | 626                   | 179                       | 538      | 1165          |

**Background Mean Concentration (BMC)= 591**  
**3 S.D.= 762**  
**BMC + 3 S.D.= 1354**

\* = 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.



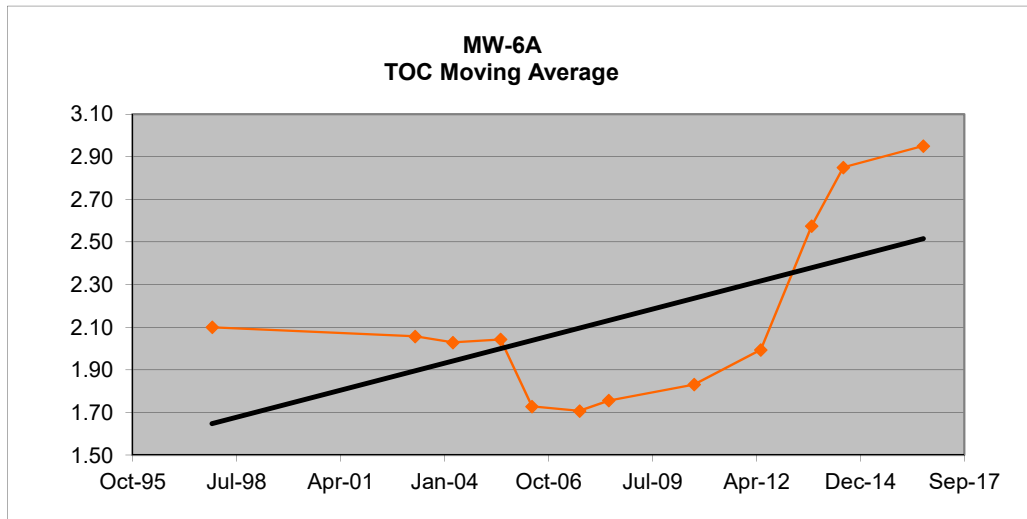
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Total Organic Carbon**

| Event No. | Event Date | TOC (mg/L) | * | Moving Average (M.A.) | Standard Deviation (S.D.) | S.D. x 3 | M.A. + 3 S.D. |
|-----------|------------|------------|---|-----------------------|---------------------------|----------|---------------|
| 1         | Mar-96     | 1.30       |   |                       |                           |          |               |
| 2         | Jun-96     | 1.60       |   |                       |                           |          |               |
| 3         | Oct-96     | 2.00       |   |                       |                           |          |               |
| 4         | Dec-96     | 3.60       |   |                       |                           |          |               |
| 5         | Mar-97     | 2.00       |   |                       |                           |          |               |
| 6         | Jun-97     | NA         |   |                       |                           |          |               |
| 7         | Sep-97     | 2.40       |   |                       |                           |          |               |
| 8         | Dec-97     | 1.80       |   | 2.10                  | 0.75                      | 2.24     | 4.34          |
| 9         | Apr-03     | 1.00       | * | 2.06                  | 0.81                      | 2.42     | 4.47          |
| 10        | Apr-04     | 1.40       |   | 2.03                  | 0.83                      | 2.48     | 4.51          |
| 11        | Jul-05     | 2.10       |   | 2.04                  | 0.83                      | 2.49     | 4.53          |
| 12        | May-06     | 1.40       |   | 1.73                  | 0.49                      | 1.46     | 3.19          |
| 13        | Aug-07     | 1.85       |   | 1.71                  | 0.47                      | 1.42     | 3.13          |
| 14        | May-08     | 2.10       |   | 1.76                  | 0.46                      | 1.38     | 3.14          |
| 15        | Aug-10     | 3.00       |   | 1.83                  | 0.61                      | 1.82     | 3.65          |
| 16        | May-12     | 3.10       |   | 1.99                  | 0.75                      | 2.26     | 4.25          |
| 17        | Sep-13     | 2.10       |   | 2.58                  | 0.55                      | 1.65     | 4.23          |
| 18        | Jul-14     | 3.20       |   | 2.85                  | 0.51                      | 1.52     | 4.37          |
| 19        | Aug-16     | 3.40       |   | 2.95                  | 0.58                      | 1.74     | 4.69          |

**Background Mean Concentration (BMC)= 2.19**  
**3 S.D.= 2.32**  
**BMC + 3 S.D.= 4.51**

\* = 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.



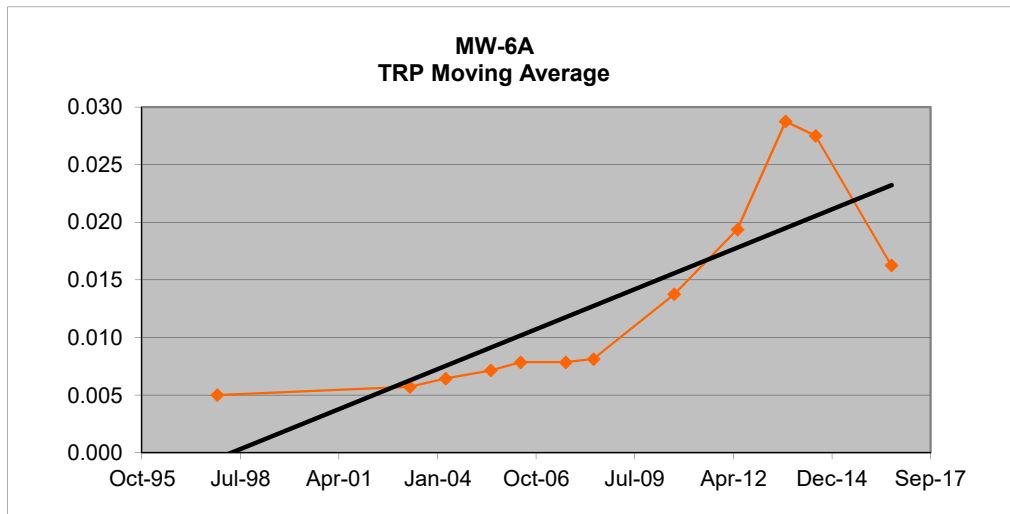
**Appendix E**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**  
**Background Deep Overburden Well MW-6A**

**Total Recoverable Phenolics**

| Event No. | Event Date | TRP (mg/L) | * | Moving Average (M.A.) | 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     | NA         |   |                       |                           |          |               |
| 7         | Sep-97     | 0.005      | * |                       |                           |          |               |
| 8         | Dec-97     | 0.005      | * | 0.005                 | 0.000                     | 0.000    | 0.005         |
| 9         | Apr-03     | 0.010      | * | 0.006                 | 0.002                     | 0.006    | 0.011         |
| 10        | Apr-04     | 0.010      | * | 0.006                 | 0.002                     | 0.007    | 0.014         |
| 11        | Jul-05     | 0.010      | * | 0.007                 | 0.003                     | 0.008    | 0.015         |
| 12        | May-06     | 0.010      | * | 0.008                 | 0.003                     | 0.008    | 0.016         |
| 13        | Aug-07     | 0.005      | * | 0.008                 | 0.003                     | 0.008    | 0.016         |
| 14        | May-08     | 0.010      | * | 0.008                 | 0.003                     | 0.008    | 0.016         |
| 15        | Aug-10     | 0.050      | * | 0.014                 | 0.015                     | 0.044    | 0.058         |
| 16        | May-12     | 0.050      | * | 0.019                 | 0.019                     | 0.057    | 0.076         |
| 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-16     | 0.005      | * | 0.016                 | 0.023                     | 0.068    | 0.084         |

**Background Mean Concentration (BMC)= 0.0114**  
**3 S.D.= 0.0427**  
**BMC + 3 S.D.= 0.0541**

\* = 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 2016 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 <sup>(3)</sup> | -     | -              | -     | -              | -     | -              | -              | -              | -          | -              | -               | -              |
| 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           | -              |

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

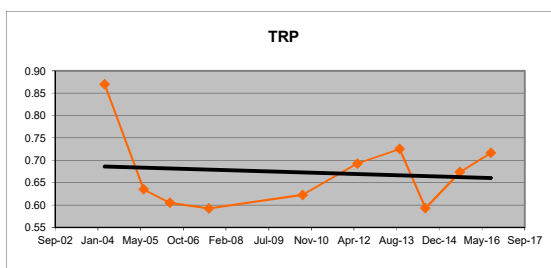
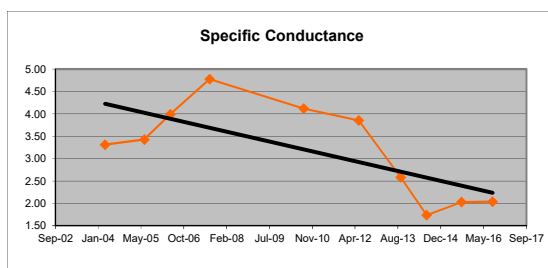
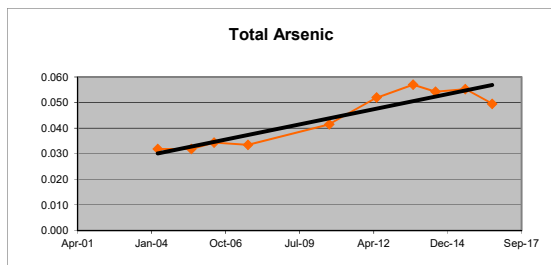
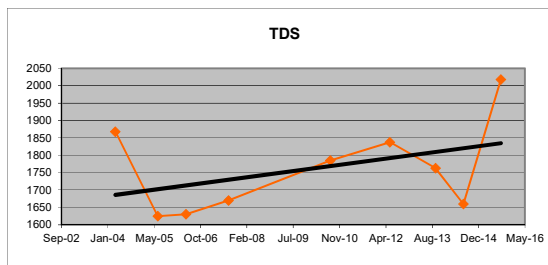
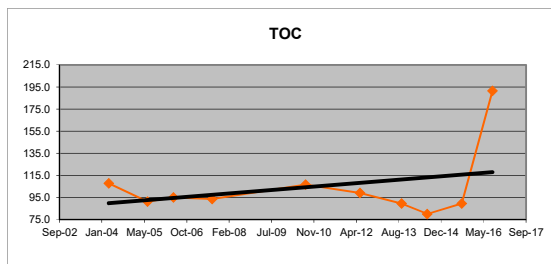
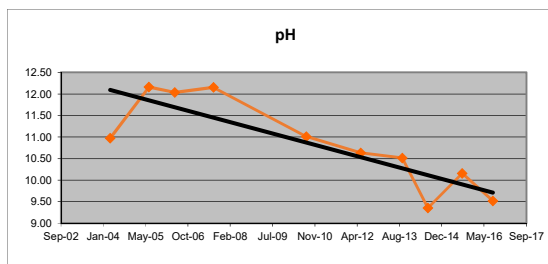
### August 2016 Annual Sampling Event

