

October 10, 2014

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 – 2014 Periodic Review Report

Dear Mr. Szymanski:

On behalf of Steelfields, LTD, please find enclosed the 2014 Periodic Review Report (PRR) for the Post-Closure Monitoring and Maintenance Plan for the Marilla Street Landfill. This report is to be submitted by October 12th and include all of the sampling, inspection, and maintenance activities performed during the 2014 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.

An electronic version of the PRR and attachments, as well as the Electronic Data Deliverables (EDDs) for NYSDEC's EQulS database were submitted to you via email on October 10, 2014.

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,

Allyson M. Zurawski, E.I.T.
Daigler Engineering, P.C.
2620 Grand Island Blvd. Grand Island, NY 14072
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cc: Richard Palumbo, Esq. – Brown & Palumbo

Enclosure: Post-Closure Monitoring and Maintenance Program – 2014 Period Review Report –
Marilla Street Landfill



POST-CLOSURE MONITORING AND MAINTENANCE PROGRAM 2014 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:

DAIGLER ENGINEERING P.C.

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

October 2014

POST-CLOSURE MONITORING & MAINTENANCE PROGRAM 2014 Periodic Review Report

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POST-CLOSURE MONITORING & MAINTENANCE PROGRAM

2014 Periodic Review Report

Steelfields, LTD

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POST-CLOSURE MONITORING & MAINTENANCE PROGRAM
2014 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.

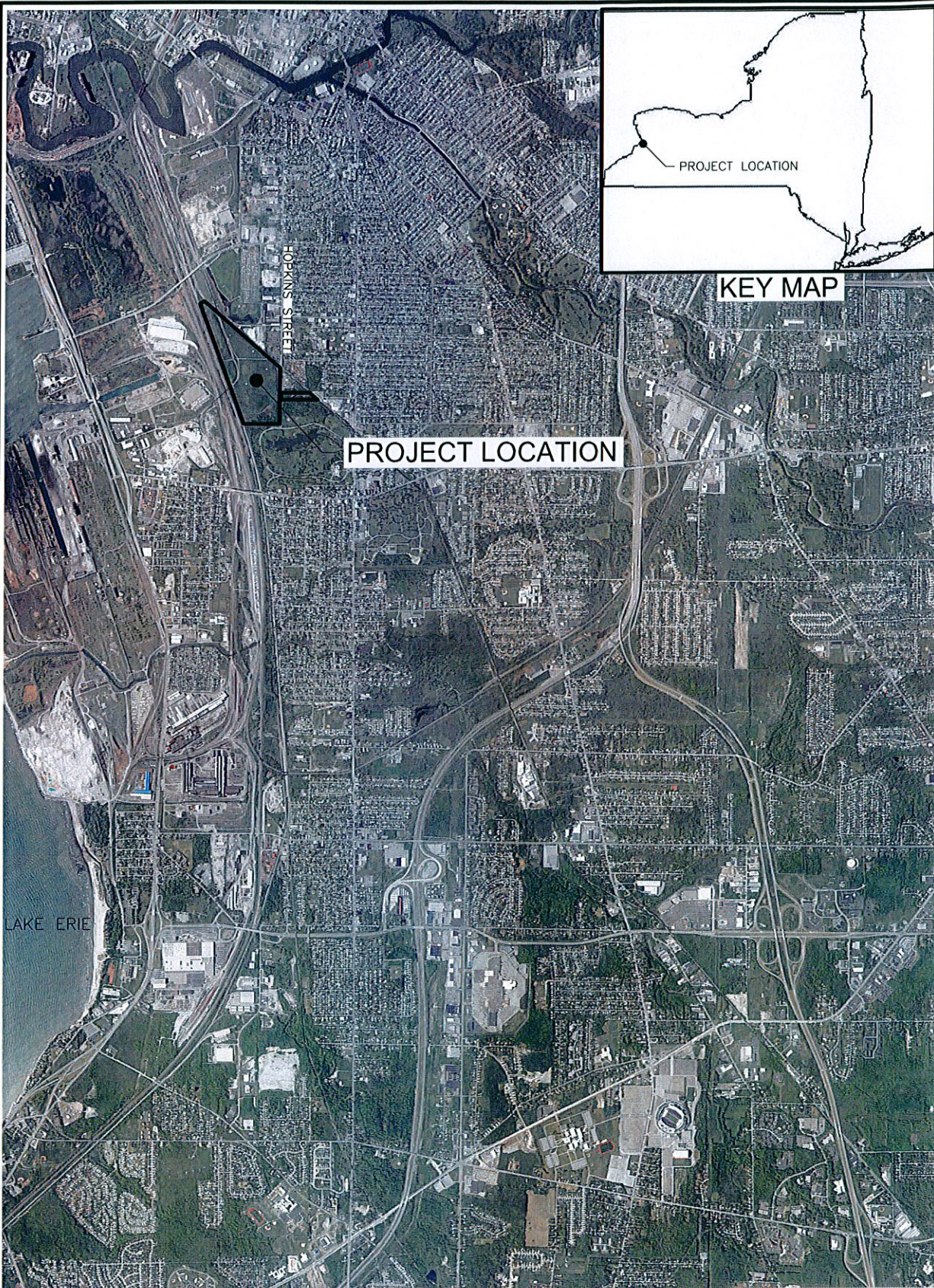
The landfill operated from 1930 through the summer of 1981 when it was owned by LTV Steel Company (formerly Republic Steel) and accepted wastes primarily produced by local steelmaking operations at the Buffalo Plant. Discarded wastes included, among others, construction and demolition debris, blast furnace 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 on 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 as per 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).

This report satisfies the requirement for the 2014 annual reporting and assessment of post-closure monitoring and maintenance activities at the Marilla Street Landfill as outlined in the Site Management Plan. 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 2014 is also provided.

Q:\Steelfields\Marilla Street Landfill\ACAD\FIG 1-LOCATION MAP.dwg 11/27/2013 1:55 PM



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LOCATION MAP

MARILLA STREET LANDFILL PERIODIC REVIEW REPORT

STEELFIELDS, LTD

CITY OF BUFFALO

ERIE COUNTY

NEW YORK

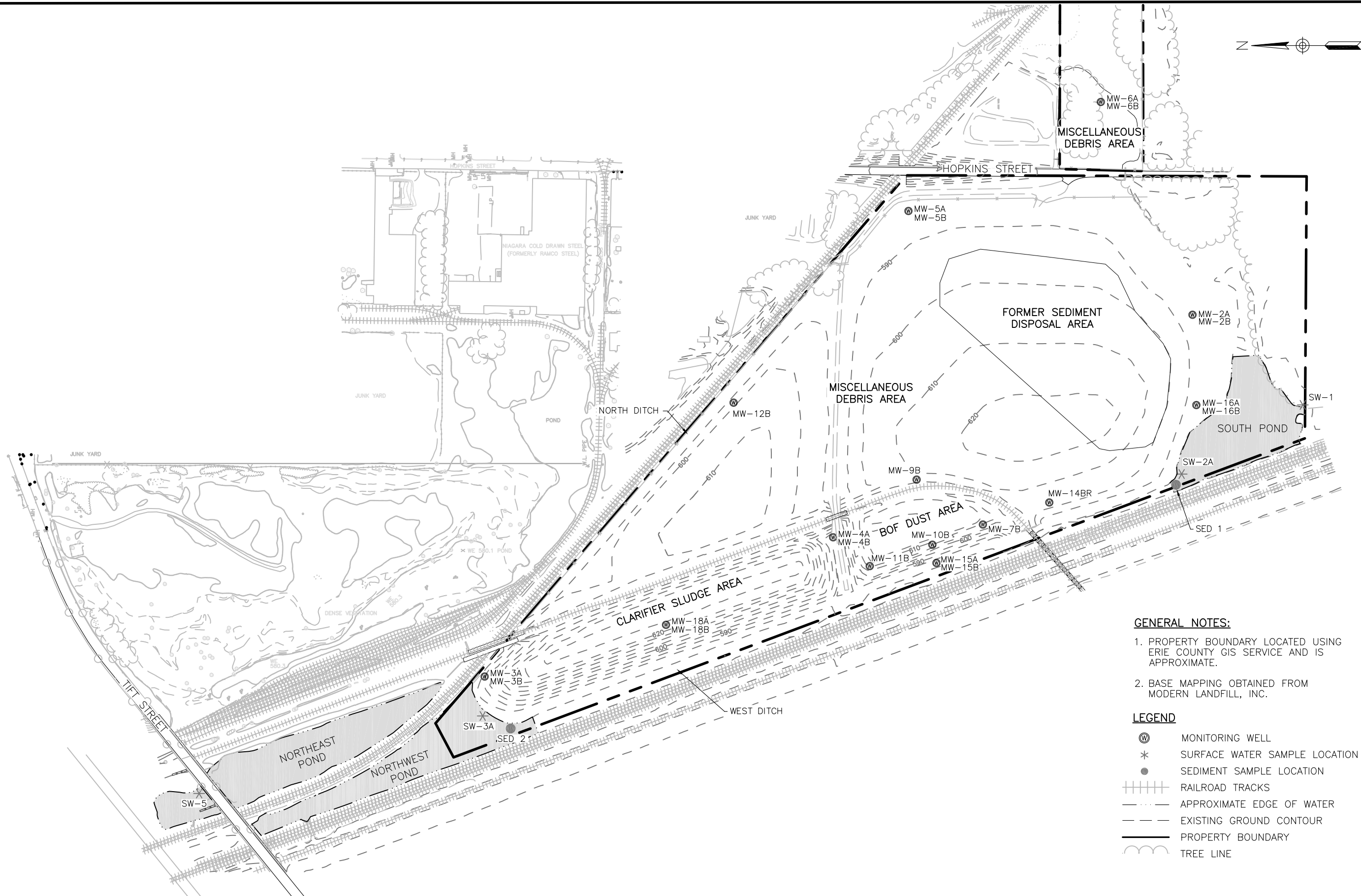
November 2013

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FIGURE
1

Q:\Steelfields\Marilla Street Landfill\ACAD\FIG 2-SITE PLAN.dwg 9/2/2014 11:14 AM



GENERAL NOTES:

1. PROPERTY BOUNDARY LOCATED USING ERIE COUNTY GIS SERVICE AND IS APPROXIMATE.
2. BASE MAPPING OBTAINED FROM MODERN LANDFILL, INC.