#### 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           |

**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.



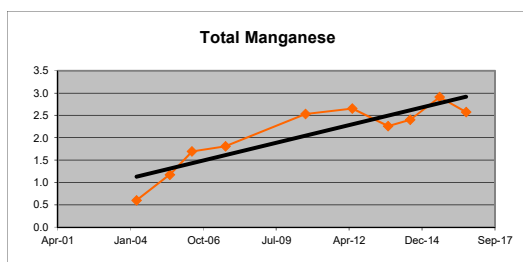
# **Appendix F** **Marilla Street Landfill** **August 2016 Annual Sampling Event**

## **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 | Soluble Arsenic | 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      | -              | 0.041           | -              |
| Jun-14     | 0.0130        | 0.0150         | 1.610           | 2.405          | 0.133          | -              | 94.4       | -              | 0.582      | -              | 0.035           | -              |
| Aug-15     | 0.0220        | 0.0150         | 5.610           | 2.908          | 0.037          | -              | 58.3       | -              | 0.105      | -              | 0.028           | -              |
| Aug-16     | 0.1000        | 0.0375         | 2.050           | 2.575          | 0.179          | -              | 115        | -              | 0.982      | -              | 0.031           | -              |

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 2016 Annual Sampling Event**

**Summary of MATA Tracked Parameters for MW-3B**

| Event Date | 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     | 0.0300           | -              | 3.990        | -              | 0.059        | -              |
| Jun-14     | 0.0230           | -              | 3.040        | -              | 0.091        | -              |
| Aug-15     | 0.0160           | -              | 2.910        | -              | 0.050        | -              |
| Aug-16     | 0.0100           | -              | 1.690        | -              | 0.006        | -              |

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 2016 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           |

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

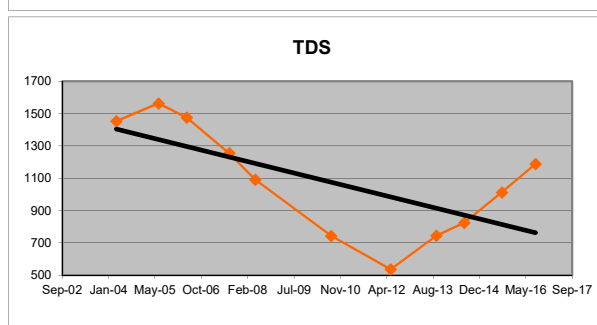
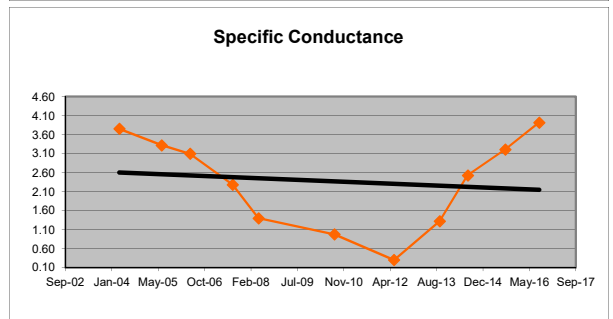
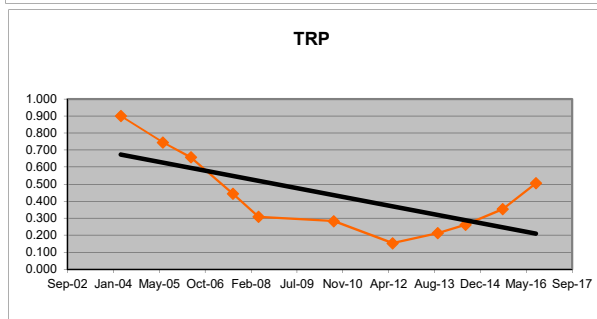
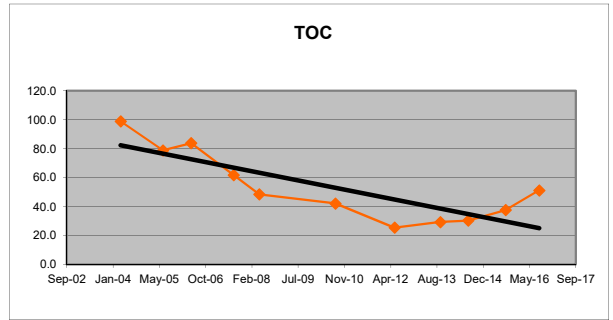
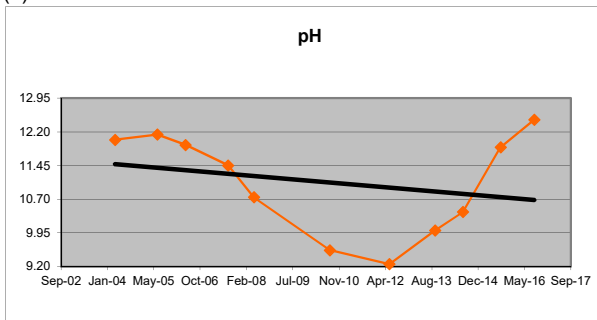
### August 2016 Annual Sampling Event

#### 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           |

#### 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

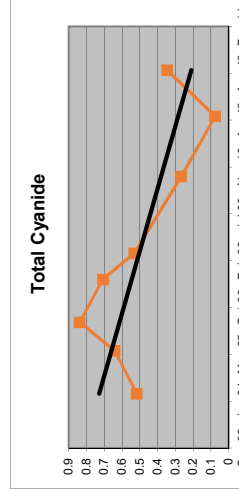
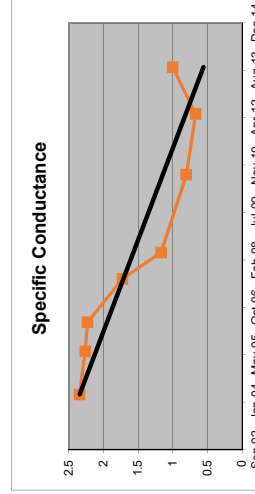
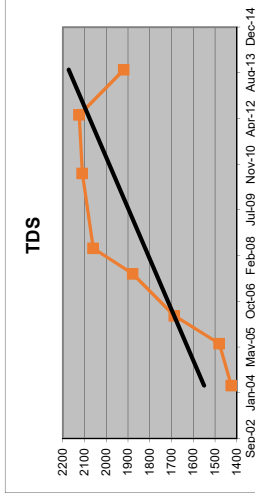
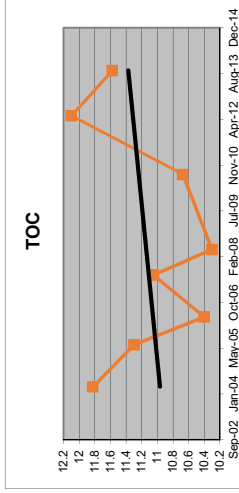
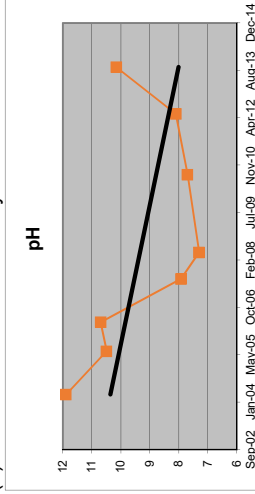
### August 2016 Annual Sampling Event

#### Summary of MATA Tracked Parameters for MW-14BR

| Event Date | pH    | Moving Average | TOC  | Moving Average | TRP    | Moving Average | Specific Conductance | Moving Average | Total Cyanide | Moving Average | TDS  | Moving Average | Total Manganese | Moving Average |
|------------|-------|----------------|------|----------------|--------|----------------|----------------------|----------------|---------------|----------------|------|----------------|-----------------|----------------|
| Oct-01     | 11.27 | -              | 14.1 | -              | 0.014  | -              | 2.50                 | -              | 0.623         | -              | 1480 | -              | 0.044           | -              |
| Apr-02     | 11.21 | -              | 11.1 | -              | 0.005  | -              | 2.31                 | -              | 0.047         | -              | 922  | -              | 0.780           | -              |
| Apr-03     | 10.71 | -              | 11.9 | -              | 0.010  | -              | 2.35                 | -              | 0.606         | -              | 1680 | -              | 0.120           | -              |
| Apr-04     | 11.89 | 11.27          | 10.2 | 11.8           | 0.012  | 11.8           | 2.23                 | 2.35           | 0.790         | 0.5164         | 1620 | 1426           | 0.529           | 0.368          |
| Jul-05     | 10.49 | 11.08          | 12.0 | 11.3           | 0.010  | 10.09          | 2.16                 | 2.26           | 1.120         | 0.6406         | 1700 | 1481           | 0.280           | 0.427          |
| May-06     | 10.69 | 10.95          | 7.5  | 10.4           | 0.010  | 0.011          | 2.19                 | 2.23           | 0.835         | 0.8378         | 1750 | 1688           | 0.350           | 0.320          |
| Aug-07     | 7.92  | 10.25          | 14.5 | 11.1           | 0.005  | 0.009          | 0.32                 | 1.73           | 0.084         | 0.7073         | 2440 | 1878           | 0.726           | 0.471          |
| May-08     | 7.30  | 9.10           | 7.2  | 10.3           | 0.010  | 0.009          | 0.00                 | 0.17           | 0.085         | 0.5310         | 2350 | 2060           | 1.800           | 0.789          |
| Aug-10     | 7.70  | 8.40           | 13.5 | 10.7           | 0.050  | 0.019          | 0.72                 | 0.81           | 0.065         | 0.2673         | 1900 | 2110           | 0.610           | 0.872          |
| May-12     | 8.10  | 7.76           | 13.2 | 12.1           | 0.050  | 0.029          | 1.64                 | 0.67           | 0.075         | 0.0773         | 1810 | 2125           | 0.749           | 0.971          |
| Sep-13     | 10.15 | 8.31           | 12.4 | 11.6           | 0.0111 | 0.030          | 1.64                 | 1.00           | 1.160         | 0.3463         | 1620 | 1920           | 0.242           | 0.850          |
| Jul-14     | NA    | NA             | NA   | NA             | NA     | NA             | NA                   | NA             | NA            | NA             | NA   | NA             | NA              | NA             |
| Aug-15     | NA    | NA             | NA   | NA             | NA     | NA             | NA                   | NA             | NA            | NA             | NA   | NA             | NA              | NA             |
| Aug-16     | NA    | NA             | NA   | NA             | NA     | NA             | NA                   | NA             | NA            | NA             | NA   | NA             | NA              | NA             |