LEGEND

- Ⓜ MONITORING WELL
- *
- SEDIMENT SAMPLE LOCATION
- ++++ RAILROAD TRACKS
- - - - - APPROXIMATE EDGE OF WATER
- - - - - EXISTING GROUND CONTOUR
- - - - - PROPERTY BOUNDARY
- ~~~~~ TREE LINE

ALTERATION OF ANY SURVEY, DRAWING, DESIGN, SPECIFICATION OR REPORT MUST BE COMPLETED IN ACCORDANCE WITH SECTION 7209 PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

DAIGLER ENGINEERING P.C.

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2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072

JAMES A. DAIGLER, P.E.
NYSPE NO. 061689

DATE: September 2014

SCALE: 1"=400'

PREPARED FOR: STEELFIELDS, LTD			SITE PLAN MARILLA STREET LANDFILL PERIODIC REVIEW REPORT			FIGURE 2
DES. BY:	DRW. BY:	CHK. BY:				
DWG: FIG 2-SITE PLAN.dwg			CITY OF BUFFALO	ERIE COUNTY	NEW YORK	

2 MONITORING AND MAINTENANCE PROGRAM

2.1 GENERAL

Monitoring and maintenance at the Marilla Street Landfill operates under the conditions specified in the Site Management Plan. This Plan 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, groundwater, and sediment is to be conducted annually, in addition to an overall site and final cover inspection. The approximate sampling locations are shown on Figure 2.

Sampling procedures including collection and preservation were completed in general accordance with the Site Management Plan for the 2014 sampling event between July 15th and 17th. Decontamination of sampling equipment was performed by washing equipment with phosphate free soap using a brush and rinsing with deionized water, followed by a 10% nitric acid rinse. Where deviations from the Site Management Plan's sampling protocol occurred, these anomalies are noted herein.

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 Site Management Plan. The laboratory reported that the methods specified in the Site Management Plan were outdated, and the methods actually used were the most current certified method equivalent to those in the Site Management Plan.

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 pipe discharged from South Park Ponds, used to establish regional background levels;

- **SW-2A** – South Pond near cutoff wall location;
- **SW-3A** – South end of Northwest Pond; and,
- **SW-5** – Northern end of Northeast Pond.

Surface water samples were collected on July 15, 16, and 17, 2014 at the four locations as described above with the exception of SW-1. An open drainage channel has replaced the discharge piping at this location. SW-1 was collected from the drainage channel entering the South Pond using a decontaminated stainless steel bucket. A blind duplicate (SW X-2) was collected at SW-2A. Each grab sample was analyzed in the field for temperature, pH, conductivity, and turbidity and recorded on the raw data sheets as shown in Appendix B. Field measurements are summarized in Table 2 in Appendix A.

As per the requirements of the Site Management Plan, surface water is to be field filtered and analyzed for soluble metals if the turbidity is greater than 50 NTU. No surface water samples demonstrated turbidity readings greater than 50 NTU. However, all surface water samples were filtered in the field (with the exception of SW-3A which was filtered in the laboratory since field staff inadvertently placed the sample into the preserved filtered metals bottle without field filtering the sample first) 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 which have only been detected below the Class D standard on one occasion (May 2006 in SW-1) for the available data set. The background water quality sampling location, SW-1, had the highest total iron concentration. Therefore, the source of iron contributing to the exceedances measured appears to be from upstream of the site.

Analytical results for both the surface water sampling locations representative of the background water quality (SW-1) and the downstream surface water sampling locations are similar. This suggests that downstream water quality is characteristic of the water quality from upstream of the site. The nondetected TDS concentration at the downstream sampling point SW-5 was unusual. The TDS concentration at SW-5 is generally two to three times greater when compared to the other three surface water locations. All other surface water results were typical.

2.3 SEDIMENT

Like surface water, sediment samples are collected annually 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 July 16, 2014 at the two locations listed above with a blind duplicate (X-3 SED) collected at SED 1. Matrix spike and matrix spike duplicate samples were also collected at SED 1. Specific conductance, temperature, and pH were inadvertently missed during field measurements at both sampling locations. 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

Generally, the concentrations of parameters at SED 1 are greater than at SED 2, which is consistent with 2012 and 2013 data. However, SED 1 was found at lower concentrations in every parameter than was detected in the previous two sampling events. Chromium concentration at SED 1 was an order of magnitude less than its 2013 concentration during this sampling event and closer to the concentrations generally found at SED 2. Since total chromium is generally not detected in the surface water across the site, this decrease could suggest an end to elevated chromium levels. Total recoverable phenolics (TRP) at both sediment sampling locations was not detected during this sampling event as is consistent with surface water samples and the two deep overburden wells. Total cadmium was also not detected.

Total lead and total manganese concentrations at SED 1 have shown decreasing concentrations over the most recent two monitoring periods for which data is available. MW-16B and SW-2A, which are closest to SED 1, are consistently below the detection limit for total lead, as is the case site wide. Total manganese at SW-2A was also elevated this reporting period but well within one standard deviation of the mean for the available data set. Levels of total lead and total manganese remained relatively consistent at SED 2.

SED 2 is observed to have an increasing trend with respect to total iron based on the previous two sampling events alone. The total iron concentrations reported for both sediment sampling locations are consistent with data from all four surface water locations which exceeded the Part 703 Class D water quality standard for iron. Concentrations of total arsenic at SED 1 have ranged between 2.3 to 3.2 times the concentrations found at SED 2. This sampling event, however, total arsenic was only 1.4 times higher in SED 1.

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 site¹. Total arsenic, cadmium, lead, and 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 above the residential use concentrations for hexavalent chromium (22 mg/L) at SED 1 and just below at 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 also below the restricted residential use SCO for the more stringent hexavalent chromium (110 mg/L) and well below the commercial use SCO for the more stringent hexavalent chromium (400 mg/L). Since it is unlikely that the site will be proposed for a residential use in the future, this result is not significant.

The relative percent difference between SED 1 and the blind duplicate for total chromium and total manganese were 75% and 70%, respectively, with the concentration in the blind duplicate the higher result in both cases. As such, the concentrations of these two parameters in SED 1

¹ There is no SCO for iron.

should be considered a usable estimate as the true concentration may be higher than reported. Even with this positive bias taken into account, the concentration in SED 1 is still well below the commercial use SCO for the more stringent hexavalent chromium (400 mg/L). Based on the accepted 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

Groundwater at the site is monitored on an annual basis for the parameters listed in Table 1 at ten monitoring wells. Every other year (2013, 2015, 2017, etc.), additional monitoring is conducted at five deep overburden wells to detect downward leachate migration and one shallow overburden well 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 other year:

- **Annual** – MW-3B, MW-4B, MW-6B, MW-7B, MW-14BR, MW-15B, MW-16B, MW-18B, MW-6A, MW-18A; and,
- **Biennial** – MW-2B, MW-2A, MW-3A, MW-4A, MW-15A, MW-16A.

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

Groundwater sampling was conducted between July 15 and 17, 2014. Depth to groundwater was first measured in all but three wells onsite (see Section 2.4.1 for exceptions). Then all wells required for sampling were purged and sampled as per the requirements in the Site Management Plan. The dedicated bailer could not be retrieved from MW-14BR which is to be sampled annually. The PVC well casing appeared to be damaged. Each sample was collected using a dedicated polyethylene bailer and preserved for analysis in laboratory provided containers. After each purge, the groundwater was field tested for temperature, pH, conductivity, and turbidity and recorded on the field observation sheets shown in Appendix B. Upon sample collection, field parameters were also recorded for each sampling location on the field observation sheets. Field data are summarized in Table 2.

Samples collected from MW-3B and MW-18A recorded turbidity values greater than 50 NTU. The turbidity at MW-3B was inadvertently not recorded on the field data sheet after the turbidity reading of greater than 50 NTU was taken. Subsequently, dissolved metals analyses were performed in addition to total metals for these two samples. Background monitoring wells MW-6A and MW-6B were also field filtered and tested for soluble metals for moving average trend analysis (MATA) purposes. Both background wells were observed with turbidity readings less than 50 NTU. A blind duplicate (X-1) was collected from MW-7B and the matrix spike/matrix spike duplicate was performed on MW-4B. 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

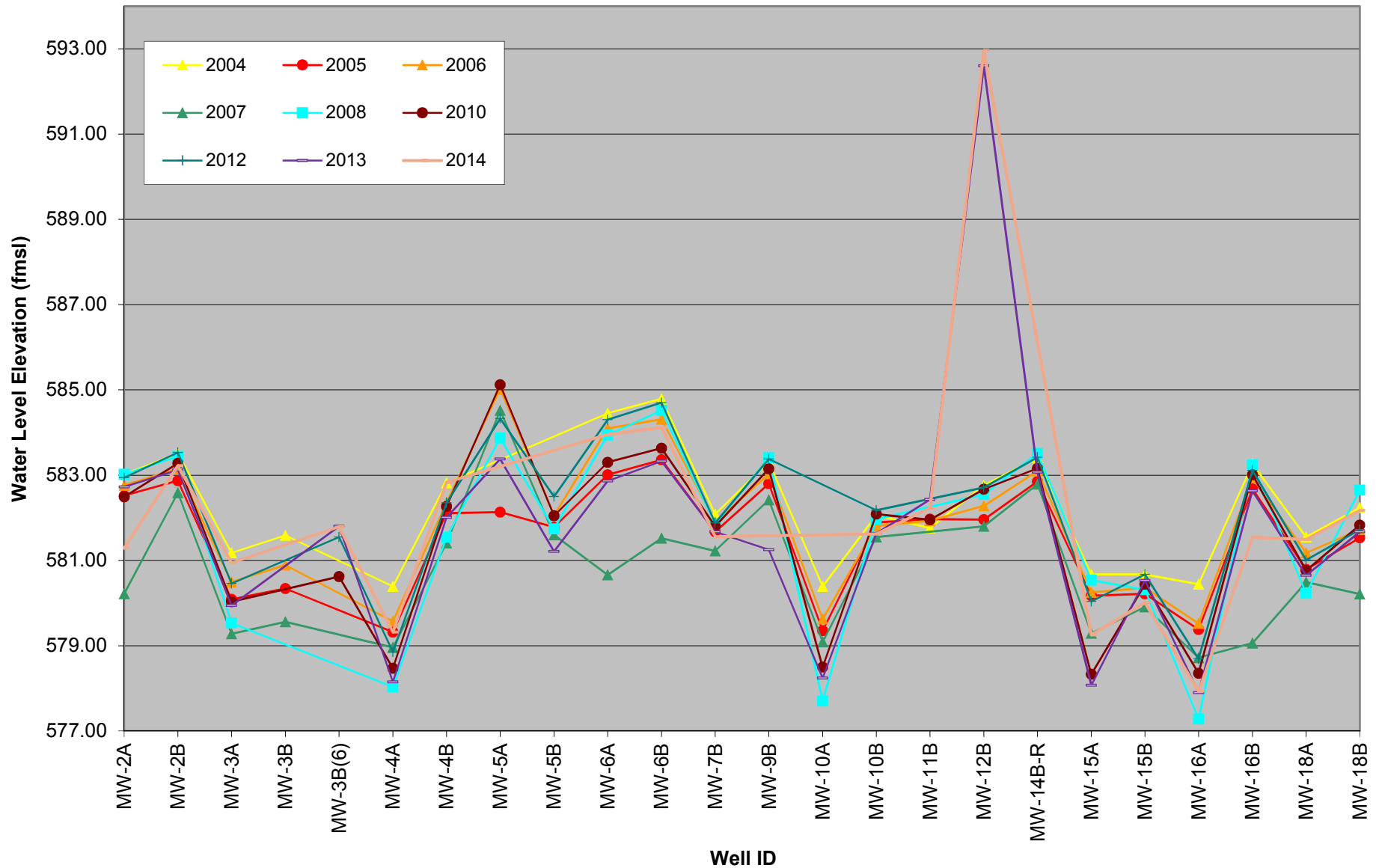
Groundwater elevation data was gathered from 18 onsite wells; 7 deep and 11 shallow overburden wells as summarized in Table 4 of Appendix A for the 2014 sampling event. Water levels and the total depth of each well were measured from the top of casing and were recorded on a field observations log at the time of measurement on July 15, 2014. Water levels at MW-6A and MW-6B were collected on July 16th. All field observations logs are included in Appendix B. Water levels were not collected at MW-5A, MW-5B, MW-9B, MW-10A, and MW-14BR. MW-14BR appeared to be damaged and the meter could only be inserted a few feet below the ground surface. The total depths recorded at MW-5A and MW-5B did not correspond to previously recorded depth measurements at this location. The September 8, 2014 inspection confirmed that the incorrect wells were identified as the MW-5 cluster. Field staff were unable to locate MW-10A, and the universal key used to unlock all other wells did not work for the lock on MW-9B.

A plot illustrating the groundwater elevations of each monitoring well is presented in Figure 3. Unusually high elevations recorded during 2013 and 2014 at MW-12B bucked previously recorded data by nearly 10 feet. This result was again rejected. Consideration may be required if future measurements continue this abnormal trend observed during the past two sampling events.

There are nine well couplets onsite. Well construction information and boring logs were reviewed to evaluate vertical gradients of groundwater flow across the site. Vertical gradients were calculated using groundwater data from a ten year period (2004 through 2014, excluding 2009 and 2011 when gauging was not conducted) and ranged between 0.05 to -0.38. With the exception of well couplet MW-5, all couplets generally experience downward vertical gradients, that is, groundwater flows from the shallow overburden to the deep overburden. Well couplets MW-2 and MW-6, located in the southeast corner of the facility, experienced relatively neutral average vertical gradients (-0.02 and -0.04, respectively), indicating predominantly horizontal flows in this area of the site. The greatest downward vertical gradient was measured at the MW-4 couplet (average of -0.38). MW-16 and MW-3 also showed strong downward flows. The couplets with the strongest downward vertical gradients are situated on the same northwest to southeast line.

The landfill cover, consisting of firm brown clay material, ranges in thickness between 2.3 and 6.25 feet below the surface. Fill and industrial slag material comprise the upper portion of the subsurface reaching elevations near 568 feet NGVD. Below the industrial material, the stratigraphy across the site is typical of the area, consisting of a relatively thin layer of glaciolacustrine sandy silt and glaciolacustrine clayey silt underlain by glacial till. The top of bedrock ranged between 20 to 50 feet below grade and generally consisted of a layer of Skaneateles formation grey limestone on top of black Marcellus formation shale.

FIGURE 3
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of Historical Groundwater Elevations



2.4.2 Groundwater Quality Analysis

The Site Management Plan requires the comparison of groundwater results to NYSDEC Part 703 Class GA Standards and Guidance Values and to background water quality. According to the Site Management Plan 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 2014 were compared to the 6 NYCRR Part 703 GA standards as shown in Tables 5 and 6 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 standards; the Class GA standards and the BMC; and the Class GA standards, the BMC, and the BMC plus three standard deviations (BMC+3SDs), respectively. Therefore, any shaded parameter is in exceedance of Part 703 GA standard. Note that BMC and BMC+3SDs exceedances will be discussed in the next section.

Widespread exceedances of the Class GA standards for specific conductance, TOC, TDS, total iron, and total manganese occurred across the site in both shallow and deep wells. Half of the shallow overburden monitoring wells experienced exceedances of the upper limit of the pH standard. However, pH measurements were less than were recorded in 2013 at all shallow wells. Groundwater at MW-3B did not exceed the pH standard which has only happened one other time (August 2010) since October 2001. There were no violations of the pH standard in the deep wells which hover near neutral pH. The standard of 1.0 ug/L for TRP was also exceeded in the majority of the shallow wells but below the detection limit for both 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.

Exceedances of the Class GA standard for total and dissolved arsenic, chromium, and lead were measured at MW-3B. Other less widespread exceedances of groundwater standards or guidance values during 2014 include the following:

- Total Arsenic in MW-15B;

- Acetone in MW-3B; and,
- Trichloroethene in MW-16B.

These exceedances are consistent with data from the 2013 sampling event.

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-6B and MW-6A as shown in Appendix D and Appendix E, respectively. The results were incorporated into Tables 5 and 6 and compared to the results from the current monitoring period. The results shaded in orange in Tables 5 and 6 indicate the need for MATA which are presented on an individual parameter basis in Appendix F and G.

Table 7 summarizes the tracked parameters and groundwater wells which have experienced exceedances of the BMC+3SDs. Increasing linear trends for shallow and deep wells with five or more tracked events are compared to trending in background water quality in their respective upgradient monitoring wells and to surface water quality. All trend analysis utilizes 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. The results were incorporated into Table 7 and trending was compared to the results from the current monitoring period.

Increasing trends in total arsenic, total manganese, TDS, and TOC were found in select wells across the site. One instance each of increasing trends of conductivity and soluble iron and manganese were also identified. Generally, these increasing trends were paralleled by an increasing trend in the upgradient wells with the exception of total arsenic in shallow wells MW-3B and 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.

The observed increasing trend in total arsenic at MW-3B and MW-15B continued with the 2014 sampling event. Regression Analysis on the data for these two wells shows that the data is reasonably well fit with a linear trend ($R^2=0.93$ for MW-3B and 0.82 for MW-15B). Further, the increasing trends are significant at the 99% confidence level since the 99% confidence interval

around the slope of the linear regression does not include zero. Conversely, the decreasing trend found in MW-6B is also significant at the 99% confidence interval. 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 Site Management Plan decision tree. Only three data points are currently available for surface water for arsenic; therefore, MATA for arsenic in surface water and a subsequent comparison cannot be made until another sampling event occurs. Moving average trend analysis is to continue, per the decision tree, at MW-3B and MW-15B for total arsenic.

The increasing trends in TDS and specific conductivity in MW-18A are both insignificant at the 95% confidence level and the data are not well fit by linear regression ($R^2=0.004$ for specific conductivity and 0.264 for TDS). MW-6A during the 2012 monitoring period exhibited increasing trends of TDS, but a relatively low TDS concentrations of 548 mg/L and 673 mg/L in 2013 and 2014, respectively reversed the direction of the linear trend line. The R-squared value decreased by an order of magnitude between the 2012 and 2013 events, and decreased even more with the 2014 results. This low R-squared value (0.020) suggests that the linear trend line is a poor fit for the data and the resulting decreasing trend is insignificant at the 95% confidence level. Therefore, neither opposing trend in MW-18A are of concern.

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, namely pH, specific conductance, TOC, total iron, and total manganese as shown by the graphs in Appendix H. The results were incorporated into Table 7 and trending was compared to the results from the current monitoring period.

Of the monitoring wells which exhibit increasing trends for TDS (MW-14BR, MW-18A), total arsenic (MW-3B, MW-15B), soluble manganese (MW-18A), and soluble iron (MW-18A), historically surface water MATA has not been performed for these same parameters; therefore, a comparison cannot be made. Currently, three historic data points have been assembled for TDS and arsenic. The 2014 event marked the first sampling event where surface water was analyzed for soluble metals regardless of the turbidity measurement. Five data points minimum are

necessary to begin MATA. Thus, TDS and arsenic comparisons can begin in 2016 while soluble manganese and soluble iron will not be possible for another four years. Appendix H shows all other parameters analyzed for in the surface water samples.

Total organic carbon which demonstrates increasing trends in four of the downgradient onsite wells (MW-14BR, MW-15B, MW-16B, MW-18A), had corresponding increasing trends at all surface water sampling locations as shown in Table 7. Regression analysis on total organic carbon data at MW-14BR, MW-15B, and MW-18A indicated that the observed increasing trends are insignificant at the 99% confidence interval, given the exclusion of zero from the 99% confidence interval around the slope of the linear regression. The increasing trend at MW-16B was statistically significant at the 99% confidence interval. Similarly, the increasing trends SW-1 and SW-2A, located near MW-16B, are significant based on linear regression analysis at the 99% confidence interval. These three monitoring locations demonstrate R-squared values near one (0.83, 0.85, and 0.83 for MW-16B, SW-1, and SW-2A, respectively), indicating a relatively strong fit of the data to a linear trend. Upgradient well MW-6B also demonstrated increasing trends in TOC, indicating that the observed impacts at MW-16B and the two surface water sampling locations may be caused by upgradient groundwater.

All surface water locations, except SW-5, exhibited decreasing trends in total manganese while concentrations at MW-3B and MW-18A trended upwards. Tracking of the trends in total manganese at MW-3B began this monitoring period with the fifth tracked event recorded in 2014.

2.5 POST-CLOSURE SITE INSPECTION AND MAINTENANCE

Annual post-closure site inspections are to be conducted as per Section 7 of the Site Management Plan. Of note here and as identified last year, there are a number of locations where the perimeter fence has been damaged or is missing. However, we understand the NYSDEC has agreed Steelfields' responsibility is the maintenance and monitoring of the landfill cap; whereas, the maintenance of the fence around the site is no longer a required element of post-closure maintenance.

Mowing was conducted during the week of July 7th to facilitate the initial landfill cover inspection, conducted on July 15, 2014. Additional site inspections were completed on September 8th and October 8th. Erosional rills, recurring small burrows, and one larger hole on the BOF Dust Area were identified. Locks and a locking mechanism were missing from a few monitoring wells as identified in the reports, and a minor amount of debris was noted at the top of the BOF Dust Area.

As noted in the reports, the inspectors also identified unauthorized tire, mattress and refuse disposal, and the presence of makeshift shelters; however, the shelters and debris are either off-site or not inside the landfill footprint, and are not within Steelfields area of responsibility. A small pile of railroad maintenance materials remains onsite near the active rail line that traverses the property. This material does not adversely impact the performance of the cover system, and is assumed to be required by the railroad company, so will not be removed.

Maintenance and repair of many of the deficiencies was initially conducted by Steelfields staff on September 4th and 8th. Steelfields staged a soil stock pile near the entrance gate to help facilitate landfill cap repairs. Inspection, debris removal, and final remedial measures were conducted by Daigler Engineering, PC on September 8th and October 8th. 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 identify any events, such as quality control failures, which may have occurred during analysis. Upon evaluation, all data are unqualified or usable estimates. All samples with the exception of MW-3B which was analyzed on the eighth day from collection, outside the acceptable seven day holding time for unpreserved samples, were analyzed within the appropriate holding times. Matrix interference is suspected at MW-3B, however, the results appear consistent with previously recorded data at this location and all data is considered usable.

Turbidity, pH, and conductivity meters were calibrated by Pine Environmental Services, Inc prior to sampling. All calibrations were reportedly successful. Calibration confirmation sheets and meter information are provided in Appendix K.

Percent completeness was calculated for each media with groundwater, surface water, and sediment calculated at 97.2%, 100%, and 81.8% complete, respectively.

2.7 EQUIS DATABASE

Laboratory analysis results were provided by ALS in the appropriate electronic data deliverables (EDD) 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 was populated in addition to Well_v3, WaterTable_v3, WaterLevel_v3, and FieldResults_v3. Although WellConstruction_v3 is required as part of Well_v3, information necessary for all wells was not available. All other requirements in the "Final Checklist for Submissions of EDDs to NYSDEC" were met.

The formatted EDDs were 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.

3 SUMMARY AND CONCLUSIONS

Groundwater and surface water quality for the 2014 annual sampling event appeared typical for the site. Total iron remained elevated both upgradient and downgradient in groundwater and surface water. The highest measured surface water concentration was at the background surface water sampling location SW-1, indicating the source of iron is likely from upstream of the site. A nondetect concentration of TDS at SW-5 was unusual this monitoring period.

Regression analysis was performed to determine the significance of observed increasing or decreasing trends in the data. The increasing trends in conductivity and TDS at MW-18A were determined to be insignificant, and therefore, their opposing trends with upgradient well MW-6A is not of concern. TOC concentrations at MW-14BR, MW-15B, and MW-18A were also determined insignificant at the 99% confidence interval. The increasing trend in TOC at MW-16B was determined to be significant; however, upgradient groundwater quality has a similar upward trend suggesting the source of increasing TOC may be coming from upgradient of the site.

Increasing arsenic trends at MW-3B and MW-15B were determined significant at the 99% confidence interval. Since the observed decreasing trend was determined significant at upgradient well MW-6B, an upgradient source of arsenic causing the trends observed at MW-3B and MW-15B is not likely. The next step in the Site Management Plan decision tree is to determine if there is a corresponding trend for total arsenic in the surface water samples. Moving average trend analysis cannot yet be performed for the surface water sampling locations since only three data points are available. Therefore, trend analysis at MW-3B and MW-15B is to continue per the Site Management Plan decision tree.

Concentrations of all parameters at SED 2 were greater than those detected at SED 1 during the 2014 sampling event which is unusual for the site. Chromium detections at SED 1 were an order of magnitude lower this year, and closer to the concentrations generally found at SED 2. This could signify an end to elevated chromium levels. Sediment parameters were compared to NYSDEC's SCOs for the first time. The comparisons suggested restricted residential use is appropriate based on chromium concentrations and unrestricted use based on the four remaining parameters tested for in soil.

The initial spring post-closure site inspection revealed some minor maintenance issues which were addressed by Steelfields, LTD and Daigler Engineering, PC staff, re-inspected, and approved during the October 2014 follow-up inspection. 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
July 2014 Annual Sampling Event
Groundwater, Surface Water, and Sediment Analytical Parameters

	Analysis Method ⁽⁵⁾	Groundwater	Surface Water ⁽³⁾	Sediment
FIELD PARAMETERS				
Static Water Level	Field	X	NA	NA
pH	Field	X	X	
Temperature	Field	X	X	
Specific Conductance	Field	X	X	
Turbidity	Field	X	X	NA
WET CHEMISTRY				
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 ⁽⁴⁾	X	X	X
METALS - INORGANIC PARAMETERS^(1,2)				
Arsenic - Total and Soluble	6010C	X	X	X
Cadmium - Total and Soluble	6010C	NA	NA	X
Chromium - Total and Soluble	6010C	X	X	X
Cyanide - Total and Soluble	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
Volatile Organic Compounds (VOCs)				
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) - Sediment samples are analyzed for total inorganics only.
- (3) - Leachate breakouts/seeps are to be analyzed for the same parameters as Surface Water.
- (4) - Laboratory analysis method for sediment
- (5) - Represents most current laboratory certified method equivalent to those in the Site Management Plan.

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

TABLE 2
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of Monitoring Field Measurements

Location	Sampling Date	Sampling Time	pH (units)	Temperature (°C)	Specific Conductance (Umhos/cm)	Turbidity (NTU)
MW-3B ⁽¹⁾	7/16/2014	9:45	7.84	14.2	2.75	> 50
MW-4B	7/15/2014	16:00	8.04	18.0	0.80	15.9
MW-6A	7/17/2014	7:45	7.90	12.3	0.96	8.85
MW-6B	7/17/2014	8:15	7.17	13.7	1.42	0.78
MW-7B	7/16/2014	11:15	11.65	15.8	4.83	10.56
MW-14BR ⁽³⁾	9/19/2013	14:50	-	-	-	-
MW-15B	7/16/2014	12:30	10.97	17.3	3.11	4.78
MW-16B	7/16/2014	10:00	10.90	16.7	1.75	29.3
MW-18A ⁽¹⁾	7/15/2014	15:20	7.33	21.2	2.51	70.6
MW-18B	7/15/2014	15:40	7.55	17.1	2.82	11.1
SW-1	7/17/2014	15:00	7.16	22.3	0.79	4.29
SW-2A	7/15/2014	14:05	7.50	28.2	0.77	9.34
SW-3A ⁽²⁾	7/15/2014	15:00	7.50	27.3	0.77	5.04
SW-5	7/16/2014	15:45	8.30	25.6	1.58	16.8
SED 1	7/16/2014	12:45	-	-	-	-
SED 2	7/16/2014	13:20	-	-	-	-

Notes:

- (1) - Sample was field filtered for soluble metals since turbidity measured greater than 50 NTU.
- (2) - Sample was laboratory filtered for soluble metals.
- (3) - Unable to retrieve dedicated polyethylene bailer. Well casing appeared to be damaged.

TABLE 3
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of Surface Water and Sediment Analytical Results

Parameter	SW-1	SW-2A	SW-3A	SW-5	Blind Duplicate #2 ⁽³⁾ (SW X-2)	Class "D" Standard ⁽¹⁾⁽²⁾	SED-1 ⁽⁴⁾	SED-2 ⁽⁴⁾	Blind Duplicate #3 ⁽³⁾⁽⁴⁾ (X-3 SED)
WATER QUALITY (mg/L or as indicated)									
pH (units)	7.16	7.50	7.50	8.30	7.50	6.0-9.5	NA	NA	NA
Specific Conductance (Umhos/cm)	0.79	0.77	0.77	1.58	0.77	NA	NA	NA	NA
Total Organic Carbon	6.1	5.8	6.3	5.7	5.8	NA	NA	NA	NA
Total Dissolved Solids	414	409	427	40 U	322	NA	NA	NA	NA
Total Recoverable Phenolics	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	NA	0.14 U	0.13 U	0.15 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	8.0	5.6	7.5
Cadmium	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA	0.74 U	0.68 U	0.73 U
Chromium	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA	23	21.1	50.5
Cyanide	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.022	NA	NA	NA
Iron	0.750	0.450	0.380	0.660	0.560	0.3	29,300	25,700	32,300
Lead	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	18.9	35.5	19.4
Manganese	0.279	0.141	0.116	0.054	0.148	NA	591	644	1,230
SOLUBLE METALS - INORGANIC PARAMETERS (mg/L)									
Arsenic	0.01 U	0.01 U	0.01 U	0.01 U	NA	0.34	NA	NA	NA
Cadmium	0.005 U	0.005 U	0.005 U	0.005 U	NA	H	NA	NA	NA
Chromium	0.01 U	0.01 U	0.01 U	0.01 U	NA	H	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	0.1 U	0.1 U	0.19	0.1 U	NA	NA	NA	NA	NA
Lead	0.05 U	0.05 U	0.05 U	0.05 U	NA	H	NA	NA	NA
Manganese	0.188	0.079	0.081	0.01 U	NA	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS (AQUEOUS) (UG/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-1.
- (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.
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TABLE 4
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of Historical Groundwater Elevations

Well ID	Riser Elevation ⁽¹⁾	Date of Measurement																	
		2004 Annual		2005 Annual		2006 Annual		2007 Annual		2008 Annual		2010 Annual		2012 Annual		2013 Annual		2014 Annual	
		Depth ⁽²⁾	Elevation	Depth ⁽²⁾	Elevation	Depth ⁽²⁾	Elevation	Depth ⁽²⁾	Elevation	Depth ⁽²⁾	Elevation	Depth ⁽²⁾	Elevation	Depth ⁽²⁾	Elevation	Depth ⁽²⁾	Elevation	Depth ⁽²⁾	Elevation
MW-2A	591.02	8.00	583.02	8.50	582.52	8.26	582.76	10.80	580.22	8.00	583.02	8.53	582.49	8.08	582.94	8.30	582.72	9.73	581.29
MW-2B	590.86	7.35	583.51	7.99	582.87	7.71	583.15	8.27	582.59	7.42	583.44	7.58	583.28	7.33	583.53	7.74	583.12	7.64	583.22
MW-3A	587.18	6.00	581.18	7.09	580.09	6.69	580.49	7.90	579.28	7.65	579.53	7.15	580.03	6.72	580.46	7.24	579.94	6.24	580.94
MW-3B	587.70	6.11	581.59	7.36	580.34	6.81	580.89	8.14	579.56	Note 6		Note 6		Note 6		Note 6		Note 6	
MW-3B ⁽⁶⁾	588.29	NA		NA		NA		NA		NA		7.67	580.62	6.74	581.55	6.49	581.80	6.50	581.79
MW-4A	591.82	11.43	580.39	12.50	579.32	12.25	579.57	12.86	578.96	13.79	578.03	13.35	578.47	12.97	578.85	13.67	578.15	12.50	579.32
MW-4B	591.89	9.07	582.82	9.78	582.11	9.53	582.36	10.48	581.41	10.35	581.54	9.62	582.27	9.54	582.35	9.88	582.01	9.06	582.83
MW-5A	589.55			7.42	582.13	4.53	585.02	5.03	584.52	5.68	583.87	4.43	585.12	5.22	584.33	6.17	583.38		
MW-5B	587.93			6.15	581.78	5.87	582.06	6.33	581.60	6.19	581.74	5.88	582.05	5.43	582.50	6.72	581.21		
MW-6A	597.66	13.21	584.45	14.65	583.01	13.56	584.10	17.00	580.66	13.72	583.94	14.36	583.30	13.36	584.30	14.80	582.86	13.71	583.95
MW-6B	597.92	13.13	584.79	14.56	583.36	13.61	584.31	16.40	581.52	13.40	584.52	14.29	583.63	13.22	584.70	14.59	583.33	13.80	584.12
MW-7B	615.76	33.68	582.08	34.09	581.67	33.86	581.90	34.54	581.22	33.90	581.86	33.96	581.80	33.88	581.88	34.09	581.67	34.20	581.56
MW-9B	612.21	28.90	583.31	29.41	582.80	29.18	583.03	29.79	582.42	28.80	583.41	29.06	583.15	28.83	583.38	30.96	581.25		
MW-10A	617.84	37.45	580.39	38.49	579.35	38.21	579.63	38.75	579.09	40.14	577.70	39.34	578.50	NA		39.60	578.24		
MW-10B	614.32	32.26	582.06	32.43	581.89	32.51	581.81	32.77	581.55	32.35	581.97	32.23	582.09	32.14	582.18	32.69	581.63	32.70	581.62
MW-11B	608.84	27.08	581.76	26.87	581.97	26.91	581.93					26.89	581.95	WI		26.41	582.43	26.61	582.23
MW-12B	597.96	15.20	582.76	16.00	581.96	15.68	582.28	16.16	581.80	15.41	582.55	15.29	582.67	15.25	582.71	5.36	592.60	5.00	592.96
MW-14B-R	607.37	23.96	583.41	24.52	582.85	24.27	583.10	24.58	582.79	23.86	583.51	24.21	583.16	23.95	583.42	24.30	583.07		
MW-15A	586.97	6.30	580.67	6.80	580.17	6.72	580.25	7.68	579.29	6.43	580.54	8.64	578.33	6.93	580.04	8.90	578.07	7.72	579.25
MW-15B	586.78	6.11	580.67	6.56	580.22	6.42	580.36	6.87	579.91	6.47	580.31	6.34	580.44	6.11	580.67	6.25	580.53	6.77	580.01
MW-16A	588.59	8.15	580.44	9.21	579.38	9.07	579.52	9.87	578.72	11.31	577.28	10.24	578.35	9.90	578.69	10.69	577.90	10.66	577.93
MW-16B	588.09	4.83	583.26	5.41	582.68	5.15	582.94	9.03	579.06	4.85	583.24	5.08	583.01	4.98	583.11	5.46	582.63	6.55	581.54
MW-18A	627.54	45.99	581.55	46.75	580.79	46.36	581.18	47.05	580.49	47.31	580.23	46.78	580.76	46.53	581.01	46.89	580.65	46.05	581.49
MW-18B	627.04	44.80	582.24	45.51	581.53	45.32	581.72	46.83	580.21	44.39	582.65	45.21	581.83	45.32	581.72	45.37	581.67	44.87	582.17

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.
- (2) - Measured in feet below top of inner casing (TIC) prior to purging/sampling.
- (3) - Empty box indicates that a measurement was not obtained.
- (4) - No sampling or gauging was conducted in 2009 or 2011.
- (5) - Well MW-3B damaged and not gauged in 2008. MW-14BR damaged and not gauged in 2014.
- (6) - Well MW-3B was repaired with new PVC riser in August 2010. The revised top of PVC casing was surveyed after the new PVC riser was installed. The revised 2010 elevation will be used for future gauging events.

TABLE 5
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of Shallow Groundwater Analytical Results

Parameter	MW-3B ⁽⁴⁾	MW-4B	MW-6B	MW-7B	MW-14-BR	MW-15B	MW-16B	MW-18B	Blind Duplicate #1 ⁽⁵⁾ (X-1)	Class "GA" Standard ⁽¹⁾	BMC ⁽²⁾	BMC +3SDs ⁽³⁾
WATER QUALITY (mg/L or as indicated)												
pH (units)	7.84	8.04	7.17	11.65	NA	10.97	10.90	7.55	11.65	6.5-8.5	7.33	6.41-8.24
Specific Conductance (mS/cm)	2.75	0.80	1.42	4.83	NA	3.11	1.75	2.82	4.83	NA	1.06	2.19
Total Organic Carbon	96	6.8	7.6	47.5	NA	96	18.2	24.4	32.4	NA	6.26	14.37
Total Dissolved Solids	1,530	552	1,200	1,070	NA	1,320	610	2,380	1,420	500	903	1,262
Total Recoverable Phenolics	0.521	0.0254	0.0050 U	0.426	NA	0.930	0.0073	0.0050 U	0.288	0.001	0.0125	0.0558
TOTAL METALS - INORGANIC PARAMETERS (mg/L)												
Arsenic	0.047	0.01 U	0.01 U	0.01 U	NA	0.032	0.01 U	0.015	0.01 U	0.025	0.00751	0.0185
Chromium	0.133	0.01 U	0.01 U	0.01 U	NA	0.01 U	0.01 U	0.01 U	0.01 U	0.05	0.0081	0.0192
Cyanide	0.013	0.010 U	0.010 U	0.023	NA	0.010 U	0.020	0.027	0.017	0.2	0.0096	0.014
Iron	94.4	2.50	1.190	0.750	NA	0.85	0.510	1.09	2.52	0.3	1.169	4.301
Lead	0.582	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.025	0.0145	0.0731
Manganese	1.61	1.02	0.567	0.023	NA	0.015	0.061	1.40	0.066	0.3	0.285	0.954
SOLUBLE METALS - INORGANIC PARAMETERS (mg/L)												
Arsenic	0.035	NA	0.01 U	NA	NA	NA	NA	NA	NA	NA	0.008	0.0181
Chromium	0.023	NA	0.01 U	NA	NA	NA	NA	NA	NA	NA	0.0104	0.012
Iron	3.04	NA	0.32	NA	NA	NA	NA	NA	NA	NA	0.452	3.21
Lead	0.091	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	0.0148	0.0747
Manganese	0.051	NA	0.51	NA	NA	NA	NA	NA	NA	NA	0.160	0.602
VOLATILE ORGANIC COMPOUNDS (AQUEOUS) (UG/L)⁽⁶⁾												
Acetone	390	10 U	10 U	100 U	NA	200 U	25 U	10 U	29	50	NA	NA
Trichloroethene	50 U	5.0 U	5.0 U	50 U	NA	100 U	21	5.0 U	13 U	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-3B was repaired and sampled on August 30, 2010 after installation of new PVC riser pipe, steel casing and a surface concrete pad.
(5) - Blind Duplicate #1 was collected from MW-7B.
(6) - Only those parameters detected at a minimum of one sample location are reported in this table. "U" indicates a non-detect value.
(7) - "NA" indicates parameter not analyzed at this location or data is not available.

#	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 all, including Background Mean plus 3 standard deviations.

TABLE 6
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of Deep Groundwater Analytical Results

Parameter	MW-6A	MW-18A	Class "GA" Standard ⁽¹⁾	BMC ⁽²⁾	BMC +3SDs ⁽³⁾
WATER QUALITY (mg/L or as indicated)					
pH (units)	7.90	7.33	6.5-8.5	7.65	6.89-8.40
Specific Conductance (Umhos/cm)	0.960	2.51	NA	0.858	1.83
Total Organic Carbon	3.2	18.2	NA	2.11	4.32
Total Dissolved Solids	673	1,920	500	584	1,362
Total Recoverable Phenolics	0.0050 U	0.0050 U	0.001	0.0118	0.0555
TOTAL METALS - INORGANIC PARAMETERS (mg/L)					
Arsenic	0.01 U	0.01 U	0.025	0.00835	0.0261
Chromium	0.01 U	0.01 U	0.05	0.0084	0.0192
Cyanide	0.010 U	0.010 U	0.2	0.0096	0.0138
Iron	1.13	9.52	0.3	0.905	3.72
Lead	0.05 U	0.05 U	0.025	0.0149	0.0751
Manganese	0.353	0.993	0.3	0.197	0.562
SOLUBLE METALS - INORGANIC PARAMETERS (mg/L)					
Arsenic	0.01 U	0.01 U	NA	0.0107	0.0319
Chromium	0.01 U	0.01 U	NA	0.0104	0.0120
Cyanide	NA	NA	NA	NA	NA
Iron	0.1 U	6.410	NA	0.142	0.686
Lead	0.05 U	0.05 U	NA	0.0146	0.0749
Manganese	0.208	0.901	NA	0.157	0.563
VOLATILE ORGANIC COMPOUNDS (AQUEOUS) (UG/L) ⁽⁵⁾					
	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) - Only those parameters detected at a minimum of one sample location are reported in this table. "U" indicates a non-detect value.

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

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 all, including Background Mean plus 3 standard deviations.

TABLE 7
Marilla Street Landfill
July 2014 Annual Sampling Event
Parameter Tracking for Moving Average Trend Analysis (MATA)

Well I.D.	Tracked Parameters	Sampling Event ⁽⁵⁾⁽⁶⁾												No. of Tracked Events	Increasing Trend ⁷⁽¹⁾	Corresponding Increasing Trend?						
		Apr-01	Oct-01	Apr-02	Apr-03	Apr-04	Jul-05	May-06	Aug-07	Aug-10	May-12	Sep-13	Jul-14			Upgradient Groundwater ⁽⁷⁾		Surface Water ⁽²⁾⁽³⁾				
																MW-6A	MW-6B	SW-1	SW-2A	SW-3A	SW-5	
Shallow Groundwater Monitoring Wells																						
MW-3B ⁽⁷⁾	pH	X		X	X	X	X	X	X			X	X		9	No						
	Specific Conductance	X	X	X	X	X	X	X	X					X	9	No						
	Total Cyanide				X				X						2	TBD ⁽⁴⁾						
	Total Dissolved Solids			X	X	X	X	X	X	X	X	X	X	X	10	Yes	-	Yes	TBD	TBD	TBD	TBD
	Total Organic Carbon	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	12	No						
	Total Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	12	Yes	-	No	TBD	TBD	TBD	TBD
	Total Chromium											X	X	X	2	TBD						
	Total Manganese								X		X	X	X	X	5	Yes	-	Yes	No	No	No	Yes
	Total Iron												X	X	2	TBD						
	Total Lead												X	X	2	TBD						
	Soluble Arsenic												X	X	2	TBD						
	Soluble Chromium												X	X	2	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				2	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	12	No						
	Specific Conductance	X	X	X	X	X	X	X				X	X		9	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		11	No						
	Total Recoverable Phenolics	X	X	X	X	X	X	X	X	X	X	X	X	X	13	No						
MW-14B-R ⁽⁶⁾	pH	X	X	X	X	X	X	X				X	X		9	No						
	Specific Conductance	X	X	X	X	X	X	X							7	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	TBD	TBD	TBD	TBD
	Total Organic Carbon	X	X	X	X	X	X								6	Yes	-	Yes	Yes	Yes	Yes	Yes
	Total Recoverable Phenolics	X	X												2	TBD						
	Total Manganese			X		X			X	X					4	TBD						
MW-15B	pH											X	X	X	3	TBD						
	Specific Conductance	X	X	X	X	X	X	X					X	X	9	No						
	Total Dissolved Solids				X	X	X	X	X	X			X	X	8	No						
	Total Recoverable Phenolics											X	X	X	3	TBD						
	Total Organic Carbon	X	X	X	X	X	X	X	X	X	X	X	X	X	12	Yes	-	Yes	Yes	Yes	Yes	Yes
	Total Arsenic						X		X	X	X	X	X	X	7	Yes	-	No	TBD	TBD	TBD	TBD
	Total Iron	X		X	X	X	X	X	X						7	No						
	Soluble Iron					X	X	X		X					4	TBD						
	Total Manganese	X	X	X	X	X	X	X	X	X					9	No						
	Soluble Manganese	X	X	X	X	X	X	X							7	No						
MW-16B	pH	X	X		X	X	X	X	X	X		X	X	X	11	No						
	Specific Conductance	X	X	X	X	X	X	X							7	No						
	Total Organic Carbon	X	X	X	X		X						X		6	Yes	-	Yes	Yes	Yes	Yes	Yes
	Total Recoverable Phenolics	X	X												2	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 7
Marilla Street Landfill
July 2014 Annual Sampling Event
Parameter Tracking for Moving Average Trend Analysis (MATA)

Well I.D.	Tracked Parameters	Sampling Event ⁽⁵⁾⁽⁶⁾													No. of Tracked Events	Increasing Trend? ⁽¹⁾	Corresponding Increasing Trend?					
		Apr-01	Oct-01	Apr-02	Apr-03	Apr-04	Jul-05	May-06	Aug-07	May-08	Aug-10	May-12	Sep-13	Jul-14			Upgradient Groundwater ⁽⁷⁾		Surface Water ⁽²⁾⁽³⁾			
																	MW-6A	MW-6B	SW-1	SW-2A	SW-3A	SW-5
MW-18B	pH					X		X							2	TBD						
	Specific Conductance	X	X	X	X	X	X	X				X	X	X	10	No						
	Total Dissolved Solids				X	X	X	X	X	X	X	X	X	X	10	No						
	Total Organic Carbon	X	X	X	X	X	X		X		X			X	9	No						
	Total Recoverable Phenolics	X	X												2	TBD						
	Total Iron												X		1	TBD						
	Total Manganese	X	X	X	X	X	X		X	X				X	9	No						
Deep Groundwater Monitoring Wells																						
MW-18A	pH									X					1	TBD						
	Specific Conductance	X	X	X	X	X	X	X			X	X	X	X	11	Yes	No	-	No	No	No	No
	Total Dissolved Solids						X	X	X	X	X	X	X	X	8	Yes	No	-	TBD	TBD	TBD	TBD
	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		X	12	No						
	Soluble Iron				X		X	X	X	X	X	X			7	Yes	Yes	-	TBD	TBD	TBD	TBD
	Total Manganese				X	X	X	X	X	X	X	X	X	X	10	Yes	Yes	-	No	No	No	Yes
	Soluble Manganese				X		X	X	X	X	X	X		X	8	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.

(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 during the July 2014 event.

(7) - Shallow groundwater monitoring wells (designated "B") are compared to upgradient monitoring well MW-6B. Deep groundwater monitoring wells ("A") are compared to upgradient monitoring well MW-6A.

X Tracked event where reported concentration exceeds Groundwater Quality Standard (GWQS), 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 Data Sheets

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW-1

Field Personnel: SJD

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7-17-14 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: _____

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
903			22.3	7.16	.79	4.29		

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW2A (X-2)

Field Personnel: _____

Sample Matrix: Surface

MONITORING WELL INSPECTION:

Date/Time 7/15/14 11405

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 (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
<u>1205</u>			<u>28.2</u>	<u>7.5</u>	<u>0.77</u>	<u>9.34</u>		

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW 3A

Field Personnel: _____

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7/15/14 11500

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 (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
1500			27.3	7.50	0.77	5.04		
	- forgot to field filter before put in							
	bottle. Lab to filter							

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: SW-5

Field Personnel: SSD

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7-16-14 1 1545

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
1515			25.6	8.3	1.58	16.8		

11.57
-6.50
5.07

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-3B

Field Personnel: SJD / AMZ

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7/15/14 11055

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: 7/15/14 1055

Date / Time Completed: 1

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

Riser Diameter, Inches: 2"

Initial Water Level, Feet: 6.5

Elevation. G/W MSL: _____

Well Total Depth, Feet: 11.57

Method of Well Purge: bailer

One (1) Riser Volume, Gal: _____

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: _____

Purged To Dryness ☒ Y ☐ N

Purge Observations: dark like coffee

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
1057		1 bailer	20.3	7.93	1.94	2.56		
1105		1 gal					dry	
1515	NOT	RECHARGED			2.2			
7-16 9:45			14.2	7.84	2.75			

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW 4B (MS/MSD)

Field Personnel: SJD/AMZ

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7/15/14 11020

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: 7/15/14 1020

Date / Time Completed: 1

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

Riser Diameter, Inches: 2"

Initial Water Level, Feet: 9.06

Elevation. G/W MSL: _____

Well Total Depth, Feet: 18.7

Method of Well Purge: bailer

One (1) Riser Volume, Gal: 1.57 gal

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: _____

Purged To Dryness ☒ Y ☐ N

Purge Observations: Some particulate

Start 1020 Finish 1042

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
7/15/14 1028	1.5 BAILERS	10.2	17.9	7.8	0.48	20.3		
1042		2 gal	19.1	7.47	0.67	>1000	dry	
1600			18.0	8.04	0.80	15.9	SAMPLE	

FIELD OBSERVATIONS

Facility: Marilla Street landfill

Sample Point ID: 6A

Field Personnel: SJD

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7-16-14 11330

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

Prot. Casing/riser height: 4.27

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