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



# Appendix F

## Marilla Street Landfill

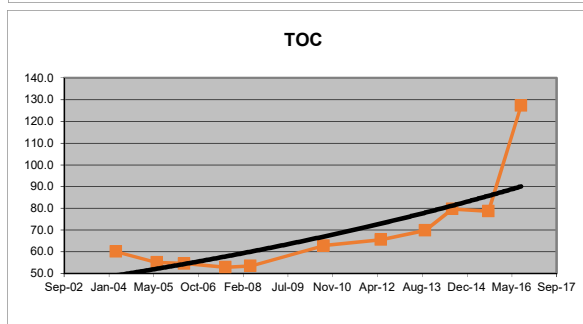
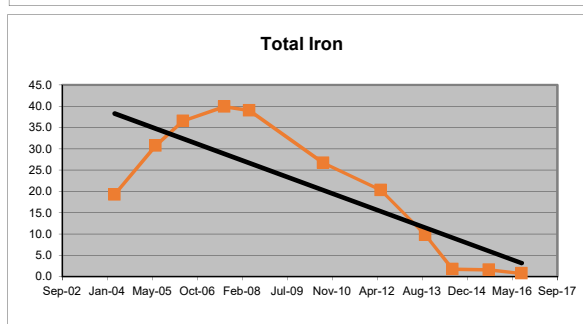
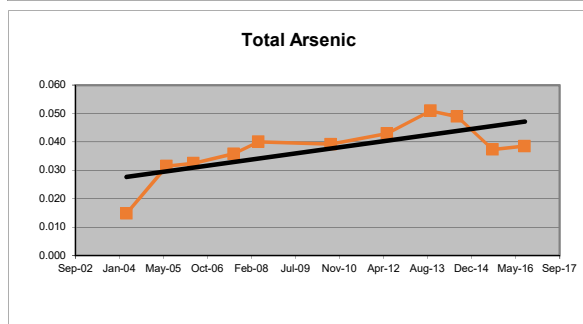
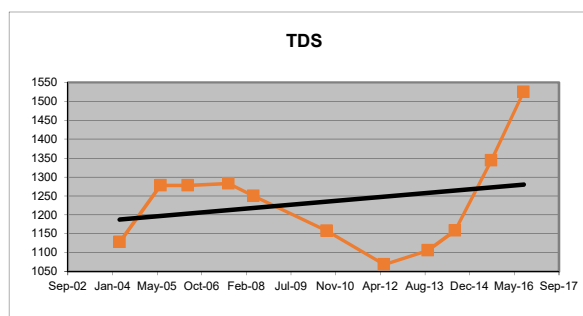
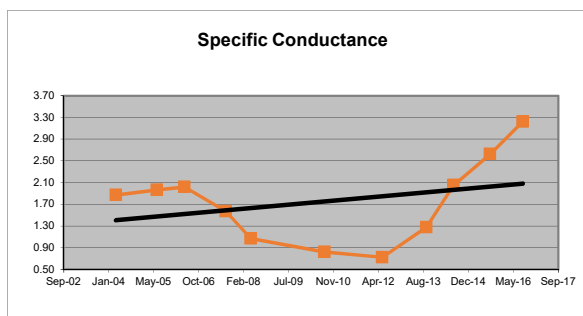
### August 2016 Annual Sampling Event

#### 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            |

#### 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

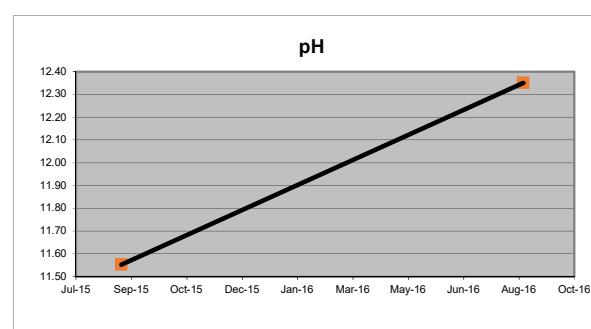
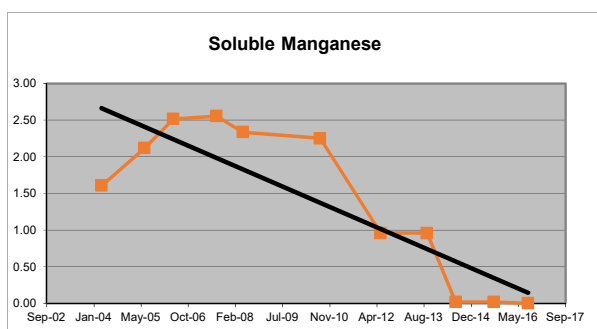
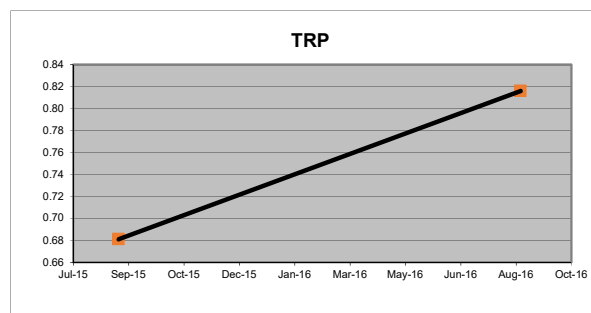
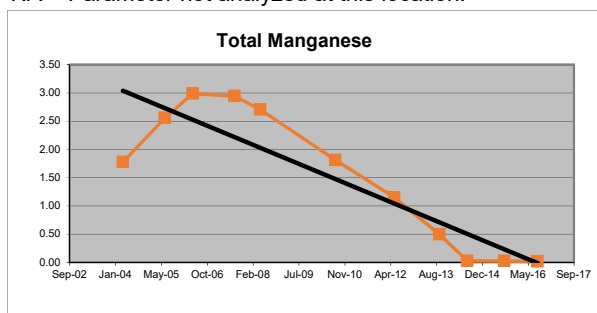
### August 2016 Annual Sampling Event

#### 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          |

#### Notes:

- (1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.
- (2) - TRP = Total Recoverable Phenolics
- (3) - NA = Parameter not analyzed at this location.



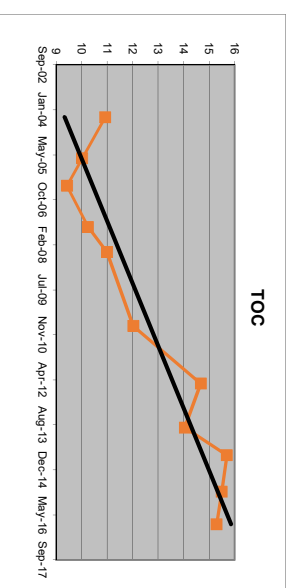
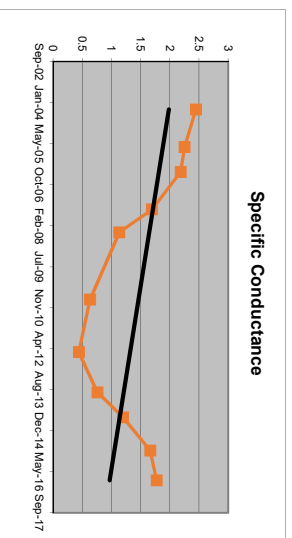
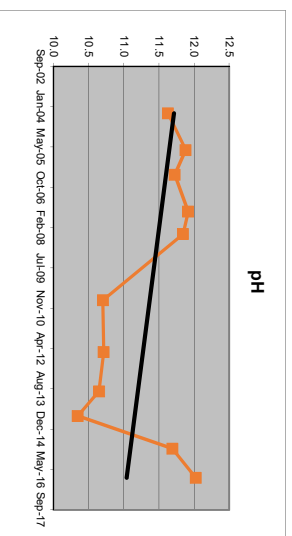
# **Appendix F** **Marilla Street Landfill** **August 2016 Annual Sampling Event**

## **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           | -              | 5.000  | -              |
| Apr-02     | 12.11 | -              | 2.37                 | -              | 9.3  | -              | 0.005  | -              | 0.970      | -              | 0.005          | -              | 0.130           | -              | 5.000  | -              |
| Apr-03     | 11.37 | -              | 2.19                 | -              | 11.2 | -              | 0.010  | -              | 1.400      | -              | 0.010          | -              | 0.330           | -              | 5.000  | -              |
| 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          | 5.000  | -              |
| 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          | 5.000  | -              |
| 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          | 31.000 | 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          | 20.000 | 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          | 5.000  | 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          | 1.000  | 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          | 11.900 | 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          | 35.000 | 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          | 21.000 | 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          | 26.000 | 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          | 25.000 | 26.750         |

**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

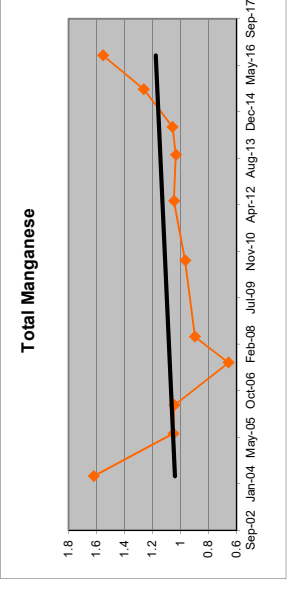
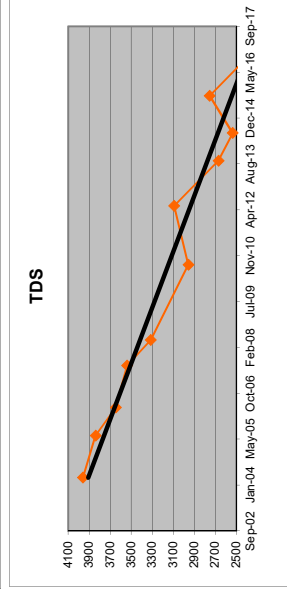
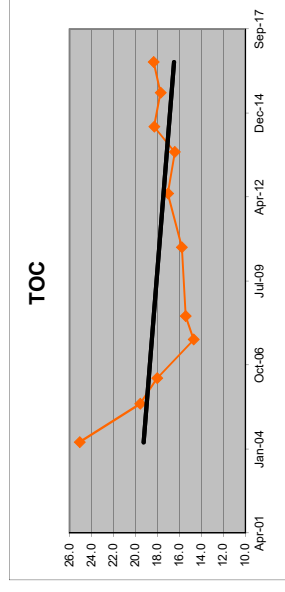
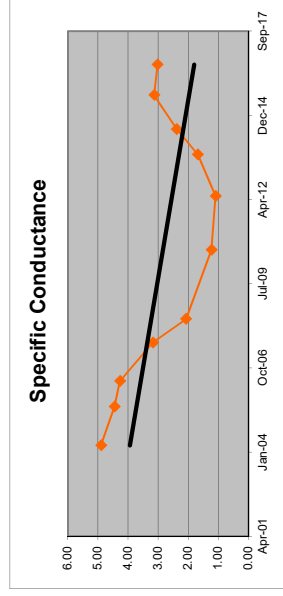
### August 2016 Annual Sampling Event

#### 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       | -              |

#### 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 Deep Overburden Wells**



**Appendix G**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**

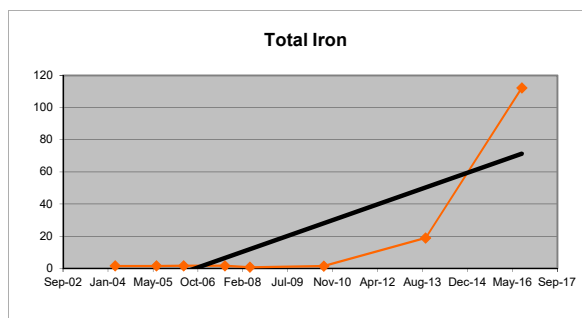
**Summary of MATA Tracked Parameters for MW-2A**

| Event Date | Total Iron | Moving Average | Total Chromium | Moving Average | Total Manganese | Moving Average | TOC  | Moving Average | pH   | Moving Average |
|------------|------------|----------------|----------------|----------------|-----------------|----------------|------|----------------|------|----------------|
| Oct-01     | 0.08       | -              | -              | -              | -               | -              | -    | -              | -    | -              |
| Apr-02     | 0.073      | -              | -              | -              | -               | -              | -    | -              | -    | -              |
| Apr-03     | 0.47       | -              | -              | -              | -               | -              | -    | -              | -    | -              |
| Apr-04     | 4.97       | 1.40           | -              | -              | -               | -              | -    | -              | -    | -              |
| Jul-05     | 0.42       | 1.48           | -              | -              | -               | -              | -    | -              | -    | -              |
| May-06     | 0.36       | 1.56           | -              | -              | -               | -              | -    | -              | -    | -              |
| Aug-07     | 0.404      | 1.54           | -              | -              | -               | -              | -    | -              | -    | -              |
| May-08     | 1.20       | 0.60           | -              | -              | -               | -              | -    | -              | -    | -              |
| Aug-10     | 3.26       | 1.31           | -              | -              | -               | -              | -    | -              | -    | -              |
| Sep-13     | 70.5       | 18.84          | 0.081          | -              | 2.84            | -              | -    | -              | 7.98 | -              |
| Aug-16     | 154        | 112.25         | 0.165          | -              | 6.13            | -              | 10.1 | -              | 8.42 | -              |

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



# **Appendix G** **Marilla Street Landfill** **August 2016 Annual Sampling Event**

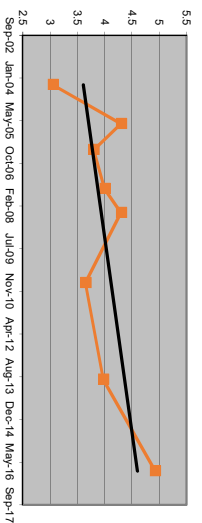
## **Summary of MATA Tracked Parameters for MW-3A**

| Event Date | pH   | Moving Average | TOC | Moving Average | TDS  | Moving Average | Total Iron | Moving Average | Specific Conductance | Moving Average | Total Manganese | Moving Average | Total Chromium | Moving Average | Total Lead | Moving Average |
|------------|------|----------------|-----|----------------|------|----------------|------------|----------------|----------------------|----------------|-----------------|----------------|----------------|----------------|------------|----------------|
| Oct-01     | 11.9 | -              | 1.0 | -              | 1510 | -              | 6.3        | -              | 5.30                 | -              | 0.990           | -              | -              | -              | -          | -              |
| Apr-02     | 7.15 | -              | 5.4 | -              | 1770 | -              | 0.5        | -              | 2.02                 | -              | 0.900           | -              | -              | -              | -          | -              |
| Apr-03     | 7.15 | -              | 2.6 | -              | 1580 | -              | 1.8        | -              | 2.74                 | -              | 0.770           | -              | -              | -              | -          | -              |
| Apr-04     | 9.3  | 8.88           | 3.2 | 3.1            | 1500 | 1590           | 3.2        | 2.9            | 2.02                 | 3.02           | 0.634           | 0.824          | -              | -              | -          | -              |
| Jul-05     | 7.64 | 7.81           | 6.0 | 4.3            | 1510 | 1590           | 1.6        | 1.8            | 1.95                 | 2.18           | 0.610           | 0.729          | -              | -              | -          | -              |
| May-06     | 7.72 | 7.95           | 3.4 | 3.8            | 1540 | 1533           | 0.6        | 1.8            | 1.95                 | 2.16           | 0.520           | 0.634          | -              | -              | -          | -              |
| Aug-07     | 6.92 | 7.90           | 3.4 | 4.0            | 1420 | 1493           | 3.4        | 2.2            | 0.22                 | 1.54           | 0.536           | 0.575          | -              | -              | -          | -              |
| May-08     | 7.48 | 7.44           | 4.4 | 4.3            | 1340 | 1453           | 0.6        | 1.6            | 0.00                 | 1.03           | 0.440           | 0.527          | -              | -              | -          | -              |
| Aug-10     | 7.27 | 7.35           | 3.4 | 3.7            | 1240 | 1385           | 0.5        | 1.3            | 0.10                 | 0.57           | 0.448           | 0.486          | -              | -              | -          | -              |
| Sep-13     | 7.17 | 7.21           | 4.7 | 4.0            | 1480 | 1370           | 0.4        | 1.2            | 1.59                 | 0.48           | 1.01            | 0.609          | -              | -              | -          | -              |
| Aug-16     | 10.2 | 8.03           | 7.2 | 4.9            | 1540 | 1400           | 145.0      | 36.6           | 1.75                 | 0.86           | 2.40            | 1.075          | 0.103          | -              | 0.788      | -              |

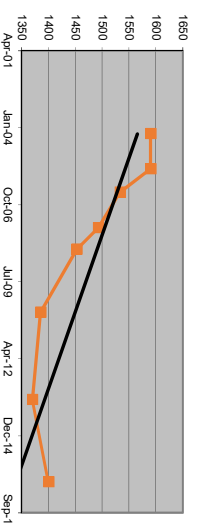
Notes:

- (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

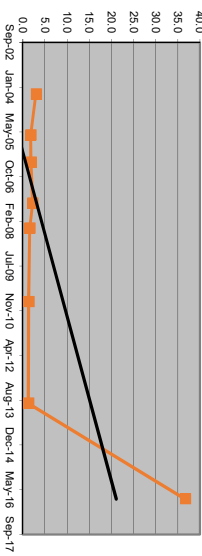
**TOC**



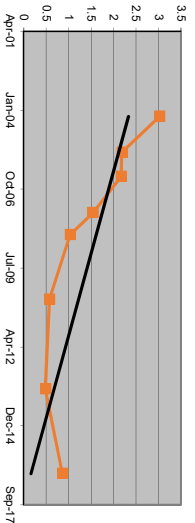
**TDS**



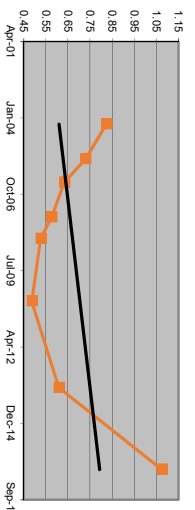
**Total Iron**



**Specific Conductance**



**Total Manganese**



# Appendix G

## Marilla Street Landfill

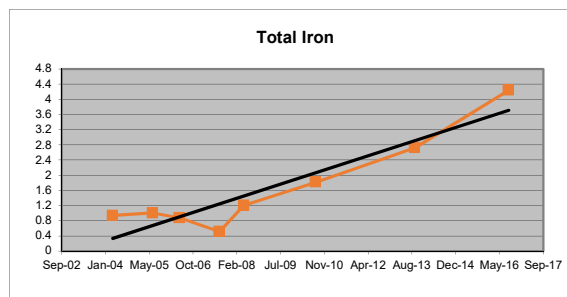
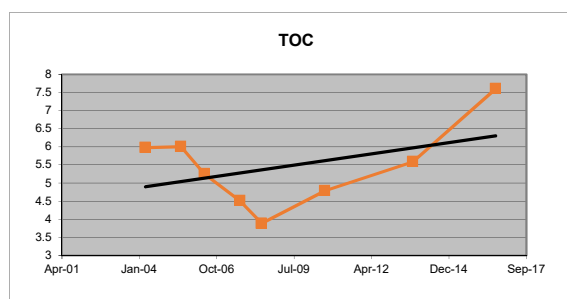
### August 2016 Annual Sampling Event