If prot.casing; depth to riser below: .24

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

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

PURGE INFORMATION:

Date / Time Initiated: 7-16-14

Date / Time Completed: 1

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

Riser Diameter, inches: _____

Initial Water Level, Feet: 13.71

Elevation. GW MSL: _____

Well Total Depth, Feet: 29.82

Method of Well Purge: _____

One (1) Riser Volume, Gal: 2.63

Dedicated: ☒ Y () N

Total Volume Purged, Gal: 7.89

Purged To Dryness ☒ Y () N

Purge Observations: Dry after 4.5 gallons Start 1400 Finish 1432

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
1414		.75 gallons	16.1	7.51	.96	4.23		
7:17 745			12.3	7.9	.96	8.85		

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: 6B

Field Personnel: SJD

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7-16-14 1 1330

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

Prot. Casing/riser height: 3.8'

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

If prot.casing; depth to riser below: .31'

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

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

PURGE INFORMATION:

Date / Time Initiated: 7-16-14/1330

Date / Time Completed: 1

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

Riser Diameter, Inches: _____

Initial Water Level, Feet: 13.8

Elevation. GW MSL: _____

Well Total Depth, Feet: 18.9

Method of Well Purge: Bailer

One (1) Riser Volume, Gal: .8323

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 1.25

Purged To Dryness ☒ Y ☐ N

Purge Observations: _____

Start 1330 Finish 1400

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
1330		.5 gallons	15.5	7.22	1.76	13.0		
810			13.6	7.17	1.42	.78		

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-7B

Field Personnel: SJD / AMZ

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7/15/14 1305

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: 7/15/14 1305

Date / Time Completed: 1

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

Riser Diameter, Inches: _____

Initial Water Level, Feet: 34.2

Elevation. G/W MSL: _____

Well Total Depth, Feet: 43

Method of Well Purge: _____

One (1) Riser Volume, Gal: 1.43

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 1.5

Purged To Dryness ☒ Y ☐ N

Purge Observations: clear

Start 1305 Finish 1317

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
1305		0	18.2	8.44	0.50	6.48		
1115			15.8	11.65	4.83	10.56		

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-15B

Field Personnel: SJD / AMZ

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7/15/14 1327

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: 7/15/14 1327

Date / Time Completed: 1

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

Riser Diameter, Inches: _____

Initial Water Level, Feet: 6.77

Elevation. G/W MSL: _____

Well Total Depth, Feet: 13.27

Method of Well Purge: _____

One (1) Riser Volume, Gal: 1.06

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: 3 gal

Purged To Dryness Y ☒ N almost

Purge Observations: brown some solids

Start 1327 Finish 1340

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
1327		0	20.5	10.36	1.93	42.9		
1230			17.3	10.97	3.11	4.78		

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW-16B

Field Personnel: SJD/AMZ

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7/15/14 1245

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: 7/15/14 / 1245

Date / Time Completed: 1

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

Riser Diameter, Inches: _____

Initial Water Level, Feet: 6.55

Elevation. G/W MSL: _____

Well Total Depth, Feet: 15.07

Method of Well Purge: _____

One (1) Riser Volume, Gal: 1.39

Dedicated: ☒ Y / N

Total Volume Purged, Gal: 4.0

Purged To Dryness Y / ☒ N

Purge Observations: 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
1245		0	21.1	10.13	1.11	4.67		
1257		4.0 1.39 gal	17.1	10.23	1.63	65.1		
955			16.7	10.90	1.75	29.3		

7/16

FIELD OBSERVATIONS

Facility: Marilla Street Landfill

Sample Point ID: MW 18A

Field Personnel: _____

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7/15/14 1112

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: 7/15/14 1112

Date / Time Completed: 1

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

Riser Diameter, Inches: _____

Initial Water Level, Feet: 46.05

Elevation. G/W MSL: _____

Well Total Depth, Feet: 61.05

Method of Well Purge: _____

One (1) Riser Volume, Gal: 2.448

Dedicated: ☒ Y / ☐ N

Total Volume Purged, Gal: 8.5

Purged To Dryness ☒ Y / ☐ N

Purge Observations: became cloudy after several bails

Start 1112 Finish 1155

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
1112		1 bailer	17.6	6.93	1.94	23.2		
1147		2.5 gal 7.5 gal	18.7	6.90	2.35	773		
1520			21.2	7.33	2.51	70.6	SAMPLE	
				* Field Filtered				

51.85
 44.87
 7.68
 16.32

FIELD OBSERVATIONS

Facility: Marilla Street landfill

Sample Point ID: MW 18B

Field Personnel: _____

Sample Matrix: _____

MONITORING WELL INSPECTION:

Date/Time 7/15/14 1120

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: 7/15/14 / 1120

Date / Time Completed: 1

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

Riser Diameter, Inches: _____

Initial Water Level, Feet: 44.87

Elevation. G/W MSL: _____

Well Total Depth, Feet: 51.55

Method of Well Purge: bailer

One (1) Riser Volume, Gal: 1.09

Dedicated: ☒ Y ☐ N

Total Volume Purged, Gal: _____

Purged To Dryness Y ☒ N

Purge Observations: clear

Start 1120 Finish 1147

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other
		1 bailer	17.0	7.35	2.42	6.61		
1147		30 bailers	18.2	7.57	2.87	9.30		
1520			21.2	7.33	2.51	70.6		
				FIELD FILTER				
1540			17.1	7.55	2.82	11.1	SAMPLE	

APPENDIX C

Laboratory Reports and Chain of Custody Forms



July 31, 2014

Service Request No: R1405452

Ms. Allyson Zurawski
Daigler Engineering
1711 Grand Island Blvd.
Grand Island, NY 14072

Laboratory Results for: Marilla St. Landfill GW 7/2014

Dear Ms. Zurawski:

Enclosed are the results of the sample(s) submitted to our laboratory between July 16, 2014 and July 18, 2014. For your reference, these analyses have been assigned our service request number **R1405452**.

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.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

Page 1 of 93

Client: Daigler Engineering
Project: Marilla St. LF GW 7/2014
Sample Matrix: Water

Service Request No.: R1405452
Date Received: 7/16-17/14

Revised: 9/18/14

All analyses were performed consistent with the quality assurance program of ALS Environmental (ALS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

Sample Receipt

Eleven (11) samples were collected by the client on 7/15-16/14 and received for analysis at ALS on 7/16-17/14 via a national courier.

Samples were received in good condition, consistent with the Chains of Custody (COC) and within cooler temperature guidelines of 0-6 degrees C. Several samples were noted as having headspace in VOA vials on the Cooler Receipt and Preservation Form at the end of the report.

Inorganics

Eleven (11) samples were analyzed for a client specified list of parameters. All method numbers are noted on the data forms. Filtering of 4 samples for dissolved metals was performed in the field.

The Laboratory Method Blanks were free from contamination.

Site QC was requested for location MW 4B (ALS # R1405452-001). All Matrix Spike (MS) recoveries and Relative Percent Difference (RPD) calculations were acceptable.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries were within QC limits.

All samples were analyzed within the proper holding times for the methods.

No other analytical or QC problems were encountered.

Volatile Organics

Four (4) samples were analyzed for a client specified list of Volatile compounds by GC/MS Method 8260C.

All surrogate recoveries were within QC limits.

All Initial Calibration criteria was met for these samples. All Continuing Calibration Verifications (CCV's) were acceptable except for the following compounds which were outside the 20% Difference (20%D) limit:

CCV 7/22/14 run: 1,2-Dichloroethane, 2-Butanone, Bromomethane and Chloroethane,

CCV 7/23/14 run: 1,2-Dichloroethane, 2-Butanone, and Acetone,

CCV 7/28/14: 1,2-Dichloroethane and Chloroethane.

Any hits for these samples associated with this CCV should be considered as estimated.

The Laboratory Method Blank was free from contamination.

Site QC was requested for location MW 4B (ALS # R1405453-001). All Matrix Spike (MS) and MS Duplicate (MSD) recoveries were within acceptance limits except for 1,1-Dichloroethene and Styrene. The exceedences are flagged as "**". All RPD's were acceptable.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries were within QC limits except for 2-Butanone which was outside limits high on the 7/23/14 run. The exceeded recovery has been flagged as "**". No data was affected.

Sample locations 7B, 3B, and 15B (ALS# R1405452-006, 008, 011 respectively) were foamy matrices and required dilutions in order to analyze the samples.

Approved by



Date



00002rev

All samples were analyzed within the 14 day holding time for preserved samples. All vials were checked for pH after analysis in order to maintain the integrity of the sample. All vials were found to be preserved to a pH of < 2 except for location 3B (ALS # R1405452-008 which was found to have a pH of 4. This sample was analyzed on the 8th day from collection, outside the 7 day holding time for unpreserved samples. All ALS provided vials are certified as preserved. Matrix interference is suspected.

No other analytical or QC problems were encountered.

Approved by

Loren Burman Date 9/18/19

00002A

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1405452

<u>Lab ID</u>	<u>Client ID</u>
R1405452-001	MW 4B
R1405452-002	MW 18B
R1405452-003	MW 18A
R1405452-004	MW 18A Dissolved
R1405452-005	X-2
R1405452-006	7B
R1405452-007	16B
R1405452-008	3B
R1405452-009	3B Dissolved
R1405452-010	X-1
R1405452-011	15B
R1405452-012	6A
R1405452-013	6A Dissolved
R1405452-014	6B
R1405452-015	6B Dissolved

REPORT QUALIFIERS AND DEFINITIONS

- | | |
|---|--|
| <p>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.</p> <p>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).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>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> <p>* 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.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p> | <p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% (25% for CLP) difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>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).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p> |
|---|--|



Rochester Lab ID # for State Certifications¹

NELAP Accredited	Maine ID #NY0032	New Hampshire ID #
Connecticut ID # PH0556	Nebraska Accredited	294100 A/B
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
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		Virginia #460167

¹ 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 laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



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	3010A
200.8	ILM05.3
6010C	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	3010A
6010 SPLP (1312) extract	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.

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: MW 4B
Lab Code: R1405452-001

Service Request: R1405452
Date Collected: 7/15/14 1600
Date Received: 7/16/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	6.8		mg/L	1.0	1	NA	7/18/14 19:10	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/17/14	7/18/14 15:30	
Phenolics, Total Recoverable	420.4	0.0254		mg/L	0.0050	1	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	552		mg/L	10	1	NA	7/17/14 10:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: MW 4B
Lab Code: R1405452-001

Service Request: R1405452
Date Collected: 7/15/14 1600
Date Received: 7/16/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10 U	µg/L	10	1	7/24/14	7/28/14 19:00	
Cadmium, Total	6010C	5.0 U	µg/L	5.0	1	7/24/14	7/28/14 19:00	
Chromium, Total	6010C	10 U	µg/L	10	1	7/24/14	7/28/14 19:00	
Iron, Total	6010C	2500	µg/L	100	1	7/24/14	7/28/14 19:00	
Lead, Total	6010C	50 U	µg/L	50	1	7/24/14	7/28/14 19:00	
Manganese, Total	6010C	1020	µg/L	10	1	7/24/14	7/28/14 19:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water

Service Request: R1405452
 Date Collected: 7/15/14 1600
 Date Received: 7/16/14
 Date Analyzed: 7/22/14 21:14

Sample Name: MW 4B
 Lab Code: R1405452-001

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
 Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M7560.D\

Analysis Lot: 402898
 Instrument Name: R-MS-12
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1600
Date Received: 7/16/14
Date Analyzed: 7/22/14 21:14

Sample Name: MW 4B
Lab Code: R1405452-001

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M7560.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85-122	7/22/14 21:14	
Dibromofluoromethane	111	89-119	7/22/14 21:14	
Toluene-d8	95	87-121	7/22/14 21:14	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: MW 18B
Lab Code: R1405452-002

Service Request: R1405452
Date Collected: 7/15/14 1540
Date Received: 7/16/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	24.4		mg/L	1.0	1	NA	7/18/14 20:55	
Cyanide, Total	335.4	0.027		mg/L	0.010	1	7/17/14	7/18/14 15:05	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	2380		mg/L	20	1	NA	7/17/14 10:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1540
Date Received: 7/16/14

Sample Name: MW 18B
Lab Code: R1405452-002

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	15		µg/L	10	1	7/24/14	7/28/14 19:32	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 19:32	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 19:32	
Iron, Total	6010C	1090		µg/L	100	1	7/24/14	7/28/14 19:32	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 19:32	
Manganese, Total	6010C	1400		µg/L	10	1	7/24/14	7/28/14 19:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1540
Date Received: 7/16/14
Date Analyzed: 7/22/14 19:04

Sample Name: MW 18B
Lab Code: R1405452-002

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M7556.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1540
Date Received: 7/16/14
Date Analyzed: 7/22/14 19:04

Sample Name: MW 18B
Lab Code: R1405452-002

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQU\DATA\MSVOA12\DATA\072214\M75556.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85-122	7/22/14 19:04	
Dibromofluoromethane	109	89-119	7/22/14 19:04	
Toluene-d8	100	87-121	7/22/14 19:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: MW 18A
Lab Code: R1405452-003

Service Request: R1405452
Date Collected: 7/15/14 1520
Date Received: 7/16/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	18.2		mg/L	1.0	1	NA	7/18/14 21:16	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/17/14	7/18/14 15:06	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	1920		mg/L	20	1	NA	7/17/14 10:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: MW 18A
Lab Code: R1405452-003

Service Request: R1405452
Date Collected: 7/15/14 1520
Date Received: 7/16/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 19:38	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 19:38	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 19:38	
Iron, Total	6010C	9520		µg/L	100	1	7/24/14	7/28/14 19:38	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 19:38	
Manganese, Total	6010C	993		µg/L	10	1	7/24/14	7/28/14 19:38	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water
 Sample Name: MW 18A Dissolved
 Lab Code: R1405452-004

Service Request: R1405452
 Date Collected: 7/15/14 1520
 Date Received: 7/16/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 19:45	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 19:45	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 19:45	
Iron, Dissolved	6010C	6410		µg/L	100	1	7/24/14	7/28/14 19:45	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 19:45	
Manganese, Dissolved	6010C	901		µg/L	10	1	7/24/14	7/28/14 19:45	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1520
Date Received: 7/16/14
Date Analyzed: 7/22/14 19:37

Sample Name: MW 18A
Lab Code: R1405452-003

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M7557.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Dichloromethane	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
100-42-5	Styrene	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1520
Date Received: 7/16/14
Date Analyzed: 7/22/14 19:37

Sample Name: MW 18A
Lab Code: R1405452-003

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M7557.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85-122	7/22/14 19:37	
Dibromofluoromethane	110	89-119	7/22/14 19:37	
Toluene-d8	99	87-121	7/22/14 19:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: X-2
Lab Code: R1405452-005

Service Request: R1405452
Date Collected: 7/15/14 1500
Date Received: 7/16/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	5.8		mg/L	1.0	1	NA	7/18/14 21:37	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/17/14	7/18/14 15:08	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	322		mg/L	10	1	NA	7/17/14 10:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1500
Date Received: 7/16/14

Sample Name: X-2
Lab Code: R1405452-005

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:04	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 20:04	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:04	
Iron, Total	6010C	560		µg/L	100	1	7/24/14	7/28/14 20:04	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 20:04	
Manganese, Total	6010C	148		µg/L	10	1	7/24/14	7/28/14 20:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1500
Date Received: 7/16/14
Date Analyzed: 7/22/14 20:09

Sample Name: X-2
Lab Code: R1405452-005

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M7558.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Dichloromethane	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
100-42-5	Styrene	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14 1500
Date Received: 7/16/14
Date Analyzed: 7/22/14 20:09

Sample Name: X-2
Lab Code: R1405452-005

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M75558.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85-122	7/22/14 20:09	
Dibromofluoromethane	112	89-119	7/22/14 20:09	
Toluene-d8	99	87-121	7/22/14 20:09	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 7B
Lab Code: R1405452-006

Service Request: R1405452
Date Collected: 7/16/14 1115
Date Received: 7/17/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	47.5	mg/L	2.0	2	NA	7/21/14 18:08	
Cyanide, Total	335.4	0.023	mg/L	0.010	1	7/22/14	7/23/14 09:45	
Phenolics, Total Recoverable	420.4	0.426	mg/L	0.050	10	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	1070	mg/L	30	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 7B
Lab Code: R1405452-006

Service Request: R1405452
Date Collected: 7/16/14 1115
Date Received: 7/17/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:11	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 20:11	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:11	
Iron, Total	6010C	750		µg/L	100	1	7/24/14	7/28/14 20:11	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 20:11	
Manganese, Total	6010C	23		µg/L	10	1	7/24/14	7/28/14 20:11	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 1115
Date Received: 7/17/14
Date Analyzed: 7/22/14 20:41

Sample Name: 7B
Lab Code: R1405452-006

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M7559.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
75-34-3	1,1-Dichloroethane (1,1-DCA)	50	U	50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	50	U	50	
107-06-2	1,2-Dichloroethane	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
78-93-3	2-Butanone (MEK)	100	U	100	
591-78-6	2-Hexanone	100	U	100	
108-10-1	4-Methyl-2-pentanone	100	U	100	
67-64-1	Acetone	100	U	100	
71-43-2	Benzene	50	U	50	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
75-15-0	Carbon Disulfide	100	U	100	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-09-2	Dichloromethane	50	U	50	
100-41-4	Ethylbenzene	50	U	50	
100-42-5	Styrene	50	U	50	
127-18-4	Tetrachloroethene (PCE)	50	U	50	
108-88-3	Toluene	50	U	50	
79-01-6	Trichloroethene (TCE)	50	U	50	
75-01-4	Vinyl Chloride	50	U	50	
156-59-2	cis-1,2-Dichloroethene	50	U	50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
179601-23-1	m,p-Xylenes	50	U	50	
95-47-6	o-Xylene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	50	U	50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 1115
Date Received: 7/17/14
Date Analyzed: 7/22/14 20:41

Sample Name: 7B
Lab Code: R1405452-006

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072214\M7559.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 10

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85-122	7/22/14 20:41	
Dibromofluoromethane	108	89-119	7/22/14 20:41	
Toluene-d8	100	87-121	7/22/14 20:41	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 16B
Lab Code: R1405452-007

Service Request: R1405452
Date Collected: 7/16/14 1000
Date Received: 7/17/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	18.2	mg/L	1.0	1	NA	7/18/14 23:00	
Cyanide, Total	335.4	0.020	mg/L	0.010	1	7/22/14	7/23/14 09:46	
Phenolics, Total Recoverable	420.4	0.0073	mg/L	0.0050	1	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	610	mg/L	10	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 1000
Date Received: 7/17/14

Sample Name: 16B
Lab Code: R1405452-007

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:17	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 20:17	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:17	
Iron, Total	6010C	510		µg/L	100	1	7/24/14	7/28/14 20:17	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 20:17	
Manganese, Total	6010C	61		µg/L	10	1	7/24/14	7/28/14 20:17	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 1000
Date Received: 7/17/14
Date Analyzed: 7/23/14 19:01

Sample Name: 16B
Lab Code: R1405452-007

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7600.D\

Analysis Lot: 403155
Instrument Name: R-MS-12
Dilution Factor: 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	13	U	13	
79-34-5	1,1,2,2-Tetrachloroethane	13	U	13	
79-00-5	1,1,2-Trichloroethane	13	U	13	
75-34-3	1,1-Dichloroethane (1,1-DCA)	13	U	13	
75-35-4	1,1-Dichloroethene (1,1-DCE)	13	U	13	
107-06-2	1,2-Dichloroethane	13	U	13	
78-87-5	1,2-Dichloropropane	13	U	13	
78-93-3	2-Butanone (MEK)	25	U	25	
591-78-6	2-Hexanone	25	U	25	
108-10-1	4-Methyl-2-pentanone	25	U	25	
67-64-1	Acetone	25	U	25	
71-43-2	Benzene	13	U	13	
75-27-4	Bromodichloromethane	13	U	13	
75-25-2	Bromoform	13	U	13	
74-83-9	Bromomethane	13	U	13	
75-15-0	Carbon Disulfide	25	U	25	
56-23-5	Carbon Tetrachloride	13	U	13	
108-90-7	Chlorobenzene	13	U	13	
75-00-3	Chloroethane	13	U	13	
67-66-3	Chloroform	13	U	13	
74-87-3	Chloromethane	13	U	13	
124-48-1	Dibromochloromethane	13	U	13	
75-09-2	Dichloromethane	13	U	13	
100-41-4	Ethylbenzene	13	U	13	
100-42-5	Styrene	13	U	13	
127-18-4	Tetrachloroethene (PCE)	13	U	13	
108-88-3	Toluene	13	U	13	
79-01-6	Trichloroethene (TCE)	21		13	
75-01-4	Vinyl Chloride	13	U	13	
156-59-2	cis-1,2-Dichloroethene	13	U	13	
10061-01-5	cis-1,3-Dichloropropene	13	U	13	
179601-23-1	m,p-Xylenes	13	U	13	
95-47-6	o-Xylene	13	U	13	
156-60-5	trans-1,2-Dichloroethene	13	U	13	
10061-02-6	trans-1,3-Dichloropropene	13	U	13	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 1000
Date Received: 7/17/14
Date Analyzed: 7/23/14 19:01

Sample Name: 16B
Lab Code: R1405452-007

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7600.D\

Analysis Lot: 403155
Instrument Name: R-MS-12
Dilution Factor: 2.5

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85-122	7/23/14 19:01	
Dibromofluoromethane	107	89-119	7/23/14 19:01	
Toluene-d8	101	87-121	7/23/14 19:01	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 0830
Date Received: 7/17/14

Sample Name: 3B
Lab Code: R1405452-008

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	96	mg/L	10	10	NA	7/21/14 18:29	
Cyanide, Total	335.4	0.013	mg/L	0.010	1	7/22/14	7/23/14 09:46	
Phenolics, Total Recoverable	420.4	0.521	mg/L	0.050	10	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	1530	mg/L	10	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 3B
Lab Code: R1405452-008

Service Request: R1405452
Date Collected: 7/16/14 0830
Date Received: 7/17/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	47	µg/L	10	1	7/24/14	7/28/14 20:23	
Cadmium, Total	6010C	5.0 U	µg/L	5.0	1	7/24/14	7/28/14 20:23	
Chromium, Total	6010C	133	µg/L	10	1	7/24/14	7/28/14 20:23	
Iron, Total	6010C	94400	µg/L	1000	10	7/24/14	7/29/14 17:40	
Lead, Total	6010C	582	µg/L	50	1	7/24/14	7/28/14 20:23	
Manganese, Total	6010C	1610	µg/L	10	1	7/24/14	7/28/14 20:23	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 0830
Date Received: 7/17/14

Sample Name: 3B Dissolved
Lab Code: R1405452-009

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	35		µg/L	10	1	7/24/14	7/25/14 20:24	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 20:24	
Chromium, Dissolved	6010C	23		µg/L	10	1	7/24/14	7/25/14 20:24	
Iron, Dissolved	6010C	3040		µg/L	100	1	7/24/14	7/25/14 20:24	
Lead, Dissolved	6010C	91		µg/L	50	1	7/24/14	7/25/14 20:24	
Manganese, Dissolved	6010C	51		µg/L	10	1	7/24/14	7/25/14 20:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 0830
Date Received: 7/17/14
Date Analyzed: 7/28/14 15:53

Sample Name: 3B
Lab Code: R1405452-008

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\072814\M7714.D\

Analysis Lot: 403796
Instrument Name: R-MS-12
Dilution Factor: 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
75-34-3	1,1-Dichloroethane (1,1-DCA)	50	U	50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	50	U	50	
107-06-2	1,2-Dichloroethane	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
78-93-3	2-Butanone (MEK)	100	U	100	
591-78-6	2-Hexanone	100	U	100	
108-10-1	4-Methyl-2-pentanone	100	U	100	
67-64-1	Acetone	390		100	
71-43-2	Benzene	50	U	50	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
75-15-0	Carbon Disulfide	100	U	100	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-09-2	Dichloromethane	50	U	50	
100-41-4	Ethylbenzene	50	U	50	
100-42-5	Styrene	50	U	50	
127-18-4	Tetrachloroethene (PCE)	50	U	50	
108-88-3	Toluene	50	U	50	
79-01-6	Trichloroethene (TCE)	50	U	50	
75-01-4	Vinyl Chloride	50	U	50	
156-59-2	cis-1,2-Dichloroethene	50	U	50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
179601-23-1	m,p-Xylenes	50	U	50	
95-47-6	o-Xylene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	50	U	50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

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

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 0830
Date Received: 7/17/14
Date Analyzed: 7/28/14 15:53

Sample Name: 3B
Lab Code: R1405452-008

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\072814\M7714.D\

Analysis Lot: 403796
Instrument Name: R-MS-12
Dilution Factor: 10

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85-122	7/28/14 15:53	
Dibromofluoromethane	112	89-119	7/28/14 15:53	
Toluene-d8	101	87-121	7/28/14 15:53	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: X-1
Lab Code: R1405452-010

Service Request: R1405452
Date Collected: 7/16/14 0000
Date Received: 7/17/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	32.4	mg/L	2.0	2	NA	7/21/14 18:50	
Cyanide, Total	335.4	0.017	mg/L	0.010	1	7/22/14	7/23/14 09:47	
Phenolics, Total Recoverable	420.4	0.288	mg/L	0.025	5	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	1420	mg/L	20	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: X-1
Lab Code: R1405452-010

Service Request: R1405452
Date Collected: 7/16/14 0000
Date Received: 7/17/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:30	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 20:30	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:30	
Iron, Total	6010C	2520		µg/L	100	1	7/24/14	7/28/14 20:30	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 20:30	
Manganese, Total	6010C	66		µg/L	10	1	7/24/14	7/28/14 20:30	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 0000
Date Received: 7/17/14
Date Analyzed: 7/28/14 15:21

Sample Name: X-1
Lab Code: R1405452-010

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\072814\M7713.D\

Analysis Lot: 403796
Instrument Name: R-MS-12
Dilution Factor: 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	13	U	13	
79-34-5	1,1,2,2-Tetrachloroethane	13	U	13	
79-00-5	1,1,2-Trichloroethane	13	U	13	
75-34-3	1,1-Dichloroethane (1,1-DCA)	13	U	13	
75-35-4	1,1-Dichloroethene (1,1-DCE)	13	U	13	
107-06-2	1,2-Dichloroethane	13	U	13	
78-87-5	1,2-Dichloropropane	13	U	13	
78-93-3	2-Butanone (MEK)	25	U	25	
591-78-6	2-Hexanone	25	U	25	
108-10-1	4-Methyl-2-pentanone	25	U	25	
67-64-1	Acetone	29		25	
71-43-2	Benzene	13	U	13	
75-27-4	Bromodichloromethane	13	U	13	
75-25-2	Bromoform	13	U	13	
74-83-9	Bromomethane	13	U	13	
75-15-0	Carbon Disulfide	25	U	25	
56-23-5	Carbon Tetrachloride	13	U	13	
108-90-7	Chlorobenzene	13	U	13	
75-00-3	Chloroethane	13	U	13	
67-66-3	Chloroform	13	U	13	
74-87-3	Chloromethane	13	U	13	
124-48-1	Dibromochloromethane	13	U	13	
75-09-2	Dichloromethane	13	U	13	
100-41-4	Ethylbenzene	13	U	13	
100-42-5	Styrene	13	U	13	
127-18-4	Tetrachloroethene (PCE)	13	U	13	
108-88-3	Toluene	13	U	13	
79-01-6	Trichloroethene (TCE)	13	U	13	
75-01-4	Vinyl Chloride	13	U	13	
156-59-2	cis-1,2-Dichloroethene	13	U	13	
10061-01-5	cis-1,3-Dichloropropene	13	U	13	
179601-23-1	m,p-Xylenes	13	U	13	
95-47-6	o-Xylene	13	U	13	
156-60-5	trans-1,2-Dichloroethene	13	U	13	
10061-02-6	trans-1,3-Dichloropropene	13	U	13	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water

Service Request: R1405452
 Date Collected: 7/16/14 0000
 Date Received: 7/17/14
 Date Analyzed: 7/28/14 15:21

Sample Name: X-1
 Lab Code: R1405452-010

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
 Data File Name: I:\ACQUDATA\msvoa12\Data\072814\M7713.D\

Analysis Lot: 403796
 Instrument Name: R-MS-12
 Dilution Factor: 2.5

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85-122	7/28/14 15:21	
Dibromofluoromethane	109	89-119	7/28/14 15:21	
Toluene-d8	100	87-121	7/28/14 15:21	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 1230
Date Received: 7/17/14

Sample Name: 15B
Lab Code: R1405452-011

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	96		mg/L	10	10	NA	7/21/14 19:11	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:48	
Phenolics, Total Recoverable	420.4	0.930		mg/L	0.050	10	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	1320		mg/L	40	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 15B
Lab Code: R1405452-011

Service Request: R1405452
Date Collected: 7/16/14 1230
Date Received: 7/17/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	32		µg/L	10	1	7/24/14	7/28/14 20:36	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 20:36	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:36	
Iron, Total	6010C	850		µg/L	100	1	7/24/14	7/28/14 20:36	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 20:36	
Manganese, Total	6010C	15		µg/L	10	1	7/24/14	7/28/14 20:36	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 1230
Date Received: 7/17/14
Date Analyzed: 7/23/14 20:39

Sample Name: 15B
Lab Code: R1405452-011

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7603.D\

Analysis Lot: 403155
Instrument Name: R-MS-12
Dilution Factor: 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
78-93-3	2-Butanone (MEK)	200	U	200	
591-78-6	2-Hexanone	200	U	200	
108-10-1	4-Methyl-2-pentanone	200	U	200	
67-64-1	Acetone	200	U	200	
71-43-2	Benzene	100	U	100	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
75-15-0	Carbon Disulfide	200	U	200	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Dichloromethane	100	U	100	
100-41-4	Ethylbenzene	100	U	100	
100-42-5	Styrene	100	U	100	
127-18-4	Tetrachloroethene (PCE)	100	U	100	
108-88-3	Toluene	100	U	100	
79-01-6	Trichloroethene (TCE)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	100	U	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
179601-23-1	m,p-Xylenes	100	U	100	
95-47-6	o-Xylene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/16/14 1230
Date Received: 7/17/14
Date Analyzed: 7/23/14 20:39

Sample Name: 15B
Lab Code: R1405452-011

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7603.D\

Analysis Lot: 403155
Instrument Name: R-MS-12
Dilution Factor: 20

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85-122	7/23/14 20:39	
Dibromofluoromethane	108	89-119	7/23/14 20:39	
Toluene-d8	99	87-121	7/23/14 20:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 6A
Lab Code: R1405452-012

Service Request: R1405452
Date Collected: 7/17/14 0745
Date Received: 7/18/14
Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	3.2		mg/L	1.0	1	NA	7/21/14 20:56	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:49	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	673		mg/L	10	1	NA	7/22/14 13:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 6A
Lab Code: R1405452-012

Service Request: R1405452
Date Collected: 7/17/14 0745
Date Received: 7/18/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:43	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 20:43	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:43	
Iron, Total	6010C	1130		µg/L	100	1	7/24/14	7/28/14 20:43	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 20:43	
Manganese, Total	6010C	353		µg/L	10	1	7/24/14	7/28/14 20:43	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 6A Dissolved
Lab Code: R1405452-013

Service Request: R1405452
Date Collected: 7/17/14 0745
Date Received: 7/18/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:49	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 20:49	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:49	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/28/14 20:49	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 20:49	
Manganese, Dissolved	6010C	208		µg/L	10	1	7/24/14	7/28/14 20:49	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water

Service Request: R1405452
 Date Collected: 7/17/14 0745
 Date Received: 7/18/14
 Date Analyzed: 7/23/14 17:56

Sample Name: 6A
 Lab Code: R1405452-012

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
 Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7598.D\

Analysis Lot: 403155
 Instrument Name: R-MS-12
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/17/14 0745
Date Received: 7/18/14
Date Analyzed: 7/23/14 17:56

Sample Name: 6A
Lab Code: R1405452-012

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7598.D\

Analysis Lot: 403155
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85-122	7/23/14 17:56	
Dibromofluoromethane	111	89-119	7/23/14 17:56	
Toluene-d8	102	87-121	7/23/14 17:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water
 Sample Name: 6B
 Lab Code: R1405452-014

Service Request: R1405452
 Date Collected: 7/17/14 0815
 Date Received: 7/18/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	7.6		mg/L	1.0	1	NA	7/21/14 21:17	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:50	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	1200		mg/L	10	1	NA	7/22/14 13:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 6B
Lab Code: R1405452-014

Service Request: R1405452
Date Collected: 7/17/14 0815
Date Received: 7/18/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:56	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 20:56	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 20:56	
Iron, Total	6010C	1190		µg/L	100	1	7/24/14	7/28/14 20:56	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 20:56	
Manganese, Total	6010C	567		µg/L	10	1	7/24/14	7/28/14 20:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: 6B Dissolved
Lab Code: R1405452-015

Service Request: R1405452
Date Collected: 7/17/14 0815
Date Received: 7/18/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 21:02	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 21:02	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 21:02	
Iron, Dissolved	6010C	320		µg/L	100	1	7/24/14	7/28/14 21:02	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 21:02	
Manganese, Dissolved	6010C	510		µg/L	10	1	7/24/14	7/28/14 21:02	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water

Service Request: R1405452
 Date Collected: 7/17/14 0815
 Date Received: 7/18/14
 Date Analyzed: 7/23/14 18:29

Sample Name: 6B
 Lab Code: R1405452-014

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
 Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7599.D\

Analysis Lot: 403155
 Instrument Name: R-MS-12
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/17/14 0815
Date Received: 7/18/14
Date Analyzed: 7/23/14 18:29

Sample Name: 6B
Lab Code: R1405452-014

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7599.D\

Analysis Lot: 403155
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85-122	7/23/14 18:29	
Dibromofluoromethane	110	89-119	7/23/14 18:29	
Toluene-d8	102	87-121	7/23/14 18:29	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1405452-MB1

Service Request: R1405452
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	1.0	U	mg/L	1.0	1	NA	7/18/14 16:23	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/17/14	7/18/14 14:54	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/29/14 09:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10	U	mg/L	10	1	NA	7/17/14 10:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water
 Sample Name: Method Blank
 Lab Code: R1405452-MB2

Service Request: R1405452
 Date Collected: NA
 Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	1.0	U	mg/L	1.0	1	NA	7/21/14 16:24	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/17/14	7/18/14 15:28	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10	U	mg/L	10	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: R1405452-MB3

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:34	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10	U	mg/L	10	1	NA	7/22/14 13:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1405452-MB1

Service Request: R1405452
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 18:48	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 20:05	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 18:48	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 18:48	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/25/14 20:05	
Iron, Total	6010C	100	U	µg/L	100	1	7/24/14	7/28/14 18:48	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 20:05	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 18:48	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	
Manganese, Total	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 18:48	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1405452-MB2

Service Request: R1405452
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:18	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 20:18	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:18	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/25/14 20:18	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 20:18	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:18	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water
 Sample Name: Method Blank
 Lab Code: R1405452-MB3

Service Request: R1405452
 Date Collected: NA
 Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 18:48	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/28/14 18:48	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 18:48	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/28/14 18:48	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/28/14 18:48	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/28/14 18:48	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: NA
Date Received: NA
Date Analyzed: 7/22/14 12:37

Sample Name: Method Blank
Lab Code: RQ1408513-04

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\072214\M7544.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Dichloromethane	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
100-42-5	Styrene	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: NA
Date Received: NA
Date Analyzed: 7/22/14 12:37

Sample Name: Method Blank
Lab Code: RQ1408513-04

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\072214\M7544.D\

Analysis Lot: 402898
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85-122	7/22/14 12:37	
Dibromofluoromethane	111	89-119	7/22/14 12:37	
Toluene-d8	101	87-121	7/22/14 12:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: NA
Date Received: NA
Date Analyzed: 7/23/14 15:15

Sample Name: Method Blank
Lab Code: RQ1408606-04

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7593.D\

Analysis Lot: 403155
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: NA
Date Received: NA
Date Analyzed: 7/23/14 15:15

Sample Name: Method Blank
Lab Code: RQ1408606-04

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072314\M7593.D\

Analysis Lot: 403155
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85-122	7/23/14 15:15	
Dibromofluoromethane	110	89-119	7/23/14 15:15	
Toluene-d8	101	87-121	7/23/14 15:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: NA
Date Received: NA
Date Analyzed: 7/28/14 12:41

Sample Name: Method Blank
Lab Code: RQ1408762-04

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072814\M7708.D\

Analysis Lot: 403796
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: NA
Date Received: NA
Date Analyzed: 7/28/14 12:41

Sample Name: Method Blank
Lab Code: RQ1408762-04

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072814\M7708.D\

Analysis Lot: 403796
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85-122	7/28/14 12:41	
Dibromofluoromethane	109	89-119	7/28/14 12:41	
Toluene-d8	99	87-121	7/28/14 12:41	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14
Date Received: 7/16/14
Date Analyzed: 7/17/14 - 7/29/14

**Replicate Sample Summary
 General Chemistry Parameters**

Sample Name: MW 4B
Lab Code: R1405452-001

Units: mg/L
Basis: NA

Analyte Name	Method	MRL	Sample Result	MW 4BDUP Duplicate Sample R1405452-001DUP		RPD	RPD Limit
				Result	Average		
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	1.0	6.8	6.9	6.84	1	20
Cyanide, Total	335.4	0.010	0.010 U	0.010 U	NC	NC	20
Phenolics, Total Recoverable	420.4	0.0050	0.0254	0.0260	0.0257	2	20
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10	552	552	552	<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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14
Date Received: 7/16/14
Date Analyzed: 7/18/14 - 7/29/14

Matrix Spike Summary
General Chemistry Parameters

Sample Name: MW 4B
Lab Code: R1405452-001

Units: mg/L
Basis: NA

MW 4BMS Matrix Spike R1405452-001MS						
Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310B/C-2000	6.8	17.0	10.0	102	48 - 135
Cyanide, Total	335.4	ND	0.100	0.100	100	90 - 110
Phenolics, Total Recoverable	420.4	0.0254	0.0651	0.0400	99	90 - 110

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14
Date Received: 7/16/14
Date Analyzed: 7/28/14

**Replicate Sample Summary
Inorganic Parameters**

Sample Name: MW 4B
Lab Code: R1405452-001

Units: µg/L
Basis: NA

Analyte Name	Method	MRL	Sample Result	MW 4BDUP Duplicate Sample R1405452-001DUP			RPD	RPD Limit
				Result	Average			
Arsenic, Total	6010C	10	10 U	10 U	NC	NC	NC	20
Cadmium, Total	6010C	5.0	5.0 U	5.0 U	NC	NC	NC	20
Chromium, Total	6010C	10	10 U	10 U	NC	NC	NC	20
Iron, Total	6010C	100	2500	2470	2480	1	NC	20
Lead, Total	6010C	50	50 U	50 U	NC	NC	NC	20
Manganese, Total	6010C	10	1020	1020	1020	<1	NC	20

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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.



Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14
Date Received: 7/16/14
Date Analyzed: 7/28/14

Matrix Spike Summary
Inorganic Parameters

Sample Name: MW 4B
Lab Code: R1405452-001

Units: µg/L
Basis: NA

Analytical Method: 6010C
Prep Method: EPA 3010A

MW 4BMS
Matrix Spike
R1405452-001MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	ND	42	40	104	75 - 125
Cadmium, Total	ND	49.8	50.0	100	75 - 125
Chromium, Total	ND	213	200	107	75 - 125
Iron, Total	2500	3560	1000	106	75 - 125
Lead, Total	ND	511	500	102	75 - 125
Manganese, Total	1020	1550	500	106	75 - 125

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14
Date Received: 7/16/14
Date Analyzed: 7/22/14

Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW 4B
Lab Code: R1405452-001

Units: µg/L
Basis: NA

Analytical Method: 8260C

Analyte Name	Sample Result	MW 4BMS Matrix Spike RQ1408513-05			MW 4BDMS Duplicate Matrix Spike RQ1408513-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	ND	54.9	50.0	110	55.3	50.0	111	74 - 127	<1	30
1,1,2,2-Tetrachloroethane	ND	46.6	50.0	93	45.8	50.0	92	72 - 122	2	30
1,1,2-Trichloroethane	ND	50.8	50.0	102	49.3	50.0	99	82 - 115	3	30
1,1-Dichloroethane (1,1-DCA)	ND	49.5	50.0	99	49.2	50.0	98	74 - 132	<1	30
1,1-Dichloroethene (1,1-DCE)	ND	33.4	50.0	67 *	31.2	50.0	62 *	72 - 125	7	30
1,2-Dichloroethane	ND	64.0	50.0	128	62.3	50.0	125	72 - 132	3	30
1,2-Dichloropropane	ND	53.0	50.0	106	52.7	50.0	105	79 - 124	<1	30
2-Butanone (MEK)	ND	48.7	50.0	97	50.1	50.0	100	46 - 141	3	30
2-Hexanone	ND	52.1	50.0	104	49.9	50.0	100	56 - 132	4	30
4-Methyl-2-pentanone	ND	53.3	50.0	107	52.4	50.0	105	60 - 141	2	30
Acetone	ND	54.8	50.0	110	55.0	50.0	110	29 - 151	<1	30
Benzene	ND	51.8	50.0	104	51.8	50.0	104	76 - 129	<1	30
Bromodichloromethane	ND	54.7	50.0	109	55.5	50.0	111	76 - 127	2	30
Bromoform	ND	37.7	50.0	75	39.7	50.0	79	58 - 133	5	30
Bromomethane	ND	18.9	50.0	38	19.2	50.0	38	10 - 162	2	30
Carbon Disulfide	ND	45.8	50.0	92	46.3	50.0	93	34 - 162	1	30
Carbon Tetrachloride	ND	51.9	50.0	104	56.2	50.0	112	71 - 135	8	30
Chlorobenzene	ND	49.6	50.0	99	50.2	50.0	100	76 - 125	1	30
Chloroethane	ND	40.4	50.0	81	51.1	50.0	102	70 - 140	23	30
Chloroform	ND	52.8	50.0	106	52.2	50.0	104	75 - 130	1	30
Chloromethane	ND	43.3	50.0	87	43.9	50.0	88	55 - 160	1	30
Dibromochloromethane	ND	48.7	50.0	97	48.5	50.0	97	72 - 128	<1	30
Dichloromethane	ND	44.2	50.0	88	44.4	50.0	89	75 - 121	<1	30
Ethylbenzene	ND	41.8	50.0	84	42.2	50.0	84	72 - 134	<1	30
Styrene	ND	4.91	50.0	10 *	4.64	50.0	9 *	34 - 156	6	30