#### Summary of MATA Tracked Parameters for MW-4A

| Event Date | pH   | Moving Average | TOC  | Moving Average | TRP   | Moving Average | Total Iron | Moving Average | Soluble Iron | Moving Average | Soluble Manganese | Moving Average |
|------------|------|----------------|------|----------------|-------|----------------|------------|----------------|--------------|----------------|-------------------|----------------|
| Oct-01     | 7.63 | -              | 6.9  | -              | 0.005 | -              | 0.59       | -              | -            | -              | -                 | -              |
| Apr-02     | 8.20 | -              | 5.7  | -              | 0.012 | -              | 0.81       | -              | -            | -              | -                 | -              |
| Apr-03     | 8.19 | -              | 5.6  | -              | 0.010 | -              | 2.10       | -              | -            | -              | -                 | -              |
| Apr-04     | 8.79 | 8.20           | 5.7  | 6.0            | 0.010 | 0.0093         | 0.24       | 0.93           | -            | -              | -                 | -              |
| Jul-05     | 7.80 | 8.25           | 7.0  | 6.0            | 0.010 | 0.0105         | 0.86       | 1.00           | -            | -              | -                 | -              |
| May-06     | 7.61 | 8.10           | 2.7  | 5.3            | 0.010 | 0.0100         | 0.31       | 0.88           | -            | -              | -                 | -              |
| Aug-07     | 7.81 | 8.00           | 2.6  | 4.5            | 0.005 | 0.0088         | 0.65       | 0.51           | -            | -              | -                 | -              |
| May-08     | 7.86 | 7.77           | 3.2  | 3.9            | 0.010 | 0.0088         | 3.00       | 1.20           | -            | -              | -                 | -              |
| Aug-10     | 7.70 | 7.75           | 10.6 | 4.8            | 0.068 | 0.0233         | 3.31       | 1.82           | -            | -              | -                 | -              |
| Sep-13     | 7.95 | 7.83           | 5.9  | 5.6            | 0.005 | 0.0220         | 3.94       | 2.72           | 0.10         | -              | 0.10              | -              |
| Aug-16     | 8.40 | 7.98           | 10.7 | 7.6            | 0.005 | 0.0220         | 6.70       | 4.24           | 0.10         | -              | 0.070             | -              |

#### 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



# Appendix G

## Marilla Street Landfill

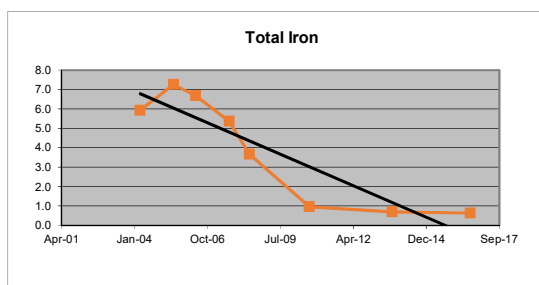
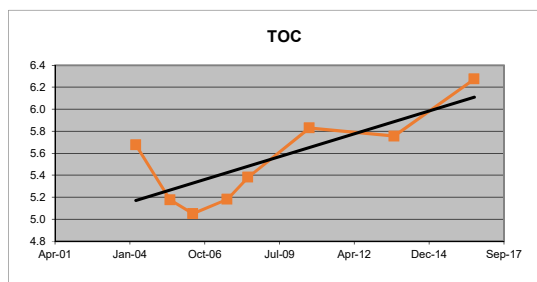
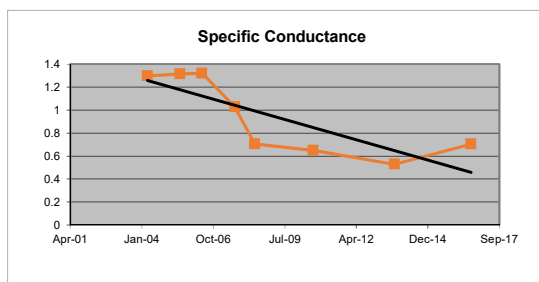
### August 2016 Annual Sampling Event

#### Summary of MATA Tracked Parameters for MW-15A

| Event Date | Specific Conductance | Moving Average | TOC | Moving Average | Total Iron | Moving Average | Soluble Iron | Moving Average | Total Manganese | Moving Average | TDS | Moving Average |
|------------|----------------------|----------------|-----|----------------|------------|----------------|--------------|----------------|-----------------|----------------|-----|----------------|
| Oct-01     | 1.346                | -              | 6.8 | -              | 6.9        | -              | NA           | -              | 0.110           | -              | -   | -              |
| Apr-02     | 1.246                | -              | 6.2 | -              | 3.9        | -              | NA           | -              | 0.130           | -              | -   | -              |
| Apr-03     | 1.313                | -              | 4.9 | -              | 6.0        | -              | 0.76         | -              | 0.120           | -              | -   | -              |
| Apr-04     | 1.289                | 1.299          | 4.8 | 5.7            | 6.9        | 5.9            | 2.26         | 1.51           | 0.139           | 0.125          | -   | -              |
| Jul-05     | 1.409                | 1.314          | 4.8 | 5.2            | 12.2       | 7.3            | 0.95         | 1.32           | 0.360           | 0.187          | -   | -              |
| May-06     | 1.272                | 1.321          | 5.7 | 5.1            | 1.6        | 6.7            | NA           | 1.32           | 0.300           | 0.230          | -   | -              |
| Aug-07     | 0.140                | 1.028          | 5.4 | 5.2            | 0.7        | 5.3            | NA           | 1.32           | 0.034           | 0.208          | -   | -              |
| May-08     | 0.000                | 0.705          | 5.6 | 5.4            | 0.1        | 3.7            | NA           | 1.32           | 0.020           | 0.178          | -   | -              |
| Aug-10     | 1.185                | 0.649          | 6.6 | 5.8            | 1.4        | 1.0            | NA           | 1.32           | 0.033           | 0.097          | -   | -              |
| Sep-13     | 0.790                | 0.529          | 5.4 | 5.8            | 0.5        | 0.7            | NA           | 1.32           | 0.025           | 0.028          | 611 | -              |
| Aug-16     | 0.840                | 0.704          | 7.5 | 6.3            | 0.5        | 0.6            | NA           | 1.32           | 0.022           | 0.025          | 588 | -              |

**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) - NA = Parameter not analyzed at this location



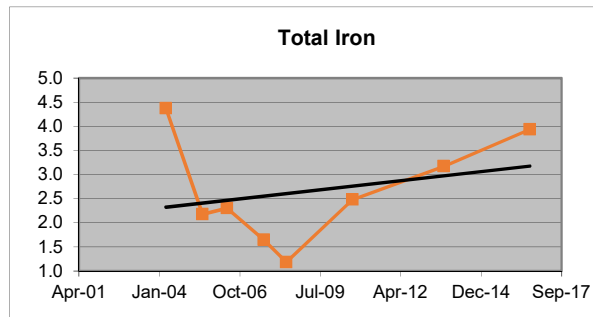
**Appendix G**  
**Marilla Street Landfill**  
**August 2016 Annual Sampling Event**

**Summary of MATA Tracked Parameters for MW-16A**

| Event Date | Specific Conductance | Moving Average | Total Iron | Moving Average | TOC  | Moving Average |
|------------|----------------------|----------------|------------|----------------|------|----------------|
| Oct-01     | 1.187                | -              | 10.6       | -              | ND   | -              |
| Apr-02     | 1.122                | -              | 1.80       | -              | ND   | -              |
| Apr-03     | 1.131                | -              | 3.00       | -              | ND   | -              |
| Apr-04     | 1.153                | 1.148          | 2.10       | 4.4            | ND   | -              |
| Jul-05     | 1.128                | 1.134          | 1.80       | 2.2            | ND   | -              |
| May-06     | 1.144                | 1.139          | 2.30       | 2.3            | 4.20 | 4.20           |
| Aug-07     | 0.130                | 0.889          | 0.37       | 1.6            | 3.28 | 3.74           |
| May-08     | 0.000                | 0.601          | 0.26       | 1.2            | 2.10 | 3.19           |
| Aug-10     | 1.235                | 0.627          | 6.99       | 2.5            | 3.20 | 3.20           |
| Sep-13     | 0.920                | 0.571          | 5.06       | 3.2            | 2.60 | 2.80           |
| Aug-16     | 1.110                | 0.816          | 3.43       | 3.9            | 3.50 | 2.85           |

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) - ND = No data available for this location.



# Appendix G

## Marilla Street Landfill

### August 2016 Annual Sampling Event

#### Summary of MATA Tracked Parameters for MW-18A

| Event Date | Specific Conductance | Moving Average | TOC  | Moving Average | TDS  | Moving Average | Soluble Arsenic | Moving Average | Total Iron | Moving Average |
|------------|----------------------|----------------|------|----------------|------|----------------|-----------------|----------------|------------|----------------|
| Oct-01     | 1.699                | -              | 9.0  | -              | 1100 | -              | NA              | -              | 4.7        | -              |
| Apr-02     | 1.357                | -              | 8.4  | -              | 1160 | -              | NA              | -              | 3.3        | -              |
| Apr-03     | 1.417                | -              | 6.3  | -              | 933  | -              | 0.0046          | -              | 6.3        | -              |
| Apr-04     | 1.531                | 1.501          | 8.3  | 8.0            | 1280 | 1118           | NA              | 0.0046         | 6.1        | 5.1            |
| Jul-05     | 3.029                | 1.834          | 12.0 | 8.8            | 2400 | 1443           | 0.004           | 0.0043         | 60.7       | 19.1           |
| May-06     | 2.376                | 2.088          | 10.0 | 9.2            | 3650 | 2066           | 0.004           | 0.0042         | 61.0       | 33.5           |
| Aug-07     | 0.230                | 1.792          | 10.6 | 10.2           | 1590 | 2230           | NA              | 0.0040         | 8.8        | 34.2           |
| May-08     | 0.000                | 1.409          | 6.5  | 9.8            | 2500 | 2535           | NA              | 0.0040         | 9.8        | 35.1           |
| Aug-10     | 2.630                | 1.309          | 14.4 | 10.4           | 1800 | 2385           | 0.004           | 0.0040         | 3.6        | 20.8           |
| May-12     | 2.170                | 1.258          | 11.4 | 10.7           | 1500 | 1848           | 0.004           | 0.0040         | 8.7        | 7.7            |
| Sep-13     | 2.030                | 1.708          | 16.9 | 12.3           | 3110 | 2228           | NA              | 0.0040         | 0.24       | 5.6            |
| Jul-14     | 2.350                | 2.295          | 18.2 | 15.2           | 1920 | 2083           | 0.010           | 0.0060         | 9.52       | 5.5            |
| Aug-16     | 2.550                | 2.275          | 21.1 | 16.9           | 2050 | 2145           | 0.010           | 0.0080         | 22.80      | 10.3           |