Tetrachloroethene (PCE)	ND	54.2	50.0	108	54.2	50.0	108	67 - 137	<1	30
Toluene	ND	47.3	50.0	95	48.0	50.0	96	79 - 125	1	30
Trichloroethene (TCE)	ND	47.4	50.0	95	48.4	50.0	97	62 - 142	2	30

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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.

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Collected: 7/15/14
Date Received: 7/16/14
Date Analyzed: 7/22/14

Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW 4B
Lab Code: R1405452-001

Units: µg/L
Basis: NA

Analytical Method: 8260C

Analyte Name	Sample Result	MW 4BMS Matrix Spike RQ1408513-05			MW 4BDMS Duplicate Matrix Spike RQ1408513-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Vinyl Chloride	ND	33.9	50.0	68	32.7	50.0	65	60 - 157	4	30
cis-1,2-Dichloroethene	ND	43.9	50.0	88	44.2	50.0	88	72 - 133	<1	30
cis-1,3-Dichloropropene	ND	41.4	50.0	83	43.7	50.0	87	52 - 134	5	30
m,p-Xylenes	ND	76.6	100	77	77.6	100	78	68 - 138	1	30
o-Xylene	ND	38.6	50.0	77	38.1	50.0	76	68 - 134	1	30
trans-1,2-Dichloroethene	ND	44.4	50.0	89	44.4	50.0	89	77 - 125	<1	30
trans-1,3-Dichloropropene	ND	40.1	50.0	80	42.3	50.0	85	64 - 123	5	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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/17/14 -
7/29/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Lab Control Sample R1405452-LCS1					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	11.3	10.0	113	76 - 123
Cyanide, Total	335.4	0.0970	0.100	97	90 - 110
Phenolics, Total Recoverable	420.4	0.0408	0.0400	102	90 - 110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	866	915	95	90 - 110

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

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

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/18/14 -
7/21/14

**Lab Control Sample Summary
General Chemistry Parameters**

Units: mg/L
Basis: NA

Lab Control Sample R1405452-LCS2					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	11.2	10.0	112	76 - 123
Cyanide, Total	335.4	0.397	0.400	99	90 - 110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	880	915	96	90 - 110

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

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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/18/14 -
7/22/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Lab Control Sample R1405452-LCS3					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	335.4	0.0960	0.100	96	90 - 110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	846	914	93	90 - 110

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

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 GW 7/2014
 Sample Matrix: Water

Service Request: R1405452
 Date Analyzed: 7/18/14

Lab Control Sample Summary General Chemistry Parameters

Units: mg/L
 Basis: NA

Lab Control Sample R1405452-LCS4					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	335.4	0.384	0.400	96	90 - 110

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

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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Form 3C

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SuperSet Reference: 90075
 44-0006296956 Rev 00

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/23/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Lab Control Sample R1405452-LCS5					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	335.4	0.0999	0.100	100	90 - 110

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

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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/23/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Lab Control Sample R1405452-LCS6					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	335.4	0.406	0.400	101	90 - 110

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

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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/25/14 -
 7/28/14

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Lab Control Sample R1405452-LCS1					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Dissolved	6010C	42.0	40	105	80 - 120
Arsenic, Total	6010C	39.2	40	98	80 - 120
Cadmium, Dissolved	6010C	50.7	50.0	101	80 - 120
Cadmium, Total	6010C	51.0	50.0	102	80 - 120
Chromium, Dissolved	6010C	210	200	105	80 - 120
Chromium, Total	6010C	213	200	106	80 - 120
Iron, Dissolved	6010C	1050	1000	105	80 - 120
Iron, Total	6010C	1050	1000	105	80 - 120
Lead, Dissolved	6010C	530	500	106	80 - 120
Lead, Total	6010C	535	500	107	80 - 120
Manganese, Dissolved	6010C	517	500	103	80 - 120
Manganese, Total	6010C	521	500	104	80 - 120

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

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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/28/14

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Lab Control Sample R1405452-LCS2					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Dissolved	6010C	39.2	40	98	80 - 120
Cadmium, Dissolved	6010C	51.0	50.0	102	80 - 120
Chromium, Dissolved	6010C	213	200	106	80 - 120
Iron, Dissolved	6010C	1050	1000	105	80 - 120
Lead, Dissolved	6010C	535	500	107	80 - 120
Manganese, Dissolved	6010C	521	500	104	80 - 120

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

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

Client: Daigler Engineering
 Project: Marilla St. Landfill GW 7/2014
 Sample Matrix: Water

Service Request: R1405452
 Date Analyzed: 7/22/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L

Basis: NA

Analysis Lot: 402898

Lab Control Sample
RQ1408513-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	22.6	20.0	113	71 - 123
1,1,2,2-Tetrachloroethane	19.5	20.0	97	74 - 127
1,1,2-Trichloroethane	20.4	20.0	102	79 - 117
1,1-Dichloroethane (1,1-DCA)	20.9	20.0	104	76 - 128
1,1-Dichloroethene (1,1-DCE)	21.4	20.0	107	74 - 135
1,2-Dichloroethane	26.1	20.0	130	72 - 130
1,2-Dichloropropane	22.1	20.0	111	80 - 119
2-Butanone (MEK)	25.2	20.0	126	66 - 129
2-Hexanone	23.2	20.0	116	61 - 131
4-Methyl-2-pentanone	21.4	20.0	107	68 - 129
Acetone	27.9	20.0	140	51 - 146
Benzene	22.4	20.0	112	76 - 118
Bromodichloromethane	23.0	20.0	115	79 - 122
Bromoform	16.3	20.0	81	65 - 138
Bromomethane	17.8	20.0	89	41 - 159
Carbon Disulfide	19.0	20.0	95	63 - 141
Carbon Tetrachloride	21.9	20.0	109	66 - 128
Chlorobenzene	21.2	20.0	106	80 - 121
Chloroethane	16.5	20.0	83	71 - 128
Chloroform	22.9	20.0	114	76 - 120
Chloromethane	18.6	20.0	93	64 - 140
Dibromochloromethane	19.7	20.0	98	79 - 125
Dichloromethane	19.0	20.0	95	73 - 122
Ethylbenzene	19.5	20.0	97	76 - 120
Styrene	20.5	20.0	102	81 - 122
Tetrachloroethene (PCE)	23.0	20.0	115	69 - 124
Toluene	21.9	20.0	109	77 - 120
Trichloroethene (TCE)	21.0	20.0	105	76 - 123
Vinyl Chloride	16.9	20.0	84	69 - 136
cis-1,2-Dichloroethene	20.1	20.0	100	80 - 121
cis-1,3-Dichloropropene	20.4	20.0	102	77 - 125
m,p-Xylenes	42.0	40.0	105	78 - 123
o-Xylene	20.7	20.0	104	77 - 131

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

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

Client: Daigler Engineering
Project: Marilla St. Landfill GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/22/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L

Basis: NA

Analysis Lot: 402898

Lab Control Sample RQ1408513-03				
Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	19.6	20.0	98	78 - 124
trans-1,3-Dichloropropene	21.0	20.0	105	72 - 123

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

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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/23/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 403155

Lab Control Sample
RQ1408606-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	23.5	20.0	117	71 - 123
1,1,2,2-Tetrachloroethane	20.6	20.0	103	74 - 127
1,1,2-Trichloroethane	21.0	20.0	105	79 - 117
1,1-Dichloroethane (1,1-DCA)	22.3	20.0	111	76 - 128
1,1-Dichloroethene (1,1-DCE)	22.0	20.0	110	74 - 135
1,2-Dichloroethane	25.2	20.0	126	72 - 130
1,2-Dichloropropane	22.1	20.0	110	80 - 119
2-Butanone (MEK)	26.6	20.0	133 *	66 - 129
2-Hexanone	23.7	20.0	119	61 - 131
4-Methyl-2-pentanone	22.0	20.0	110	68 - 129
Acetone	28.0	20.0	140	51 - 146
Benzene	21.7	20.0	109	76 - 118
Bromodichloromethane	23.3	20.0	117	79 - 122
Bromoform	18.0	20.0	90	65 - 138
Bromomethane	16.7	20.0	83	41 - 159
Carbon Disulfide	20.2	20.0	101	63 - 141
Carbon Tetrachloride	23.8	20.0	119	66 - 128
Chlorobenzene	21.0	20.0	105	80 - 121
Chloroethane	17.9	20.0	89	71 - 128
Chloroform	23.1	20.0	116	76 - 120
Chloromethane	19.8	20.0	99	64 - 140
Dibromochloromethane	21.6	20.0	108	79 - 125
Dichloromethane	20.0	20.0	100	73 - 122
Ethylbenzene	19.9	20.0	99	76 - 120
Styrene	20.8	20.0	104	81 - 122
Tetrachloroethene (PCE)	22.7	20.0	113	69 - 124
Toluene	21.5	20.0	108	77 - 120
Trichloroethene (TCE)	20.7	20.0	103	76 - 123
Vinyl Chloride	18.4	20.0	92	69 - 136
cis-1,2-Dichloroethene	20.1	20.0	101	80 - 121
cis-1,3-Dichloropropene	21.4	20.0	107	77 - 125
m,p-Xylenes	41.9	40.0	105	78 - 123
o-Xylene	20.3	20.0	102	77 - 131

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

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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/23/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 403155

Lab Control Sample
RQ1408606-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	20.2	20.0	101	78 - 124
trans-1,3-Dichloropropene	22.1	20.0	111	72 - 123

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

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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/28/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 403796

Lab Control Sample RQ1408762-03				
Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	22.1	20.0	111	71 - 123
1,1,2,2-Tetrachloroethane	20.4	20.0	102	74 - 127
1,1,2-Trichloroethane	21.8	20.0	109	79 - 117
1,1-Dichloroethane (1,1-DCA)	19.6	20.0	98	76 - 128
1,1-Dichloroethene (1,1-DCE)	20.2	20.0	101	74 - 135
1,2-Dichloroethane	24.9	20.0	124	72 - 130
1,2-Dichloropropane	20.9	20.0	104	80 - 119
2-Butanone (MEK)	23.3	20.0	117	66 - 129
2-Hexanone	21.9	20.0	110	61 - 131
4-Methyl-2-pentanone	21.8	20.0	109	68 - 129
Acetone	24.1	20.0	121	51 - 146
Benzene	20.5	20.0	102	76 - 118
Bromodichloromethane	23.0	20.0	115	79 - 122
Bromoform	20.2	20.0	101	65 - 138
Bromomethane	16.4	20.0	82	41 - 159
Carbon Disulfide	19.0	20.0	95	63 - 141
Carbon Tetrachloride	22.4	20.0	112	66 - 128
Chlorobenzene	20.4	20.0	102	80 - 121
Chloroethane	15.6	20.0	78	71 - 128
Chloroform	21.3	20.0	107	76 - 120
Chloromethane	16.4	20.0	82	64 - 140
Dibromochloromethane	22.1	20.0	110	79 - 125
Dichloromethane	18.5	20.0	93	73 - 122
Ethylbenzene	18.6	20.0	93	76 - 120
Styrene	20.4	20.0	102	81 - 122
Tetrachloroethene (PCE)	22.2	20.0	111	69 - 124
Toluene	20.6	20.0	103	77 - 120
Trichloroethene (TCE)	20.3	20.0	102	76 - 123
Vinyl Chloride	16.7	20.0	83	69 - 136
cis-1,2-Dichloroethene	18.2	20.0	91	80 - 121
cis-1,3-Dichloropropene	21.1	20.0	105	77 - 125
m,p-Xylenes	40.2	40.0	100	78 - 123
o-Xylene	19.5	20.0	98	77 - 131

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

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 GW 7/2014
Sample Matrix: Water

Service Request: R1405452
Date Analyzed: 7/28/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 403796

Lab Control Sample
RQ1408762-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	18.7	20.0	94	78 - 124
trans-1,3-Dichloropropene	22.0	20.0	110	72 - 123

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

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

Project Name ALLYSON ZURAWSKI		Project Number MARILLA ST LANDFILL		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																			
Project Manager		Report CC		PRESERVATIVE																			
Company/Address 2620 GRAND ISLAND BLVD GRAND ISLAND NY 14072				NUMBER OF CONTAINERS	GC/MS VOCs • 8260 • 823 • CLP	GC/MS SVOCs • 8270 • 825	GC VOCs • 8021 • 801/802	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS TOTAL (List in comments below)	METALS DISSOLVED (List in comments below)	PHENOLICS	TDS	TOL	TOTAL CN	Preservative Key 0. NONE 1. HCL 2. HNO ₃ 3. H ₂ SO ₄ 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO ₄ 8. Other _____							
Phone # 716 773 6872 x202		Email allyson@jadenvegrum.com																					
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name ALLYSON ZURAWSKI																					
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE TIME		MATRIX																			
MW 4B	-001	7/15/14	1600	W	6	X				X		X	X	X	X								
MW 4B (MS)	QC	7/15/14	1600	W	6	X				X		X	X	X	X								
MW 4B (MSB)	QC	7/15/14	1600	W	6	X				X		X	X	X	X								
MW 18B	-002	7/15/14	1540	W	6	X				X		X	X	X	X								
MW 18A	-003	7/15/14	1520	W	6	X				X	X	X	X	X	X								
SW 3A	QC	7/15/14	1500	W	7	X				X	X	X	X	X	X								
SW 2A	QC	7/15/14	1405	W	1	X				X	X	X	X	X	X								
X-2	-005	7/15/14		W	6	X				X		X	X	X	X								
		7/15/14		W																			
		7/15/14		W																			
		7/15/14		W																			
SPECIAL INSTRUCTIONS/COMMENTS Metals SW 3A - NOT FILTERED IN FIELD TO BE FILTERED IN LAB + TESTED FOR DISSOLVED As, Cd, Cr, Fe, Pb, Mn Fedex 7706 1058 0839					TURNAROUND REQUIREMENTS ____ RUSH (SURCHARGES APPLY) ____ 1 day ____ 2 day ____ 3 day ____ 4 day ____ 5 day REQUESTED REPORT DATE SWJ					REPORT REQUIREMENTS ____ I. Results Only ____ II. Results + OC Summaries (LCS, DUP, MS/MSD as required) ____ III. Results + OC and Calibration Summaries ____ IV. Data Validation Report with Raw Data Edata ____ Yes					INVOICE INFORMATION PO # BILL TO: R1405452 Dalgler Engineering Marilla St. Landfill								
STATE WHERE SAMPLES WERE COLLECTED																							
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY															
Signature <i>[Signature]</i>		Signature <i>[Signature]</i>		Signature		Signature		Signature					Signature										
Printed Name ALLYSON ZURAWSKI		Printed Name ALLYSON Z. Esmerjail		Printed Name		Printed Name		Printed Name					Printed Name										
Firm DAIGLER		Firm ALS		Firm		Firm		Firm					Firm										
Date/Time 7/15/14 1730		Date/Time 7/16/14 10:00		Date/Time		Date/Time		Date/Time					Date/Time										



Cooler Receipt and Preservation Check Form

Project/Client

Daigster

Folder Number

R1405452

Cooler received on

7-16-14

by

KE

COURIER: ALS UPS FEDEX VELOCITY CLIENT

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

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

8. Temperature Readings

Date:

7-16-14

Time:

10:32

ID

IR#3

IR#4

From:

Temp Blank

Sample Bottle

Observed Temp (°C)	3.5						
Correction Factor (°C)	-0.2						
Corrected Temp (°C)	3.3						
Within 0-6°C?	☒ 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

KE

on

7-16-14

at

10:40

5035 samples placed in storage location:

by

on

at

PC Secondary Review:

KB 7/16/14

Cooler Breakdown: Date:

7/17

Time:

08:12

by:

KS

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)?

☒ YES

NO

2. Did all bottle labels and tags agree with custody papers?

☒ YES

NO

3. Were correct containers used for the tests indicated?

☒ YES

NO

4. 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	☒		WC126250C	5/15				
≤2	HNO ₃	☒		B0326136B	5/15				
≤2	H ₂ SO ₄	☒		WC126250C	5/15				
<4	NaHSO ₄								
Residual Chlorine (-)	For CN Phenol and 522	☒		If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
	Na ₂ S ₂ O ₃	-	-						
	ZnAcetate	-	-						
	HCl	**	**	411302	5/15				

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:

105715-2mm, 117612-2mm, 010413-1mm, 4-0816-03

Other Comments:

* SW3A, MW4B, X-2, MW4B (MS), MW4B (MSD) VOA sets: 2 of 3 vials have significant headspace.

* MW18A, MW18B VOA sets: All 3 vials have significant headspace.

PC Secondary Review:

KB 8/1/14

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

16745

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

Project Name		Project Number MARKL ST LANDFILL		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																					
Project Manager ALLYSON ZURASWI		Report CC		PRESERVATIVE																					
Company/Address DAIGLER ENGINEERING		Email ALLYSON@Jardenvoyt.com		NUMBER OF CONTAINERS GC/MS VOCs • 8260 • 821 • CLP GC/MS SVOCs • 8270 • 825 GC/MS • 821 • 801/802 PESTICIDES • 808 • 808 PCBs • 808 • 808 METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below) Phenols TDS TOC Total Cr Preservative Key 0. NONE 1. HCL 2. HNO₃ 3. H₂SO₄ 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO₄ 8. Other _____																					
2620 GRAND ISLAND BLVD																									
GRAND ISLAND NY																									
Phone #		Sampler's Signature 		REMARKS/ ALTERNATE DESCRIPTION																					
Client Sample ID		FOR OFFICE USE ONLY LAB ID		DATE		SAMPLING TIME		MATRIX																	
7B		000		7-16-14		1115		W		6 X															
16B		007		7-16-14		1000		W		6 X															
3B		008		7-16-14		830		W		7 X															
SED 1		R1405452		7-16-14		1030		SED		1 X															
SED 1 (MS)		R1405452		7-16-14		1030		SED		1 X															
SED 1 (MSD)		R1405452		7-16-14		1030		SED		1 X															
SED 2		R1405452		7-16-14		930		SED		1 X															
X-3		R1405452		7-16-14				SED		1 X															
SPECIAL INSTRUCTIONS/COMMENTS																									
Metals Additional 3B Field Filter (metals) bottle to be shipped tomorrow (7-17-14) @ Does not appear to be filtered 7/17/14 FEDEX 770620 702680																									
TURNAROUND REQUIREMENTS										REPORT REQUIREMENTS					INVOICE INFORMATION										
RUSH (SURCHARGES APPLY) ____ 1 day ____ 2 day ____ 3 day ____ 4 day ____ 5 day REQUESTED REPORT DATE _____										I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data Edata ☒ Yes ____ No					PO # BILL TO: R1405452										
STATE WHERE SAMPLES WERE COLLECTED NY																									
RELINQUISHED BY					RECEIVED BY					RELINQUISHED BY					RECEIVED BY										
Signature					Signature					Signature					Signature										
Printed Name SAM DAIGLER					Printed Name Guy Latta					Printed Name					Printed Name										
Firm DAIGLER					Firm ALS					Firm					Firm										
Date/Time 7-16-14 1700					Date/Time 7/17/14 0930					Date/Time					Date/Time										



Cooler Receipt and Preservation

R1405452

5

Daigler Engineering
Marilla St. Landfill GW 7/2014

Project/Client

Daigler

Folder Number

Cooler received on

7-17-14

by:

HE

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y	N	5a	Perchlorate samples have required headspace?	Y	N	NA
2	Custody papers properly completed (ink, signed)?	Y	N	5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y	N	NA
3	Did all bottles arrive in good condition (unbroken)?	Y	N	6	Where did the bottles originate?	ALS/ROC	CLIENT	
4	Circle: Wet Ice Dry Ice Gel packs present?	Y	N	7	Soil VOA received as:	Bulk	Encore	5035set NA

8. Temperature Readings

Date: 7-17-14

Time: 09:52

ID: IR#3 IR#4

From: Temp Blank Sample Bottle

Observed Temp (°C)	2.6°						
Correction Factor (°C)	-0.2°						
Corrected Temp (°C)	2.4°						
Within 0-6°C?	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-00R by HE on 7-17-14 at 09:57

5035 samples placed in storage location: by on at

PC Secondary Review: KB 7/17/14

Cooler Breakdown: Date: Time: by:

- 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
- 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									Yes=All samples OK
≤2	HNO ₃									No=Samples were preserved at The lab as listed
≤2	H ₂ SO ₄									
<4	NaHSO ₄									
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).						PM OK to Adjust:
	Na ₂ S ₂ O ₃	-	-							
	ZnAcetate	-	-							
	HCl	**	**							

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

Bottle lot numbers:

Other Comments:

* X-1 8260 VOA: 2 of 3 vials have significant headspace.

PC Secondary Review:

8/1/14 KB

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



Cooler Receipt and Preservation Check Form

Project/Client Douglas Folder Number R1405452

Cooler received on 7/17/14 by: Q COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>(N)</u>
2	Custody papers properly completed (ink, signed)?	Y <u>(N)</u>
3	Did all bottles arrive in good condition (unbroken)?	Y <u>(N)</u>
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	Y <u>(N)</u>
5a	Perchlorate samples have required headspace?	Y N <u>(NA)</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y <u>(N)</u> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as:	<u>Bulk</u> Encore 5035set <u>(NA)</u>

8. Temperature Readings Date: 7/17/14 Time: 0938 ID: IR#3 (R#4) From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>2.7°</u>						
Correction Factor (°C)	<u>+0.2</u>						
Corrected Temp (°C)	<u>2.9</u>						
Within 0-6°C?	<u>(Y) N</u>	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: A-002 by Q on 7/17/14 at 0943
 5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: KB 7/17/14

Cooler Breakdown: Date: 7/17 Time: 1414 by: JS

- 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
- 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>✓</u>		<u>WC126230C</u>	<u>5/15</u>				
≤2	HNO ₃	<u>✓</u>		<u>BDB26134B</u>	<u>5/15</u>				
≤2	H ₂ SO ₄	<u>✓</u>		<u>WC126101D</u>	<u>5/15</u>				
<4	NaHSO ₄								
Residual Chlorine (-)	For CN Phenol and 522	<u>✓</u>		If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
	Na ₂ S ₂ O ₃	-	-						
	ZnAcetate	-	-						
	HCl	**	**	<u>4113070</u>	<u>5/15</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: 310413-12MC, 112612-2W, 100713-247W, 4-056-003
 Other Comments:

PC Secondary Review: KB 8/1/14

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

[illegible]



Cooler Receipt and Preserva

R1405452

5

Daigler Engineering
Marilla St. Landfill GW 7/2014Project/Client Daigler Folder NumberCooler received on 7/18/14 by: JISCOURIER: ALS UPS ~~FEDEX~~ VELOCITY CLIENT

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

5a	Perchlorate samples have required headspace?	☐ Y	☒ N	☒ NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	☐ Y	☒ N	☒ NA
6	Where did the bottles originate?	<u>ALSTROC</u>	<u>CLIENT</u>	
7	Soil VOA received as:	Bulk	Encore	5035set ☒ NA

8. Temperature Readings Date: 7/18/14 Time: 1227 ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>3.1</u>						
Correction Factor (°C)	<u>-</u>						
Corrected Temp (°C)	<u>3.1</u>						
Within 0-6°C?	☒ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y

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: nor by JIS on 7/18 at 1227
5035 samples placed in storage location: by on at PC Secondary Review: KB 7/18/14Cooler Breakdown: Date: 7/18/14 Time: 1342 by: JIS

- 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
- 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	☒		WC12623JC	5/15				
≤2	HNO ₃	☒		BDB26136H	6/15				
≤2	H ₂ SO ₄	☒		WC126101D	5/15				
<4	NaHSO ₄								
Residual Chlorine (-)	For CN Phenol and 522	☒		If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
	Na ₂ S ₂ O ₃	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4112120	6/15				

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: 051214-18MC, 112612-24V, 105713-24AV, 4-052-003

Other Comments:

PC Secondary Review:

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



July 30, 2014

Service Request No: R1405501

Ms. Allyson Zurawski
Daigler Engineering
1711 Grand Island Blvd.
Grand Island, NY 14072

Laboratory Results for: Marilla St LF Sediment 7/2014

Dear Ms. Zurawski:

Enclosed are the results of the sample(s) submitted to our laboratory on July 17, 2014. For your reference, these analyses have been assigned our service request number **R1405501**.

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.

Please contact me if you have any questions. My extension is 7470. You may also contact me via email at Carlton.Beechler@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Carlton Beechler
Project Manager

Page 1 of 24

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil

Service Request No.: R1405501
Date Received: 7/17/14

CASE NARRATIVE

<u>Lab ID</u>	<u>Client ID</u>
R1405501-001	SED 1
R1405501-002	SED 2
R1405501-003	X-3

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. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three (3) samples were collected by the client on 7/16/14 and received for analysis at ALS Environmental on 7/17/14. The samples were received unbroken at a cooler temperature of 2.9 °C, within the 0-6°C guidelines.

The samples were also analyzed for % Solids in order to report all data on a dry weight basis.

Field Parameters

All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications.

Inorganics

Three (3) soil samples were analyzed for a client specified list of metals and phenols. Method #s are noted on the data forms.

The initial and continuing calibration criteria were met for these analytes.

Site QC was requested on sample SED 1 (R1405501-001). All Matrix Spike (MS) recoveries and Relative Percent Difference (RPD) calculations were within acceptance limits. Iron and Manganese were spiked too low to be accurately determined. These recoveries are flagged as "#".

All Laboratory Control Sample (LCS) recoveries were acceptable.

The Laboratory Method Blanks were free from contamination except for Total Solids. No data was affected.

No other analytical or QC problems were encountered.

Approved by



Date

7/30/14

00002



REPORT QUALIFIERS AND DEFINITIONS

- | | |
|---|--|
| <p>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.</p> <p>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).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>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> <p>* 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.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p> | <p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% (25% for CLP) difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>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).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p> |
|---|--|



Rochester Lab ID # for State Certifications¹

NELAP Accredited	Maine ID #NY0032	New Hampshire ID #
Connecticut ID # PH0556	Nebraska Accredited	294100 A/B
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
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		Virginia #460167

¹ 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 laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



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	3010A
200.8	ILM05.3
6010C	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	3010A
6010 SPLP (1312) extract	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.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: SED 1
Lab Code: R1405501-001

Service Request: R1405501
Date Collected: 7/16/14 1030
Date Received: 7/17/14

Basis: As Received

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	67.5	Percent	1.0	1	NA	7/23/14 09:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: SED 1
Lab Code: R1405501-001

Service Request: R1405501
Date Collected: 7/16/14 1030
Date Received: 7/17/14

Basis: Dry
Percent Solids: 67.5

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Phenolics, Total Recoverable	9066 Modified	0.14 U	mg/Kg	0.14	1	7/24/14	7/24/14 11:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: SED 1
Lab Code: R1405501-001

Service Request: R1405501
Date Collected: 7/16/14 1030
Date Received: 7/17/14

Basis: Dry
Percent Solids: 67.5

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	8.0	mg/Kg	1.5	1	7/24/14	7/26/14 00:32	
Cadmium, Total	6010C	0.74 U	mg/Kg	0.74	1	7/24/14	7/26/14 00:32	
Chromium, Total	6010C	23.2	mg/Kg	1.5	1	7/24/14	7/26/14 00:32	
Iron, Total	6010C	29300	mg/Kg	150	10	7/24/14	7/28/14 17:35	
Lead, Total	6010C	18.9	mg/Kg	7.4	1	7/24/14	7/26/14 00:32	
Manganese, Total	6010C	591	mg/Kg	15	10	7/24/14	7/28/14 17:35	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: SED 2
Lab Code: R1405501-002

Service Request: R1405501
Date Collected: 7/16/14 0930
Date Received: 7/17/14

Basis: As Received

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	73.1	Percent	1.0	1	NA	7/23/14 09:44	

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

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: SED 2
Lab Code: R1405501-002

Service Request: R1405501
Date Collected: 7/16/14 0930
Date Received: 7/17/14

Basis: Dry
Percent Solids: 73.1

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Phenolics, Total Recoverable	9066 Modified	0.13 U	mg/Kg	0.13	1	7/24/14	7/24/14 11:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: SED 2
Lab Code: R1405501-002

Service Request: R1405501
Date Collected: 7/16/14 0930
Date Received: 7/17/14

Basis: Dry
Percent Solids: 73.1

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	5.6	mg/Kg	1.4	1	7/24/14	7/26/14 01:15	
Cadmium, Total	6010C	0.68 U	mg/Kg	0.68	1	7/24/14	7/26/14 01:15	
Chromium, Total	6010C	21.1	mg/Kg	1.4	1	7/24/14	7/26/14 01:15	
Iron, Total	6010C	25700	mg/Kg	140	10	7/24/14	7/28/14 18:05	
Lead, Total	6010C	35.5	mg/Kg	6.8	1	7/24/14	7/26/14 01:15	
Manganese, Total	6010C	644	mg/Kg	14	10	7/24/14	7/28/14 18:05	

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

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: X-3
Lab Code: R1405501-003

Service Request: R1405501
Date Collected: 7/16/14
Date Received: 7/17/14

Basis: As Received

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	66.9	Percent	1.0	1	NA	7/23/14 09:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report \

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: X-3
Lab Code: R1405501-003

Service Request: R1405501
Date Collected: 7/16/14
Date Received: 7/17/14

Basis: Dry
Percent Solids: 66.9

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Phenolics, Total Recoverable	9066 Modified	0.15 U	mg/Kg	0.15	1	7/24/14	7/24/14 11:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: X-3
Lab Code: R1405501-003

Service Request: R1405501
Date Collected: 7/16/14
Date Received: 7/17/14

Basis: Dry
Percent Solids: 66.9

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	7.5	mg/Kg	1.5	1	7/24/14	7/26/14 01:21	
Cadmium, Total	6010C	0.73 U	mg/Kg	0.73	1	7/24/14	7/26/14 01:21	
Chromium, Total	6010C	50.5	mg/Kg	1.5	1	7/24/14	7/26/14 01:21	
Iron, Total	6010C	32300	mg/Kg	150	10	7/24/14	7/28/14 18:11	
Lead, Total	6010C	19.4	mg/Kg	7.3	1	7/24/14	7/26/14 01:21	
Manganese, Total	6010C	1230	mg/Kg	15	10	7/24/14	7/28/14 18:11	

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

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: R1405501-MB

Service Request: R1405501
Date Collected: NA
Date Received: NA

Basis: As Received

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	1.0	Percent	1.0	1	NA	7/23/14 09:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: R1405501-MB

Service Request: R1405501
Date Collected: NA
Date Received: NA

Basis: Dry

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Phenolics, Total Recoverable	9066 Modified	0.10 U	mg/Kg	0.10	1	7/24/14	7/24/14 11:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: R1405501-MB

Service Request: R1405501
Date Collected: NA
Date Received: NA

Basis: Dry

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	1.0	U	mg/Kg	1.0	1	7/24/14	7/26/14 00:01	
Cadmium, Total	6010C	0.50	U	mg/Kg	0.50	1	7/24/14	7/26/14 00:01	
Chromium, Total	6010C	1.0	U	mg/Kg	1.0	1	7/24/14	7/26/14 00:01	
Iron, Total	6010C	10	U	mg/Kg	10	1	7/24/14	7/28/14 17:04	
Lead, Total	6010C	5.0	U	mg/Kg	5.0	1	7/24/14	7/26/14 00:01	
Manganese, Total	6010C	1.0	U	mg/Kg	1.0	1	7/24/14	7/28/14 17:04	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil

Service Request: R1405501
Date Collected: 7/16/14
Date Received: 7/17/14
Date Analyzed: 7/23/14

**Replicate Sample Summary
 General Chemistry Parameters**

Sample Name: SED 1
Lab Code: R1405501-001

Units: Percent
Basis: As Received

Analyte Name	Method	MRL	Sample Result	SED 1DUP Duplicate Sample R1405501-001DUP		RPD	RPD Limit
				Result	Average		
Solids, Total	160.3 Modified	1.0	67.5	66.0	66.7	2	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 LF Sediment 7/2014
Sample Matrix: Soil

Service Request: R1405501
Date Collected: 7/16/14
Date Received: 7/17/14
Date Analyzed: 7/24/14

**Replicate Sample Summary
 General Chemistry Parameters**

Sample Name: SED 1
Lab Code: R1405501-001

Units: mg/Kg
Basis: Dry

Analyte Name	Method	MRL	Sample Result	SED 1DUP Duplicate Sample R1405501-001DUP		RPD	RPD Limit
				Result	Average		
Phenolics, Total Recoverable	9066 Modified	0.15	0.15 U	0.15 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 LF Sediment 7/2014
Sample Matrix: Soil

Service Request: R1405501
Date Collected: 7/16/14
Date Received: 7/17/14
Date Analyzed: 7/24/14

Matrix Spike Summary
General Chemistry Parameters

Sample Name: SED 1
Lab Code: R1405501-001
Analytical Method: 9066 Modified
Prep Method: Method

Units: mg/Kg
Basis: Dry

SED 1MS Matrix Spike R1405501-001MS					
Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Phenolics, Total Recoverable	ND	0.99	1.14	87	72 - 113

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 LF Sediment 7/2014
Sample Matrix: Soil

Service Request: R1405501
Date Collected: 7/16/14
Date Received: 7/17/14
Date Analyzed: 7/26/14 -
7/28/14

Matrix Spike Summary
Inorganic Parameters

Sample Name: SED 1
Lab Code: R1405501-001

Units: mg/Kg
Basis: Dry

Analytical Method: 6010C
Prep Method: EPA 3050B

Analyte Name	Sample Result	SED IMS Matrix Spike R1405501-001MS			SED 1DMS Duplicate Matrix Spike R1405501-001DMS			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Arsenic, Total	8.0	13.9	5.9	100	14.6	5.8	116	75 - 125	5	20
Cadmium, Total	ND	6.52	7.41	88	6.54	7.19	91	75 - 125	<1	20
Chromium, Total	23.2	56.8	29.6	113	53.6	28.8	106	75 - 125	6	20
Iron, Total	29300	30800	150	1045 #	32100	140	1994 #	75 - 125	4	20
Lead, Total	18.9	86.8	74.1	92	87.2	71.9	95	75 - 125	<1	20
Manganese, Total	591	719	74	173 #	717	72	176 #	75 - 125	<1	20

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

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

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla St LF Sediment 7/2014
Sample Matrix: Soil

Service Request: R1405501

Date Analyzed: 7/24/14

**Lab Control Sample Summary
 General Chemistry Parameters**

Units: mg/Kg

Basis: Dry

Lab Control Sample R1405501-LCS					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Phenolics, Total Recoverable	9066 Modified	0.688	0.80	86	59 - 128

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

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 LF Sediment 7/2014
Sample Matrix: Soil

Service Request: R1405501
Date Analyzed: 7/26/14 -
 7/28/14

Lab Control Sample Summary
Inorganic Parameters

Units: mg/Kg
Basis: Dry

Lab Control Sample R1405501-LCS					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	6010C	3.48	4.0	87	80 - 120
Cadmium, Total	6010C	4.58	5.00	92	80 - 120
Chromium, Total	6010C	20.1	20.0	100	80 - 120
Iron, Total	6010C	97.4	100	97	80 - 120
Lead, Total	6010C	47.2	50.0	94	80 - 120
Manganese, Total	6010C	47.6	50.0	95	80 - 120

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

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



Cooler Receipt and Preservation Check Form

Project/Client Daigle Folder Number R1405501

Cooler received on 7/17/14 by: R COURIER: ALS UPS ~~FEDEX~~ VELOCITY CLIENT

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

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

8. Temperature Readings Date: 7/17/14 Time: 0938 ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>2.7°</u>						
Correction Factor (°C)	<u>+0.2</u>						
Corrected Temp (°C)	<u>2.9</u>						
Within 0-6°C?	☒ 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: A-002 by R on 7/17/14 at 0943
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: KB 7/17/14

Cooler Breakdown: Date: 7/17/14 Time: 1345 by: JK

- 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
- 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								
≤2	HNO ₃								
≤2	H ₂ SO ₄								
<4	NaHSO ₄								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
	Na ₂ S ₂ O ₃	-	-						
	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: 052114-18NS
Other Comments:

PC Secondary Review: KB 7/30/14

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



July 31, 2014

Service Request No: R1405453

Ms. Allyson Zurawski
Daigler Engineering
1711 Grand Island Blvd.
Grand Island, NY 14072

Laboratory Results for: Marilla St. Landfill Surface Waters 7/2014

Dear Ms. Zurawski:

Enclosed are the results of the sample(s) submitted to our laboratory between July 16, 2014 and July 17, 2014. For your reference, these analyses have been assigned our service request number **R1405453**.

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.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

Page 1 of 41

Client: Daigler Engineering
Project: Marilla St. LF SW 7/2014
Sample Matrix: Water

Service Request No.: R1405453
Date Received: 7/16-17/14

All analyses were performed consistent with the quality assurance program of ALS Environmental (ALS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

Sample Receipt

Four (4) samples were collected by the client on 7/15-16/14 and received for analysis at ALS on 7/16-17/14 via a national courier.

Samples were received in good condition, consistent with the Chains of Custody (COC) and within cooler temperature guidelines of 0-6 degrees C. Sample "X-1" was noted as having headspace in 2 of the 3 VOA vials on the Cooler Receipt and Preservation Form at the end of the report.

Inorganics

Four (4) samples were analyzed for a client specified list of parameters. All method numbers are noted on the data forms. Filtering of dissolved metals was performed in the field except for sample SW-3A which was done in the laboratory as per COC instructions.

The Laboratory Method Blanks were free from contamination.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries were within QC limits.

All samples were analyzed within the proper holding times for the methods.

No other analytical or QC problems were encountered.

Volatile Organics

Four (4) samples were analyzed for a client specified list of Volatile compounds by GC/MS Method 8260C.

All surrogate recoveries were within QC limits.

All Initial Calibration criteria was met for these samples. All Continuing Calibration Verifications (CCV's) were acceptable except for the following compounds which were outside the 20% Difference (20%D) limit on the 7/25/14 run: 1,2-Dichloroethane, 2-Butanone, Acetone, and Chloroethane. Any hits for these samples associated with this CCV should be considered as estimated.

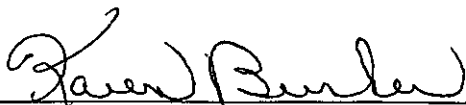
The Laboratory Method Blank was free from contamination.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries were within QC limits except for 1,2-Dichloroethane, 2-Butanone, and Acetone which were outside limits high. All exceeded recoveries have been flagged as "**". No data was affected.

All samples were analyzed within the 14 day holding time for preserved samples. All vials were checked for pH after analysis in order to maintain the integrity of the sample. All vials were found to be preserved to a pH of < 2.

No other analytical or QC problems were encountered.

Approved by



Date

8/1/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1405453

<u>Lab ID</u>	<u>Client ID</u>
R1405453-001	SW-3A
R1405453-002	SW-3A Dissolved
R1405453-003	SW-2A
R1405453-004	SW-2A Dissolved
R1405453-005	SW-1
R1405453-006	SW-1 Dissolved
R1405453-007	SW-5
R1405453-008	SW-5 Dissolved

REPORT QUALIFIERS AND DEFINITIONS

- | | |
|---|--|
| <p>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.</p> <p>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).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>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> <p>* 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.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p> | <p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% (25% for CLP) difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>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).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p> |
|---|--|



Rochester Lab ID # for State Certifications¹

NELAP Accredited	Maine ID #NY0032	New Hampshire ID #
Connecticut ID # PH0556	Nebraska Accredited	294100 A/B
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
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		Virginia #460167

¹ 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 laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



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	3010A
200.8	ILM05.3
6010C	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	3010A
6010 SPLP (1312) extract	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.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: SW-3A
Lab Code: R1405453-001

Service Request: R1405453
Date Collected: 7/15/14 1500
Date Received: 7/16/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	6.3		mg/L	1.0	1	NA	7/18/14 17:46	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:38	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/22/14 09:00	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	427		mg/L	10	1	NA	7/17/14 10:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/15/14 1500
Date Received: 7/16/14

Sample Name: SW-3A
Lab Code: R1405453-001

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:31	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 20:31	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:31	
Iron, Total	6010C	380		µg/L	100	1	7/24/14	7/25/14 20:31	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 20:31	
Manganese, Total	6010C	116		µg/L	10	1	7/24/14	7/25/14 20:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: SW-3A Dissolved
Lab Code: R1405453-002

Service Request: R1405453
Date Collected: 7/15/14 1500
Date Received: 7/16/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:03	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 21:03	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:03	
Iron, Dissolved	6010C	190		µg/L	100	1	7/24/14	7/25/14 21:03	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 21:03	
Manganese, Dissolved	6010C	81		µg/L	10	1	7/24/14	7/25/14 21:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill Surface Waters 7/2014
 Sample Matrix: Water

Service Request: R1405453
 Date Collected: 7/15/14 1500
 Date Received: 7/16/14
 Date Analyzed: 7/25/14 05:32

Sample Name: SW-3A
 Lab Code: R1405453-001

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
 Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7651.D\

Analysis Lot: 403405
 Instrument Name: R-MS-12
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/15/14 1500
Date Received: 7/16/14
Date Analyzed: 7/25/14 05:32

Sample Name: SW-3A
Lab Code: R1405453-001

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7651.D\

Analysis Lot: 403405
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	85-122	7/25/14 05:32	
Dibromofluoromethane	112	89-119	7/25/14 05:32	
Toluene-d8	101	87-121	7/25/14 05:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: SW-2A
Lab Code: R1405453-003

Service Request: R1405453
Date Collected: 7/15/14 1405
Date Received: 7/16/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	5.8		mg/L	1.0	1	NA	7/18/14 18:07	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:39	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/22/14 09:00	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	409		mg/L	10	1	NA	7/17/14 10:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: SW-2A
Lab Code: R1405453-003

Service Request: R1405453
Date Collected: 7/15/14 1405
Date Received: 7/16/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:22	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 21:22	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:22	
Iron, Total	6010C	450		µg/L	100	1	7/24/14	7/25/14 21:22	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 21:22	
Manganese, Total	6010C	141		µg/L	10	1	7/24/14	7/25/14 21:22	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/15/14 1405
Date Received: 7/16/14

Sample Name: SW-2A Dissolved
Lab Code: R1405453-004

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:28	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 21:28	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:28	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/25/14 21:28	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 21:28	
Manganese, Dissolved	6010C	79		µg/L	10	1	7/24/14	7/25/14 21:28	

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill Surface Waters 7/2014
 Sample Matrix: Water

Service Request: R1405453
 Date Collected: 7/15/14 1405
 Date Received: 7/16/14
 Date Analyzed: 7/25/14 06:05

Sample Name: SW-2A
 Lab Code: R1405453-003

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
 Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7652.D\

Analysis Lot: 403405
 Instrument Name: R-MS-12
 Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/15/14 1405
Date Received: 7/16/14
Date Analyzed: 7/25/14 06:05

Sample Name: SW-2A
Lab Code: R1405453-003

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7652.D\

Analysis Lot: 403405
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	85-122	7/25/14 06:05	
Dibromofluoromethane	111	89-119	7/25/14 06:05	
Toluene-d8	99	87-121	7/25/14 06:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/16/14 1500
Date Received: 7/17/14

Sample Name: SW-1
Lab Code: R1405453-005

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	6.1		mg/L	1.0	1	NA	7/18/14 18:28	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:41	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/22/14 09:00	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	414		mg/L	10	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/16/14 1500
Date Received: 7/17/14

Sample Name: SW-1
Lab Code: R1405453-005

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:35	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 21:35	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:35	
Iron, Total	6010C	750		µg/L	100	1	7/24/14	7/25/14 21:35	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 21:35	
Manganese, Total	6010C	279		µg/L	10	1	7/24/14	7/25/14 21:35	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: SW-1 Dissolved