#### Notes:

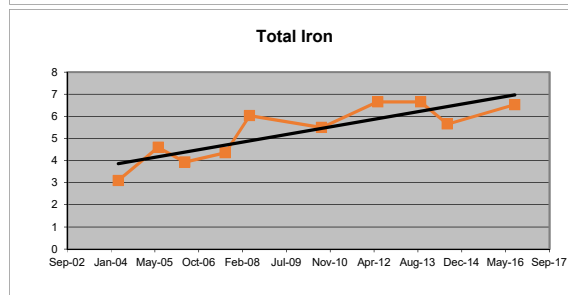
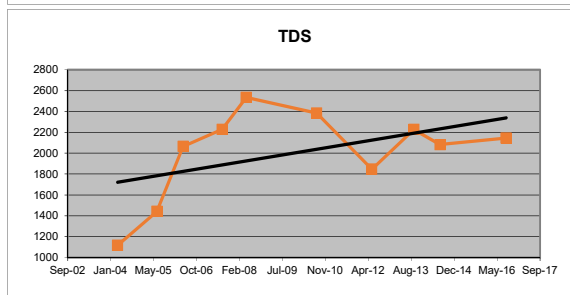
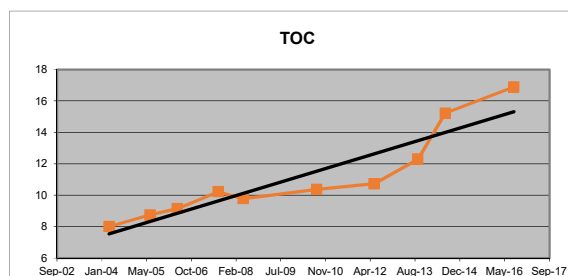
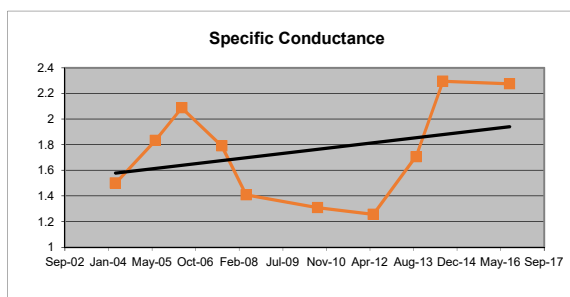
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

(2) - TOC = Total Organic Carbon

(3) - TDS = Total Dissolved Solids

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

(5) - Data for Total Lead not available



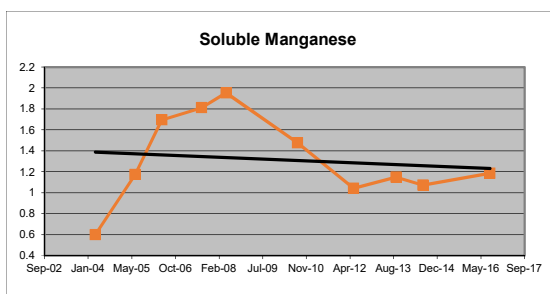
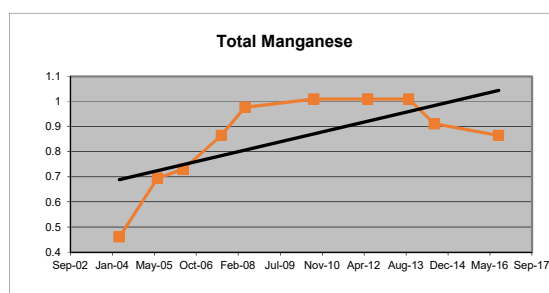
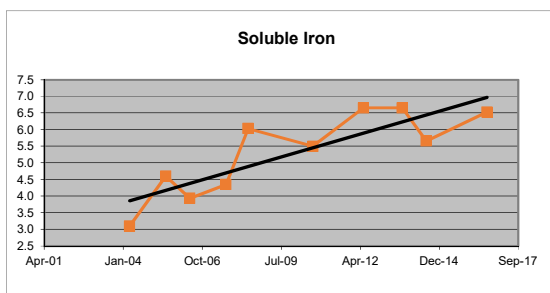
# **Appendix G** **Marilla Street Landfill** **August 2016 Annual Sampling Event** **Summary of MATA Tracked Parameters for MW-18A**

| Event Date | Soluble Iron | Moving Average | Total Manganese | Moving Average | Soluble Manganese | Moving Average | pH   | Moving Average |
|------------|--------------|----------------|-----------------|----------------|-------------------|----------------|------|----------------|
| Oct-01     | NA           | -              | 0.610           | -              | NA                | -              | -    | -              |
| Apr-02     | NA           | -              | 0.510           | -              | NA                | -              | -    | -              |
| Apr-03     | 3.1          | -              | 0.560           | -              | 0.460             | -              | -    | -              |
| Apr-04     | NA           | 3.1            | 0.727           | 0.602          | NA                | 0.460          | -    | -              |
| Jul-05     | 6.1          | 4.6            | 2.900           | 1.174          | 0.930             | 0.695          | -    | -              |
| May-06     | 2.6          | 3.9            | 2.600           | 1.697          | 0.800             | 0.730          | -    | -              |
| Aug-07     | NA           | 4.4            | 1.020           | 1.812          | NA                | 0.865          | -    | -              |
| May-08     | 9.4          | 6.0            | 1.300           | 1.955          | 1.200             | 0.977          | -    | -              |
| Aug-10     | 4.5          | 5.5            | 0.987           | 1.477          | 1.030             | 1.010          | -    | -              |
| May-12     | 6.1          | 6.7            | 0.863           | 1.043          | 0.802             | 1.011          | 7.07 | -              |
| Sep-13     | NA           | 6.7            | 1.450           | 1.150          | NA                | 1.011          | 7.00 | -              |
| Jul-14     | 6.41         | 5.7            | 0.993           | 1.073          | 0.901             | 0.911          | 7.33 | -              |
| Aug-16     | 7.11         | 6.5            | 1.440           | 1.187          | 0.890             | 0.864          | 7.27 | -              |

## **Notes:**

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

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





## **APPENDIX H**

# **Moving Average Trend Analysis of Tracked Parameters for Surface Water**



# Appendix H

## Marilla Street Landfill

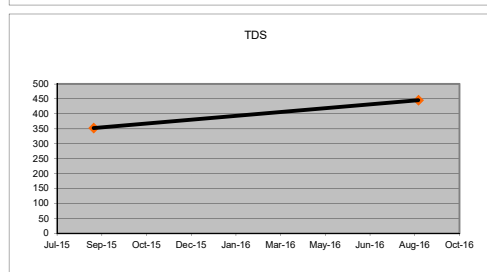
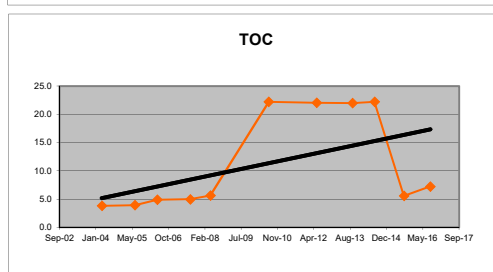
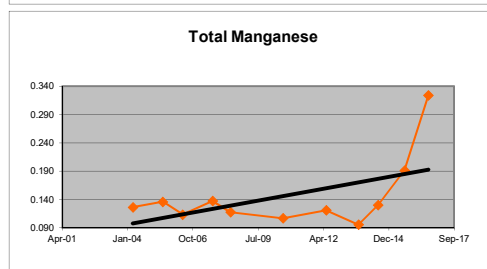
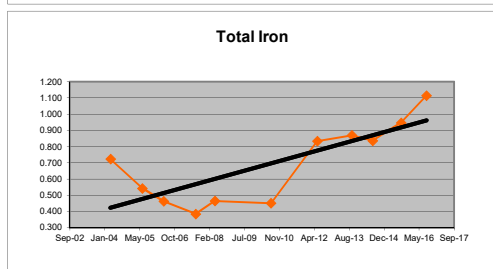
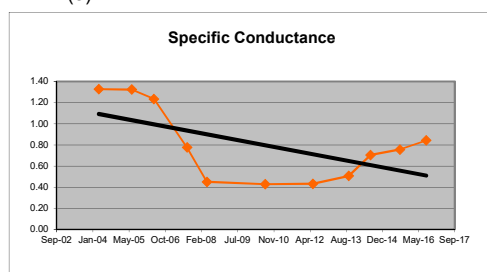
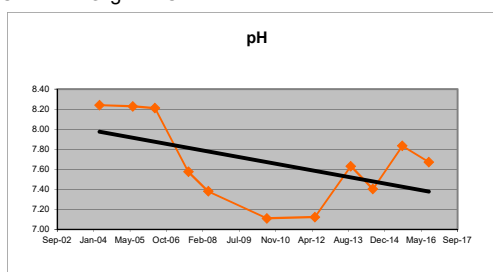
### August 2016 Annual Sampling Event

#### 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            |

#### 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 H**  
**Marilla Street Landfill**  
**August 2016 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             | -              |

# Appendix H

## Marilla Street Landfill

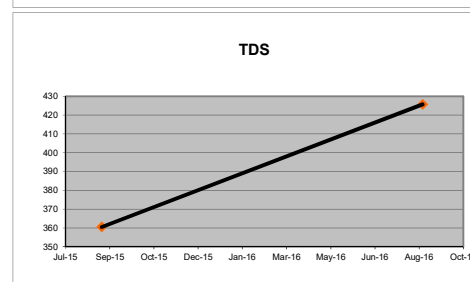
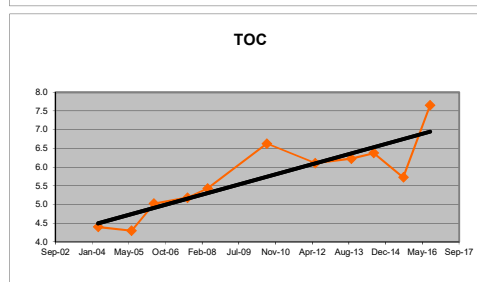
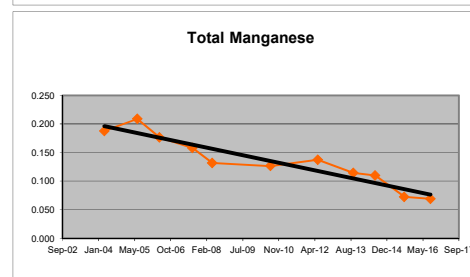
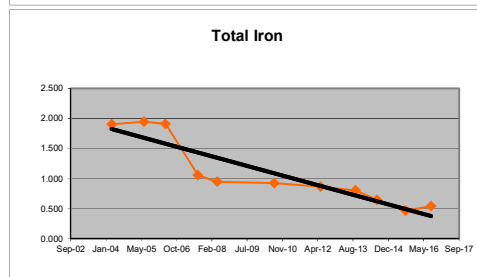
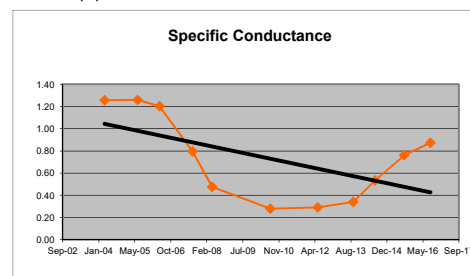
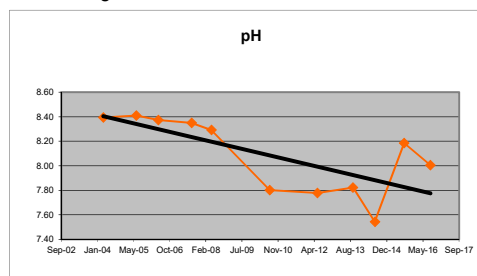
### August 2016 Annual Sampling Event

#### 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            |

#### 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 H**  
**Marilla Street Landfill**  
**August 2016 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             | -              |

# Appendix H

## Marilla Street Landfill

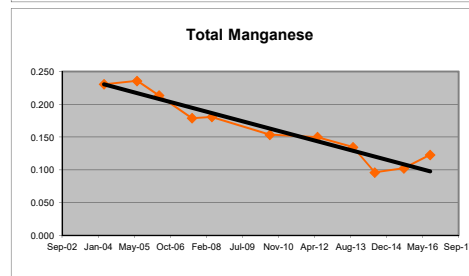
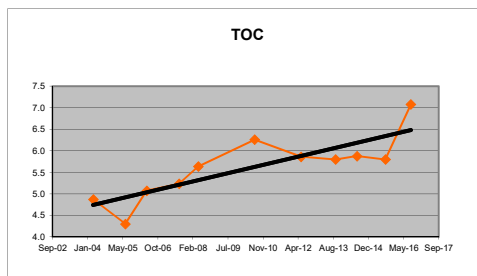
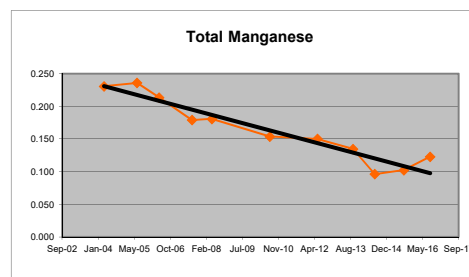
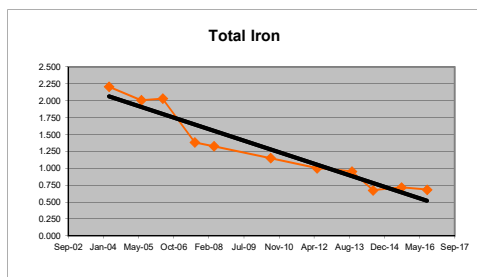
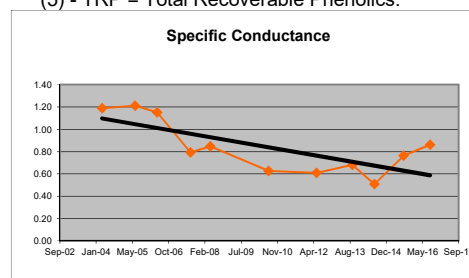
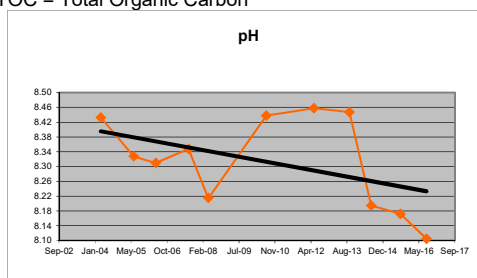
### August 2016 Annual Sampling Event

#### 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            |

#### 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 H**  
**Marilla Street Landfill**  
**August 2016 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             | -              |

# Appendix H

## Marilla Street Landfill

### August 2016 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            |

#### Notes:

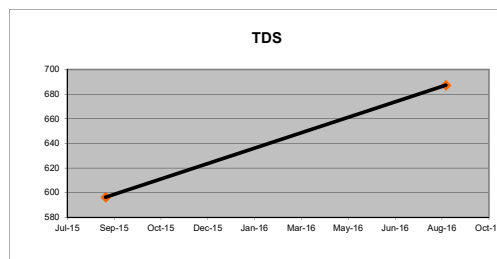
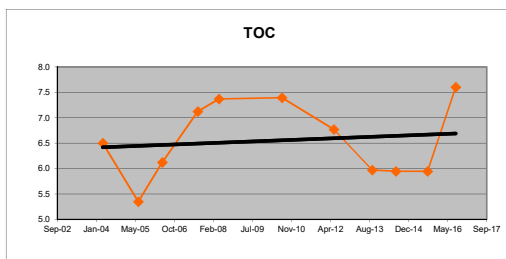
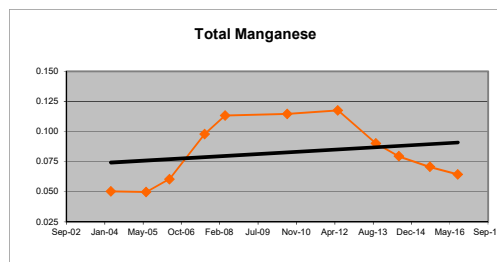
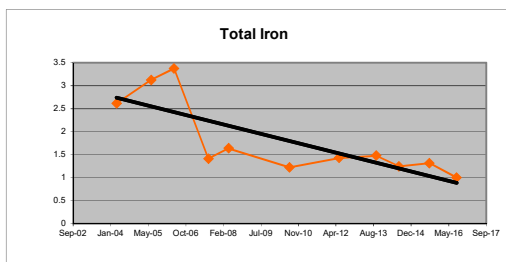
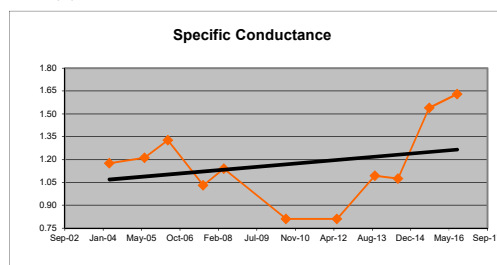
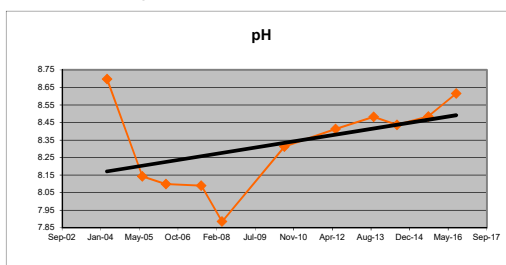
(1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.

(2) - TOC = Total Organic Carbon

(3) - TDS = Total Dissolved Solids

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

(5) - TRP = Total Recoverable Phenolics.



**Appendix H**  
**Marilla Street Landfill**  
**August 2016 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             | -              |

## **APPENDIX I**

# **2016 Post-Closure Inspection and Maintenance Report**



**MARILLA STREET LANDFILL  
POST -CLOSURE INSPECTION REPORT**

DATE: 10-4-16 2:00 → 3:30 pm  
WEATHER: CALM, SUNNY 74°  
PERSONNEL: JAD Jim Dangler

*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          | <u>X</u>      |                |             |         | <u>V. Dense vegetation</u>     |
| b. Around Landfill Perimeter              | <u>X</u>      |                |             |         | <u>&amp; matfoot structure</u> |
| 2. Integrity of Drainage Ditches          |               |                |             |         |                                |
| a. Sediment Build-up                      | <u>X</u>      |                |             |         |                                |
| b. Pooling or Ponding                     | <u>X</u>      |                |             |         |                                |
| c. Slope Integrity                        | <u>X</u>      |                |             |         |                                |
| d. Overall Adequacy                       | <u>X</u>      |                |             |         |                                |
| 3. General Conditions of Site             |               |                |             |         |                                |
| a. Road Construction                      | <u>X</u>      |                |             |         |                                |
| b. Gates/ <del>Fences</del> /Locks        | <u>X</u>      |                |             |         |                                |
| c. Grass Height                           | <u>X 3-4"</u> |                |             |         |                                |
| d. Illegal Dumping                        | <u>X</u>      |                |             |         |                                |
| e. Wetland Shrub Plantings <sup>(1)</sup> | <u>N.A.</u>   |                |             |         | <u>N/A</u>                     |
| 4. Integrity of Groundwater               | <u>N.A.</u>   |                |             |         |                                |
| 5. Integrity of Landfill Cap              |               |                |             |         |                                |
| a. Erosion Damage                         | <u>X</u>      |                |             |         |                                |
| b. Leachate Breakthrough                  | <u>X</u>      |                |             |         |                                |
| c. Settlement                             | <u>X</u>      |                |             |         |                                |
| d. Cracking                               | <u>X</u>      |                |             |         |                                |
| e. Slope                                  | <u>X</u>      |                |             |         |                                |
| f. Undesirable plants                     | <u>X</u>      |                |             |         |                                |
| g. Benchmark                              | <u>N.A.</u>   |                |             |         |                                |
| h. Animal Burrowing                       | <u>X</u>      |                |             |         |                                |

Notes: (1) Until Year 2002

JAD 10-4-16

II. SPECIFIC DATA ITEMS (Write N.A. if not applicable)

A. Erosion and Settlement:

No material erosion or sedimentation observed on inspection

1. Approximate size in feet of cap ended area(s). (List separately)
  - a. \_\_\_\_\_ feet \_\_\_\_\_ feet
  - b. \_\_\_\_\_ feet \_\_\_\_\_ feet
  - c. \_\_\_\_\_ feet \_\_\_\_\_ feet
2. How deep is the most extreme point of erosion when measured from the adjacent surface. (List separately)
  - a. \_\_\_\_\_ feet
  - b. \_\_\_\_\_ feet
  - c. \_\_\_\_\_ feet
3. Approximate size in feet of eroded areas outside the soil cap area such as drainage ditches, roads or slopes.
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
  - 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
  - c. \_\_\_\_\_ feet \_\_\_\_\_ feet
7. Approximate depth of each settlement area when measured from adjacent surface. (List separately)
  - a. \_\_\_\_\_ feet \_\_\_\_\_ feet
  - b. \_\_\_\_\_ feet \_\_\_\_\_ feet
  - 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).

N.A.

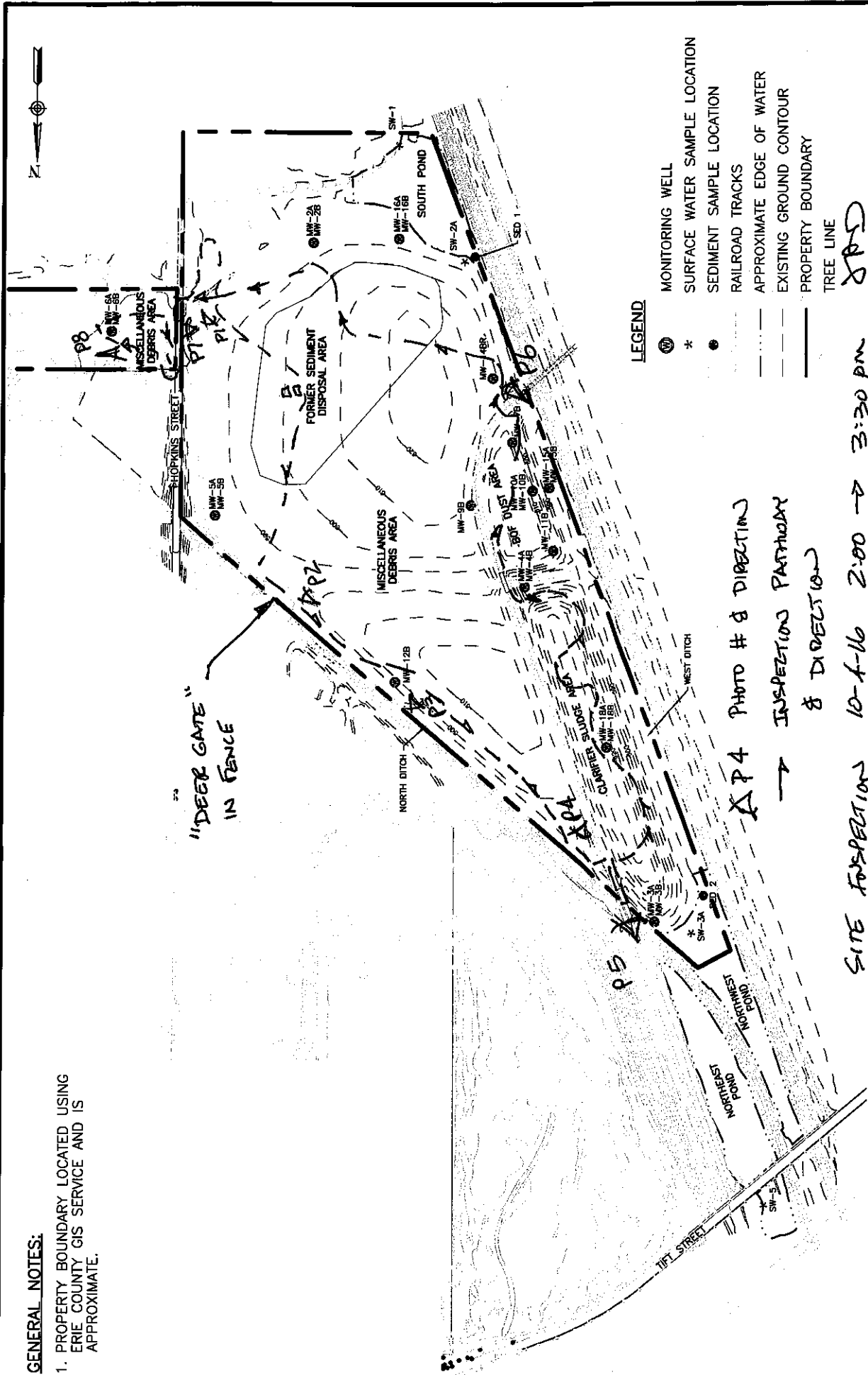
2. Date of corrective action:

N.A.

JPO  
10-4-16

# GENERAL NOTES:

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



## LEGEND

- MONITORING WELL
- \* SURFACE WATER SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- RAILROAD TRACKS
- - - APPROXIMATE EDGE OF WATER
- - - EXISTING GROUND CONTOUR
- PROPERTY BOUNDARY
- TREE LINE

SITE INSPECTION 10-1-16 2:00 → 3:30 PM JPD

STEELFIELDS, LTD

SITE PLAN

MARILLA STREET LANDFILL

FIGURE

2

SCALE: 1" = 600'

REVISION # 0

March 2015

CITY OF BUFFALO

ERIE COUNTY

NEW YORK

**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 775-6872 (716) 775-6873 FAX





LOOKING SOUTHWEST FROM HOPKINS STREET GATE

P1



LOCKED GATE AT MARILLA STREET

P2

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2016 POST CLOSURE INSPECTION**

**Photographs**

Page 1 of 4



**TYPICAL CONDITION AT TOE OF NORTHWEST FACING SLOPE**

**P3**



**TYPICAL CONDITON OF DOWNCHUTES,  
TAKEN NORTH OF RAILROAD BRIDGE**

**P4**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2016 POST CLOSURE INSPECTION**

**Photographs**

Page 2 of 4



**NORTHWEST SLOPE OF CLARIFIER SLUDGE AREA**

**P5**



**MW-14BR**

**P6**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2016 POST CLOSURE INSPECTION**

**Photographs**

Page 3 of 4



LOCKED GATE AT MISCELLANEOUS DEBRIS AREA

P7



LOOKING SOUTH ON WEST SLOPE OF MISCELLANEOUS DEBRIS AREA

P8

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2016 POST CLOSURE INSPECTION**

**Photographs**

Page 4 of 4

## **APPENDIX J**

# **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, 2015 to September 12, 2016                                                                                                  |                                     |                                     |
|                                                                                                                                                             |                                     | YES NO                              |
| 1. Is the information above correct?                                                                                                                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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?                       | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?                                                      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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?                                                                                                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
|                                                                                                                                                             |                                     | Box 2                               |
|                                                                                                                                                             |                                     | YES NO                              |
| 6. Is the current site use consistent with the use(s) listed below?<br>Closed Landfill                                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 7. Are all ICs/ECs in place and functioning as designed?                                                                                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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.                                                             |                                     |                                     |
| Signature of Owner, Remedial Party or Designated Representative                                                                                             |                                     | Date                                |
| Richard N. Rubino, V.P.                                                                                                                                     |                                     | 10-6-14                             |

To the best of my knowledge

**Description of Institutional Controls**

| <u>Parcel</u>        | <u>Owner</u>           | <u>Institutional Control</u> |
|----------------------|------------------------|------------------------------|
| <b>132.16-1-11.2</b> | <b>Steelfields LTD</b> |                              |

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 memo 2.5 of PRR*
5. Periodic Reporting of Site activities and evaluation of Site data.

|                    |                        |
|--------------------|------------------------|
| <b>132.16-1-13</b> | <b>Steelfields LTD</b> |
|--------------------|------------------------|

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.

|                    |                        |
|--------------------|------------------------|
| <b>132.16-1-14</b> | <b>Steelfields LTD</b> |
|--------------------|------------------------|

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.

|                   |                        |                        |
|-------------------|------------------------|------------------------|
| <b>132.16-1-9</b> | <b>Steelfields LTD</b> | <b>Monitoring Plan</b> |
|-------------------|------------------------|------------------------|

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.

**132.20-1-2.2** **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. Maintenance of fence around the site.~~
5. 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. Maintenance of fence around the site.~~
5. 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. Maintenance of fence around the site.~~
5. 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.~~
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. Maintenance of fence around the site.~~
5. Periodic Reporting of Site activities and evaluation of Site data.

Box 4

**Description of Engineering Controls**

Parcel

132.16-1-11.2

Engineering Control

~~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

~~Fencing~~ Access Control

*JAD  
see section  
2.5 of PRR*

| <u>Parcel</u>       | <u>Engineering Control</u>                         |
|---------------------|----------------------------------------------------|
| <b>132.20-1-2.2</b> | Cover System<br><del>Fencing</del> /Access Control |
| <b>132.20-1-9</b>   | Cover System<br><del>Fencing</del> /Access Control |
| <b>133.13-1-8</b>   | Cover System<br><del>Fencing</del> /Access Control |
| <b>133.17-1-1</b>   | Cover System<br><del>Fencing</del> /Access Control |
| <b>133.17-1-10</b>  | Cover System<br><del>Fencing</del> /Access Control |
| <b>133.17-1-2</b>   | Cover System<br><del>Fencing</del> /Access Control |
| <b>133.17-1-6</b>   | Cover System<br><del>Fencing</del> /Access Control |
| <b>133.17-1-9</b>   | Cover System<br><del>Fencing</del> /Access Control |

**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 complete.

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  
Signature of Owner, Remedial Party, or Designated Representative  
Rendering Certification

10-5-16  
Date

IC/EC CERTIFICATIONS

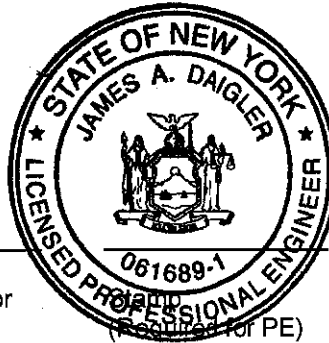
Box 7

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, GRAND ISLAND, NY 14072  
print name print business address

am certifying as a Professional Engineer for the OWNER  
(Owner or Remedial Party)



James A. Daigler

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

10-5-16

Date