Lab Code: R1405453-006

Service Request: R1405453
Date Collected: 7/16/14 1500
Date Received: 7/17/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:41	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 21:41	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:41	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/25/14 21:41	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 21:41	
Manganese, Dissolved	6010C	188		µg/L	10	1	7/24/14	7/25/14 21:41	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/16/14 1500
Date Received: 7/17/14
Date Analyzed: 7/25/14 06:37

Sample Name: SW-1
Lab Code: R1405453-005

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7653.D\

Analysis Lot: 403405
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Dichloromethane	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
100-42-5	Styrene	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

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

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/16/14 1500
Date Received: 7/17/14
Date Analyzed: 7/25/14 06:37

Sample Name: SW-1
Lab Code: R1405453-005

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7653.D\

Analysis Lot: 403405
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85-122	7/25/14 06:37	
Dibromofluoromethane	111	89-119	7/25/14 06:37	
Toluene-d8	99	87-121	7/25/14 06:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: SW-5
Lab Code: R1405453-007

Service Request: R1405453
Date Collected: 7/16/14 1545
Date Received: 7/17/14

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	5.7		mg/L	1.0	1	NA	7/18/14 18:49	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:44	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/22/14 09:00	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	40	U	mg/L	40	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: SW-5
Lab Code: R1405453-007

Service Request: R1405453
Date Collected: 7/16/14 1545
Date Received: 7/17/14

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:49	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 21:49	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:49	
Iron, Total	6010C	660		µg/L	100	1	7/24/14	7/25/14 21:49	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 21:49	
Manganese, Total	6010C	54		µg/L	10	1	7/24/14	7/25/14 21:49	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/16/14 1545
Date Received: 7/17/14

Sample Name: SW-5 Dissolved
Lab Code: R1405453-008

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:55	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 21:55	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:55	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/25/14 21:55	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 21:55	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 21:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/16/14 1545
Date Received: 7/17/14
Date Analyzed: 7/25/14 07:10

Sample Name: SW-5
Lab Code: R1405453-007

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7654.D\

Analysis Lot: 403405
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
78-93-3	2-Butanone (MEK)	10	U	10	
591-78-6	2-Hexanone	10	U	10	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
75-15-0	Carbon Disulfide	10	U	10	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Dichloromethane	5.0	U	5.0	
100-41-4	Ethylbenzene	5.0	U	5.0	
100-42-5	Styrene	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
108-88-3	Toluene	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
179601-23-1	m,p-Xylenes	5.0	U	5.0	
95-47-6	o-Xylene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: 7/16/14 1545
Date Received: 7/17/14
Date Analyzed: 7/25/14 07:10

Sample Name: SW-5
Lab Code: R1405453-007

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7654.D\

Analysis Lot: 403405
Instrument Name: R-MS-12
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85-122	7/25/14 07:10	
Dibromofluoromethane	107	89-119	7/25/14 07:10	
Toluene-d8	100	87-121	7/25/14 07:10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water /
Sample Name: Method Blank
Lab Code: R1405453-MB1

Service Request: R1405453
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	1.0	U	mg/L	1.0	1	NA	7/18/14 16:23	
Cyanide, Total	335.4	0.010	U	mg/L	0.010	1	7/22/14	7/23/14 09:34	
Phenolics, Total Recoverable	420.4	0.0050	U	mg/L	0.0050	1	NA	7/22/14 09:00	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10	U	mg/L	10	1	NA	7/17/14 10:15	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1405453-MB2

Service Request: R1405453
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10 U	mg/L	10	1	NA	7/18/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1405453-MB1

Service Request: R1405453
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	
Arsenic, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 20:05	
Cadmium, Total	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 20:05	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	
Chromium, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/25/14 20:05	
Iron, Total	6010C	100	U	µg/L	100	1	7/24/14	7/25/14 20:05	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 20:05	
Lead, Total	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 20:05	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	
Manganese, Total	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1405453-MB2

Service Request: R1405453
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:18	
Cadmium, Dissolved	6010C	5.0	U	µg/L	5.0	1	7/24/14	7/25/14 20:18	
Chromium, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:18	
Iron, Dissolved	6010C	100	U	µg/L	100	1	7/24/14	7/25/14 20:18	
Lead, Dissolved	6010C	50	U	µg/L	50	1	7/24/14	7/25/14 20:18	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	7/24/14	7/25/14 20:18	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Collected: NA
Date Received: NA
Date Analyzed: 7/25/14 01:46

Sample Name: Method Blank
Lab Code: RQ1408671-04

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7644.D\

Analysis Lot: 403405
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0 U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0 U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0 U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0 U	5.0	
107-06-2	1,2-Dichloroethane	5.0 U	5.0	
78-87-5	1,2-Dichloropropane	5.0 U	5.0	
78-93-3	2-Butanone (MEK)	10 U	10	
591-78-6	2-Hexanone	10 U	10	
108-10-1	4-Methyl-2-pentanone	10 U	10	
67-64-1	Acetone	10 U	10	
71-43-2	Benzene	5.0 U	5.0	
75-27-4	Bromodichloromethane	5.0 U	5.0	
75-25-2	Bromoform	5.0 U	5.0	
74-83-9	Bromomethane	5.0 U	5.0	
75-15-0	Carbon Disulfide	10 U	10	
56-23-5	Carbon Tetrachloride	5.0 U	5.0	
108-90-7	Chlorobenzene	5.0 U	5.0	
75-00-3	Chloroethane	5.0 U	5.0	
67-66-3	Chloroform	5.0 U	5.0	
74-87-3	Chloromethane	5.0 U	5.0	
124-48-1	Dibromochloromethane	5.0 U	5.0	
75-09-2	Dichloromethane	5.0 U	5.0	
100-41-4	Ethylbenzene	5.0 U	5.0	
100-42-5	Styrene	5.0 U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0 U	5.0	
108-88-3	Toluene	5.0 U	5.0	
79-01-6	Trichloroethene (TCE)	5.0 U	5.0	
75-01-4	Vinyl Chloride	5.0 U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0 U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0 U	5.0	
179601-23-1	m,p-Xylenes	5.0 U	5.0	
95-47-6	o-Xylene	5.0 U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0 U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0 U	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Daigler Engineering
 Project: Marilla St. Landfill Surface Waters 7/2014
 Sample Matrix: Water

Service Request: R1405453
 Date Collected: NA
 Date Received: NA
 Date Analyzed: 7/25/14 01:46

Sample Name: Method Blank
 Lab Code: RQ1408671-04

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
 Data File Name: I:\ACQUDATA\MSVOA12\DATA\072414\M7644.D\

Analysis Lot: 403405
 Instrument Name: R-MS-12
 Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85-122	7/25/14 01:46	
Dibromofluoromethane	110	89-119	7/25/14 01:46	
Toluene-d8	101	87-121	7/25/14 01:46	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
 Project: Marilla St. Landfill Surface Waters 7/2014
 Sample Matrix: Water

Service Request: R1405453
 Date Analyzed: 7/17/14 -
 7/23/14

Lab Control Sample Summary
 General Chemistry Parameters

Units: mg/L
 Basis: NA

Lab Control Sample R1405453-LCS1					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	11.3	10.0	113	76 - 123
Cyanide, Total	335.4	0.0999	0.100	100	90 - 110
Phenolics, Total Recoverable	420.4	0.0385	0.0400	96	90 - 110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	866	915	95	90 - 110

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

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

Printed 7/31/14 9:46

Form 3C

\\alprews001\starlms\SLIMSReps\LabControlSample.rpt

SuperSet Reference:

00032
 14-0000296957 rev 00

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Daigler Engineering
Project: Marilla St. Landfill Surface Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Analyzed: 7/18/14 -
 7/23/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Lab Control Sample R1405453-LCS2					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Cyanide, Total	335.4	0.406	0.400	101	90 - 110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	880	915	96	90 - 110

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

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 Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Analyzed: 7/25/14

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Lab Control Sample
R1405453-LCS

Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Dissolved	6010C	42.0	40	105	80 - 120
Arsenic, Total	6010C	42.0	40	105	80 - 120
Cadmium, Dissolved	6010C	50.7	50.0	101	80 - 120
Cadmium, Total	6010C	50.7	50.0	101	80 - 120
Chromium, Dissolved	6010C	210	200	105	80 - 120
Chromium, Total	6010C	210	200	105	80 - 120
Iron, Dissolved	6010C	1050	1000	105	80 - 120
Iron, Total	6010C	1050	1000	105	80 - 120
Lead, Dissolved	6010C	530	500	106	80 - 120
Lead, Total	6010C	530	500	106	80 - 120
Manganese, Dissolved	6010C	517	500	103	80 - 120
Manganese, Total	6010C	517	500	103	80 - 120

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

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 Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Analyzed: 7/25/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 403405

Lab Control Sample
RQ1408671-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	24.0	20.0	120	71 - 123
1,1,2,2-Tetrachloroethane	19.6	20.0	98	74 - 127
1,1,2-Trichloroethane	22.2	20.0	111	79 - 117
1,1-Dichloroethane (1,1-DCA)	21.9	20.0	109	76 - 128
1,1-Dichloroethene (1,1-DCE)	23.0	20.0	115	74 - 135
1,2-Dichloroethane	27.3	20.0	136 *	72 - 130
1,2-Dichloropropane	22.8	20.0	114	80 - 119
2-Butanone (MEK)	26.8	20.0	134 *	66 - 129
2-Hexanone	25.4	20.0	127	61 - 131
4-Methyl-2-pentanone	23.1	20.0	116	68 - 129
Acetone	30.3	20.0	152 *	51 - 146
Benzene	22.0	20.0	110	76 - 118
Bromodichloromethane	24.0	20.0	120	79 - 122
Bromoform	19.2	20.0	96	65 - 138
Bromomethane	18.3	20.0	92	41 - 159
Carbon Disulfide	20.6	20.0	103	63 - 141
Carbon Tetrachloride	24.6	20.0	123	66 - 128
Chlorobenzene	21.0	20.0	105	80 - 121
Chloroethane	17.5	20.0	88	71 - 128
Chloroform	23.7	20.0	118	76 - 120
Chloromethane	19.1	20.0	95	64 - 140
Dibromochloromethane	22.7	20.0	113	79 - 125
Dichloromethane	20.3	20.0	102	73 - 122
Ethylbenzene	19.5	20.0	98	76 - 120
Styrene	20.8	20.0	104	81 - 122
Tetrachloroethene (PCE)	22.7	20.0	114	69 - 124
Toluene	21.6	20.0	108	77 - 120
Trichloroethene (TCE)	22.6	20.0	113	76 - 123
Vinyl Chloride	18.0	20.0	90	69 - 136
cis-1,2-Dichloroethene	20.2	20.0	101	80 - 121
cis-1,3-Dichloropropene	21.1	20.0	105	77 - 125
m,p-Xylenes	42.5	40.0	106	78 - 123
o-Xylene	20.6	20.0	103	77 - 131

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

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 Waters 7/2014
Sample Matrix: Water

Service Request: R1405453
Date Analyzed: 7/25/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 403405

Lab Control Sample
RQ1408671-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	20.7	20.0	104	78 - 124
trans-1,3-Dichloropropene	22.5	20.0	113	72 - 123

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

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

[illegible]



Cooler Receipt and Preservation Check Form

Project/Client

Daigler

Folder Number

R140353

Cooler received on

7/6/14

by

HE

COURIER: ALS UPS FEDEX VELOCITY CLIENT

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

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

8. Temperature Readings

Date: 7/6/14

Time: 10:36

ID: IR#3 IR#4

From: Temp Blank Sample Bottle

Observed Temp (°C)	3.7						
Correction Factor (°C)	-0.2°						
Corrected Temp (°C)	3.5						
Within 0-6°C?	☒ 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

HE

on

7/6/14

at

10:40

5035 samples placed in storage location:

by

on

at

PC Secondary Review:

WB 7/16/14

Cooler Breakdown: Date:

7/7

Time:

0833

by:

ATS

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)?

☒ YES

NO

2. Did all bottle labels and tags agree with custody papers?

☒ YES

NO

3. Were correct containers used for the tests indicated?

☒ YES

NO

4. 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	☒		WC126230C	5/15				
≤2	HNO ₃	☒		BD22613VB	5/15				
≤2	H ₂ SO ₄	☒		WC126101D	5/15				
<4	NaHSO ₄								
Residual Chlorine (-)	For CN Phenol and 522	☒		If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
	Na ₂ S ₂ O ₃	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4113070	5/15				

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:

4-356-03, 052614-2NA0, 051214-1BMC, 110413-2NA1

Other Comments:

* Sw-2A; 2 of 3 vials have significant headspace.

PC Secondary Review:

WB 7/21/14

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



Cooler Receipt and Preservation

R1405453

5

Daigler Engineering
Marilla St. Landfill Surface Waters 7/2014Project/Client Daigler Folder NumberCooler received on 7-17-14 by: HECOURIER: ALS UPS FEDEX VELOCITY CLIENT

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

5a	Perchlorate samples have required headspace?	Y <u>N</u> <u>NA</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y <u>N</u> <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: 7-17-14 Time: 09:52 ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>2.6°</u>						
Correction Factor (°C)	<u>-0.2°</u>						
Corrected Temp (°C)	<u>2.4°</u>						
Within 0-6°C?	<u>(Y) N</u>	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 HE on 7-17-14 at 09:57
5035 samples placed in storage location: _____ by _____ on _____ at _____PC Secondary Review: 7/17/14 KBCooler Breakdown: Date: 7/17/14 Time: 1323 by: JK

- 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
- 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>WC126230C</u>	<u>5/15</u>				
≤2	HNO ₃	✓		<u>B0226136D</u>	<u>5/15</u>				
≤2	H ₂ SO ₄	✓		<u>WC126250C</u>	<u>5/15</u>				
<4	NaHSO ₄								
Residual Chlorine (-)	For CN Phenol and 522	✓		If +, contact PM to add Na ₂ S ₂ O ₃ (CN), ascorbic (phenol).					
	Na ₂ S ₂ O ₃	-	-						
	ZnAcetate	-	-						
	HCl	**	**	<u>4113070</u>	<u>5/15</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: 4-056-013, 0140134BMC, 112612-2W, 1207322A9W
Other Comments:

* X-1 8260 VOA: 2 of 3 vials have significant headspace.

PC Secondary Review: KB 7/31/14

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

APPENDIX D

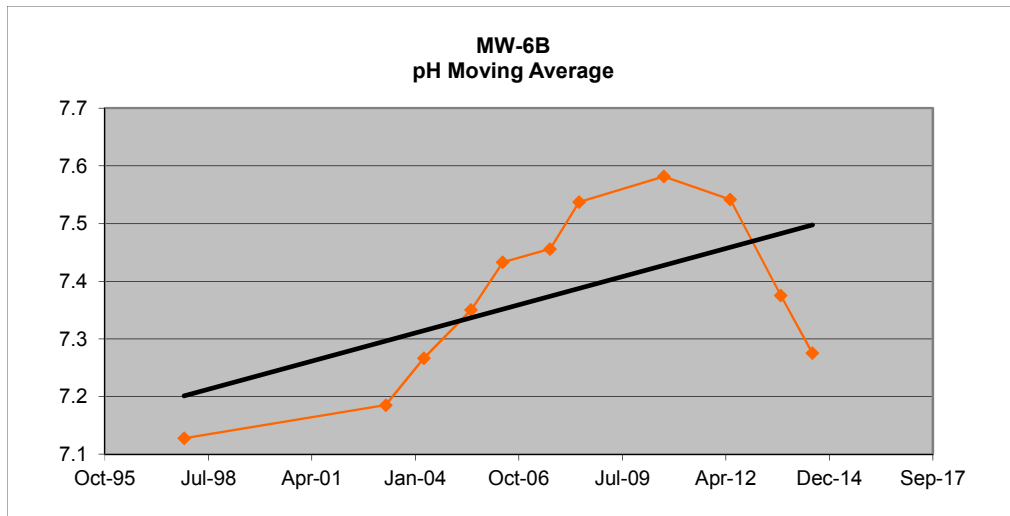
Historic Data for Shallow Overburden Background Well MW-6B

Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
pH

Event No.	Event Date	pH	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	0.146	0.438	7.128	7.566	6.689
9	Apr-03	7.68	0.245	0.734	7.185	7.919	6.451
10	Apr-04	7.89	0.351	1.052	7.266	8.318	6.214
11	Jul-05	7.99	0.435	1.306	7.350	8.656	6.044
12	May-06	7.54	0.394	1.182	7.433	8.614	6.251
13	Aug-07	7.06	0.403	1.210	7.456	8.666	6.246
14	May-08	7.57	0.394	1.183	7.537	8.720	6.354
15	Aug-10	7.34	0.353	1.058	7.581	8.639	6.524
16	May-12	7.40	0.301	0.902	7.541	8.443	6.640
17	Sep-13	7.19	0.157	0.471	7.375	7.846	6.904
18	Jul-14	7.17	0.113	0.338	7.275	7.613	6.937

BMC 7.33
3 S.D. 0.913
BMC+3SD 8.24
BMC-3SD 6.41

* = 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.

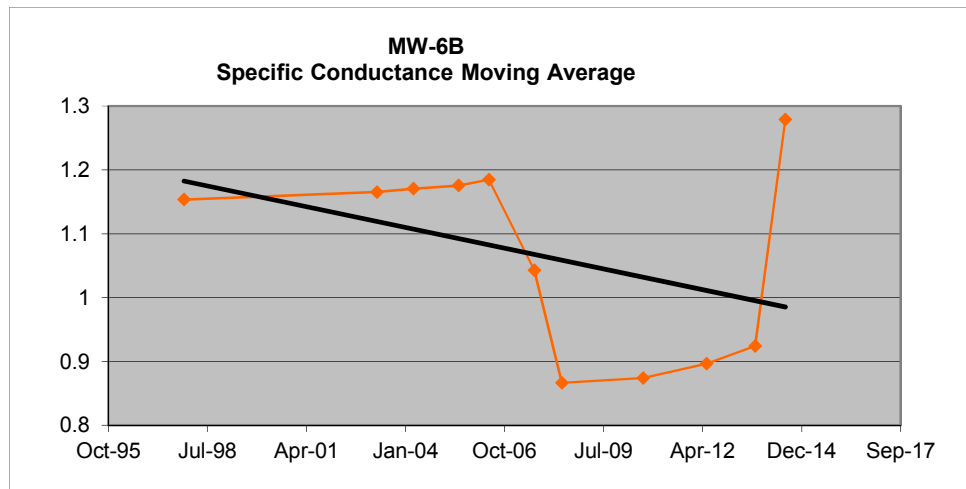


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Specific Conductance

Event No.	Event Date	Specific Conductance (mS/cm)	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	0.075	0.226	1.154	1.380
9	Apr-03	1.152	0.065	0.195	1.165	1.360
10	Apr-04	1.149	0.061	0.183	1.171	1.353
11	Jul-05	1.158	0.057	0.172	1.176	1.348
12	May-06	1.202	0.055	0.165	1.185	1.350
13	Aug-07	0.130	0.380	1.139	1.043	2.182
14	May-08	0.000	0.526	1.578	0.867	2.445
15	Aug-10	1.326	0.535	1.605	0.874	2.479
16	May-12	1.310	0.538	1.615	0.896	2.512
17	Sep-13	1.060	0.628	1.884	0.924	2.808
18	Jul-14	1.420	0.154	0.462	1.279	1.741

BMC 1.063
3 S.D. 1.129
BMC+3SD 2.192

* = 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.

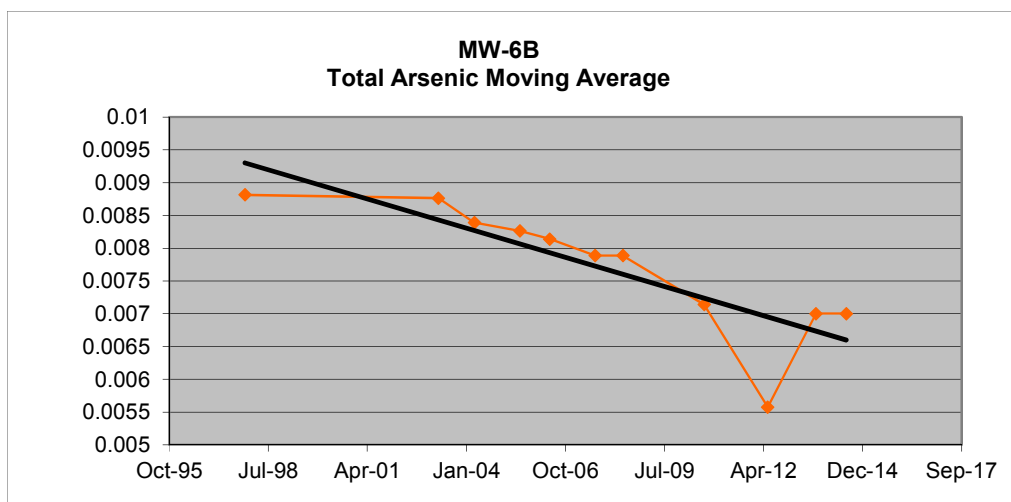


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Arsenic

Event No.	Event Date	Arsenic, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		0.0041	0.0124	0.0088	0.0212
9	Apr-03	0.0046	*	0.0042	0.0125	0.0088	0.0213
10	Apr-04	0.0040	*	0.0045	0.0134	0.0084	0.0218
11	Jul-05	0.0040	*	0.0046	0.0138	0.0083	0.0221
12	May-06	0.0040	*	0.0047	0.0141	0.0081	0.0223
13	Aug-07	0.0100	*	0.0045	0.0136	0.0079	0.0215
14	May-08	0.0100	*	0.0045	0.0136	0.0079	0.0215
15	Aug-10	0.0040	*	0.0046	0.0139	0.0071	0.0210
16	May-12	0.0040	*	0.0027	0.0082	0.0056	0.0138
17	Sep-13	0.0100	*	0.0035	0.0104	0.0070	0.0174
18	Jul-14	0.0100	*	0.0035	0.0104	0.0070	0.0174

BMC 0.00751
3 S.D. 0.0110
BMC+3SD 0.0185

* = 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.

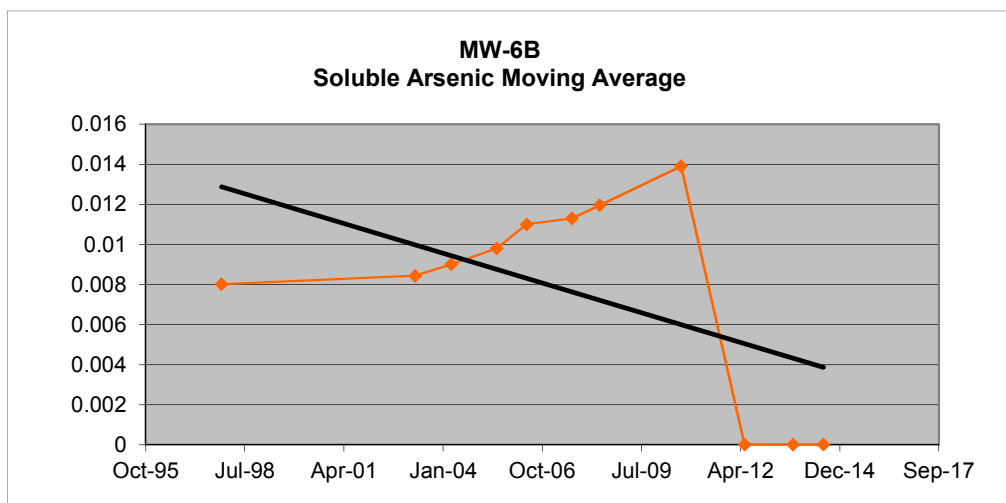


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Soluble Arsenic

Event No.	Event Date	Arsenic, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	M.A. + 3 S.D.
1	Mar-96	0.0050	*				
2	Jun-96	0.0050	*				
3	Oct-96	0.0050	*				
4	Dec-96	0.0050	*				
5	Mar-97	0.0101					
6	Jun-97	0.0100	*				
7	Sep-97	0.0100	*				
8	Dec-97	0.0139		0.0034	0.0103	0.0080	0.0183
9	Apr-03	NA		0.0035	0.0105	0.0084	0.0189
10	Apr-04	NA		0.0034	0.0103	0.0090	0.0193
11	Jul-05	NA		0.0032	0.0095	0.0098	0.0193
12	May-06	NA		0.0019	0.0058	0.0110	0.0168
13	Aug-07	NA		0.0023	0.0068	0.0113	0.0181
14	May-08	NA		0.0028	0.0083	0.0120	0.0202
15	Aug-10	NA		0.0028	0.0084	0.0139	0.0223
16	May-12	NA		0.0028	0.0084	0.0000	0.0084
17	Sep-13	NA		0.0000	0.0000	0.0000	0.0000
18	Jul-14	0.0100	*	0.0000	0.0000	0.0000	0.0000

BMC 0.00822
3 S.D. 0.0099
BMC+3SD 0.0181

* = 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.

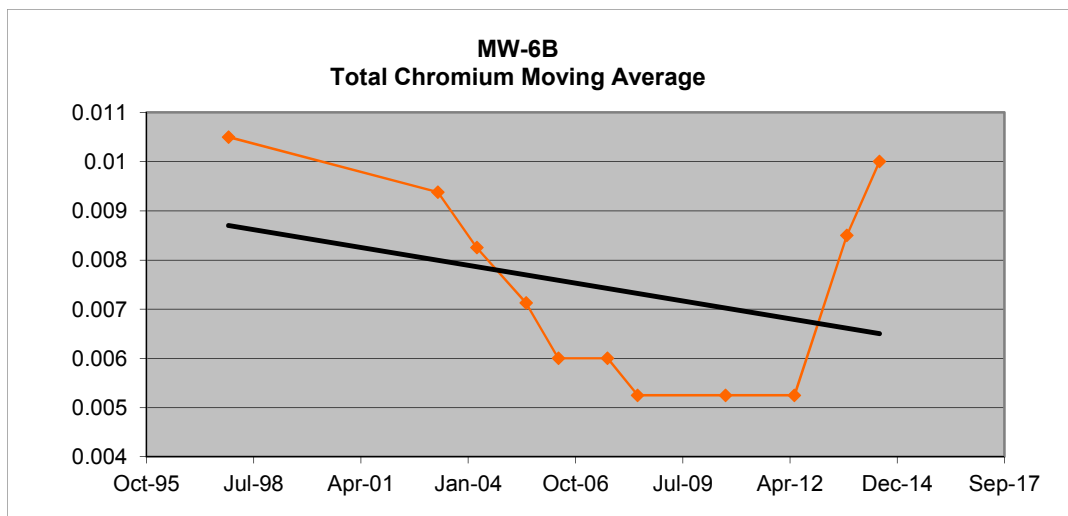


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Chromium

Event No.	Event Date	Chromium, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0005	0.0016	0.0105	0.0121
9	Apr-03	0.0020	*	0.0030	0.0091	0.0094	0.0184
10	Apr-04	0.0020	*	0.0039	0.0116	0.0083	0.0199
11	Jul-05	0.0020	*	0.0043	0.0128	0.0071	0.0199
12	May-06	0.0020	*	0.0043	0.0128	0.0060	0.0188
13	Aug-07	0.0100	*	0.0043	0.0128	0.0060	0.0188
14	May-08	0.0040	*	0.0040	0.0120	0.0053	0.0172
15	Aug-10	0.0100	*	0.0040	0.0120	0.0053	0.0172
16	May-12	0.0100	*	0.0040	0.0120	0.0053	0.0172
17	Sep-13	0.0100	*	0.0030	0.0090	0.0085	0.0175
18	Jul-14	0.0100	*	0.0000	0.0000	0.0100	0.0100

BMC 0.00811
3 S.D. 0.0111
BMC+3SD 0.0192

* = 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.

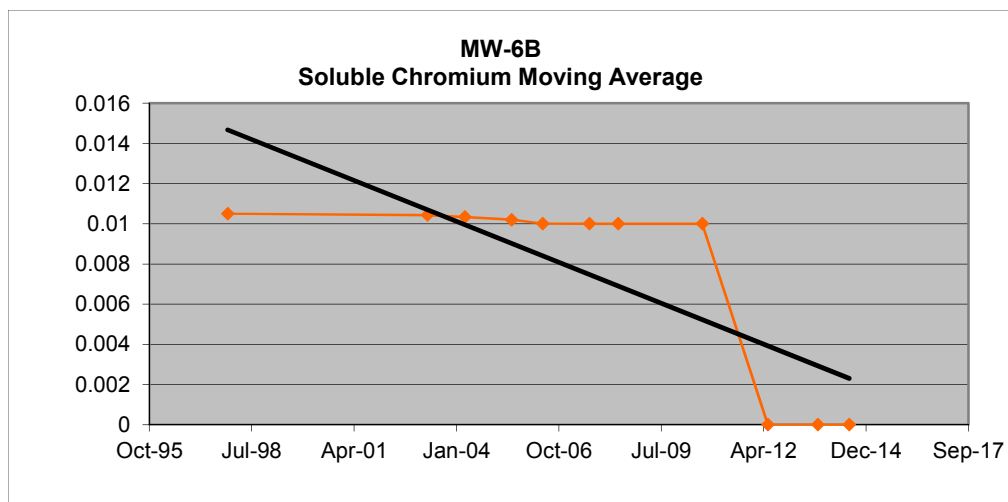


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Soluble Chromium

Event No.	Event Date	Chromium, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0005	0.0016	0.0105	0.0121
9	Apr-03	NA		0.0005	0.0016	0.0104	0.0120
10	Apr-04	NA		0.0005	0.0015	0.0103	0.0119
11	Jul-05	NA		0.0004	0.0013	0.0102	0.0115
12	May-06	NA		0.0000	0.0000	0.0100	0.0100
13	Aug-07	NA		0.0000	0.0000	0.0100	0.0100
14	May-08	NA		0.0000	0.0000	0.0100	0.0100
15	Aug-10	NA		0.0000	0.0000	0.0100	0.0100
16	May-12	NA		0.0000	0.0000	0.0000	0.0000
17	Sep-13	NA		0.0000	0.0000	0.0000	0.0000
18	Jul-14	0.0100	*	0.0000	0.0000	0.0000	0.0000

BMC 0.0104
3 S.D. 0.00158
BMC+3SD 0.0120

* = 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.



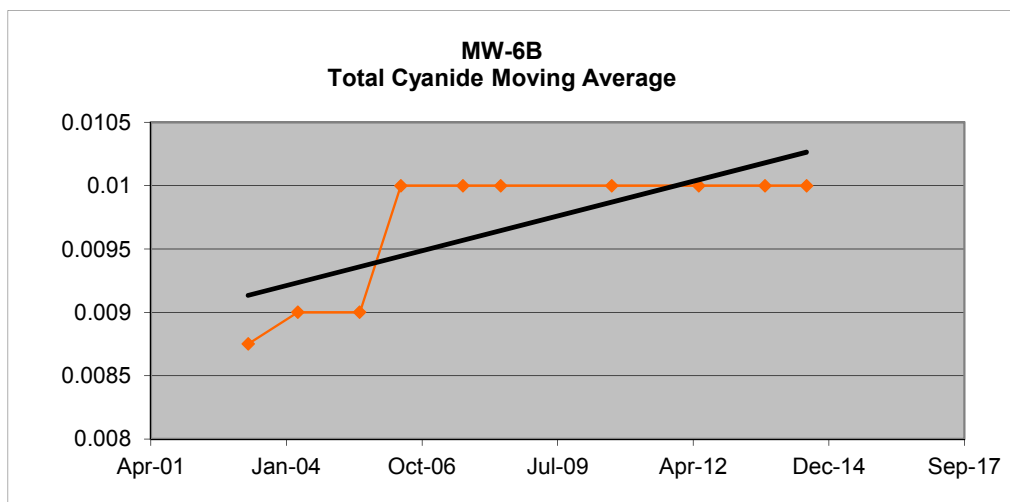
Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Cyanide

Event No.	Event Date	Cyanide, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.003	0.008	0.009	0.016
5	Apr-04	0.010	*	0.002	0.007	0.009	0.016
6	Jul-05	0.010	*	0.002	0.007	0.009	0.016
7	May-06	0.010	*	0.000	0.000	0.010	0.010
8	Aug-07	0.010	*	0.000	0.000	0.010	0.010
9	May-08	0.010	*	0.000	0.000	0.010	0.010
10	Aug-10	0.010	*	0.000	0.000	0.010	0.010
11	May-12	0.010	*	0.000	0.000	0.010	0.010
12	Sep-13	0.010	*	0.000	0.000	0.010	0.010
13	Jul-14	0.010	*	0.000	0.000	0.010	0.010

BMC 0.0096
3 S.D. 0.0042
BMC+3SD 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.

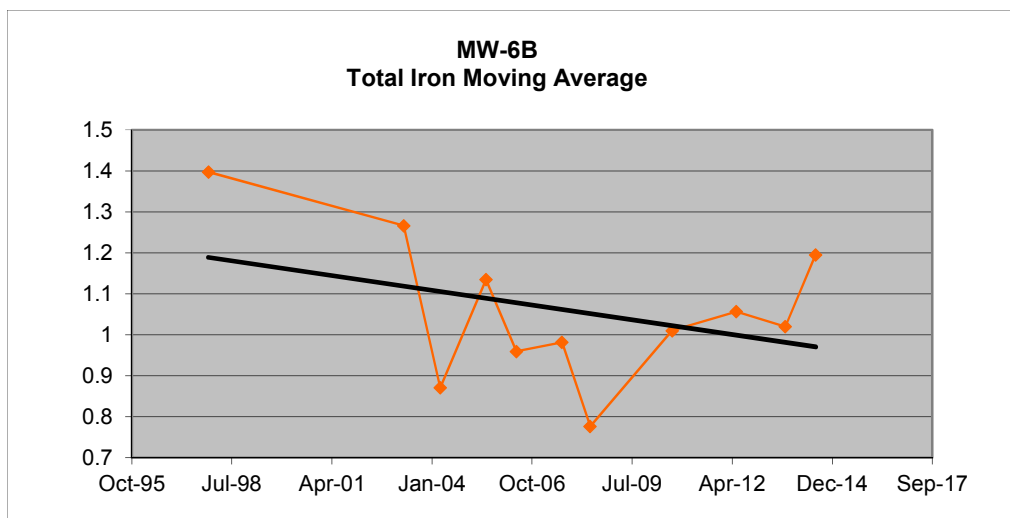


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Iron

Event No.	Event Date	Iron, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		1.230	3.691	1.397	5.088
9	Apr-03	0.250		1.296	3.889	1.266	5.155
10	Apr-04	0.798		0.705	2.114	0.871	2.985
11	Jul-05	2.800		0.972	2.915	1.134	4.050
12	May-06	0.360		0.969	2.907	0.959	3.866
13	Aug-07	0.383		0.951	2.853	0.982	3.835
14	May-08	0.490		0.838	2.515	0.777	3.291
15	Aug-10	2.280		0.972	2.915	1.010	3.925
16	May-12	1.090		0.965	2.894	1.056	3.951
17	Sep-13	0.220		0.915	2.746	1.020	3.766
18	Jul-14	1.190		0.844	2.533	1.195	3.728

BMC 1.169
3 S.D. 3.132
BMC+3SD 4.301

* = 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.

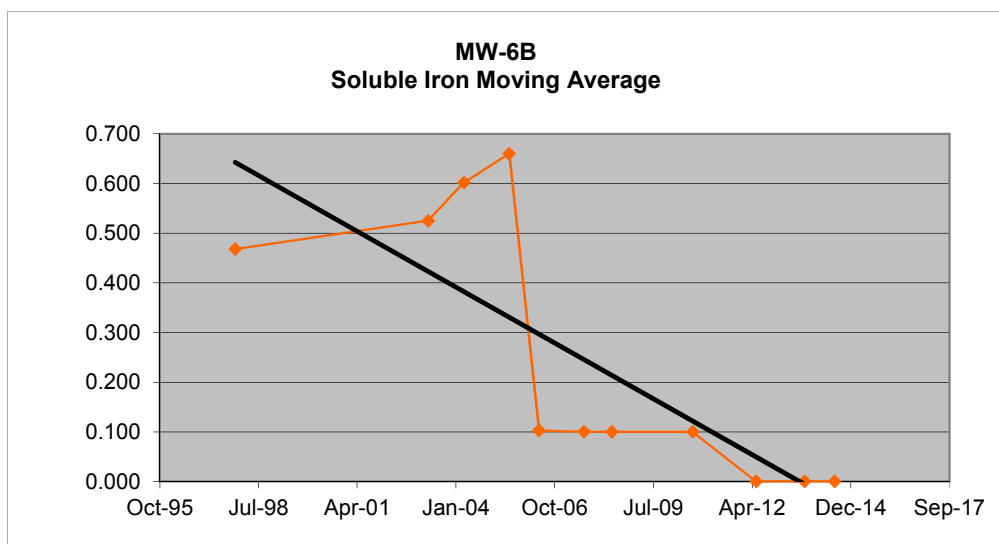


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Dissolved Iron

Event No.	Event Date	Iron, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.982	2.945	0.468	3.413
9	Apr-03	NA		1.046	3.138	0.525	3.663
10	Apr-04	NA		1.124	3.372	0.602	3.974
11	Jul-05	NA		1.247	3.740	0.660	4.400
12	May-06	NA		0.006	0.017	0.103	0.119
13	Aug-07	NA		0.000	0.000	0.100	0.100
14	May-08	NA		0.000	0.000	0.100	0.100
15	Aug-10	NA		0.000	0.000	0.100	0.100
14	May-12	NA		0.000	0.000	0.000	0.000
15	Sep-13	NA		0.000	0.000	0.000	0.000
16	Jul-14	0.320		0.000	0.000	0.000	0.000

BMC 0.452
3 S.D. 2.759
BMC+3SD 3.211

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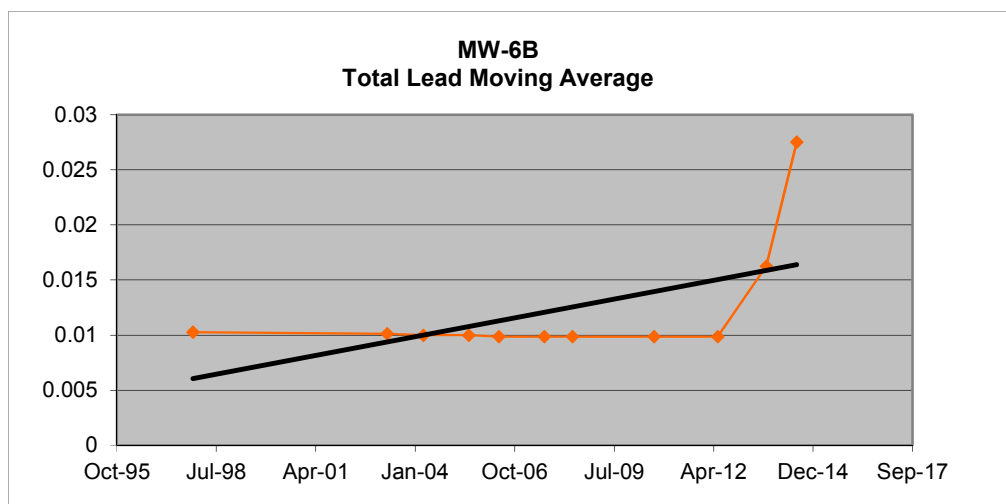


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Lead

Event No.	Event Date	Lead, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0161	0.0482	0.0103	0.0585
9	Apr-03	0.0038	*	0.0161	0.0484	0.0101	0.0585
10	Apr-04	0.0030	*	0.0162	0.0486	0.0100	0.0585
11	Jul-05	0.0040	*	0.0162	0.0486	0.0100	0.0585
12	May-06	0.0030	*	0.0162	0.0487	0.0099	0.0586
13	Aug-07	0.0500	*	0.0162	0.0487	0.0099	0.0586
14	May-08	0.0050	*	0.0162	0.0487	0.0099	0.0586
15	Aug-10	0.0050	*	0.0162	0.0487	0.0099	0.0586
16	May-12	0.0050	*	0.0162	0.0487	0.0099	0.0586
17	Sep-13	0.0500	*	0.0225	0.0675	0.0163	0.0838
18	Jul-14	0.0500	*	0.0260	0.0779	0.0275	0.1054

BMC 0.0145
3 S.D. 0.0586
BMC+3SD 0.0731

* = 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.

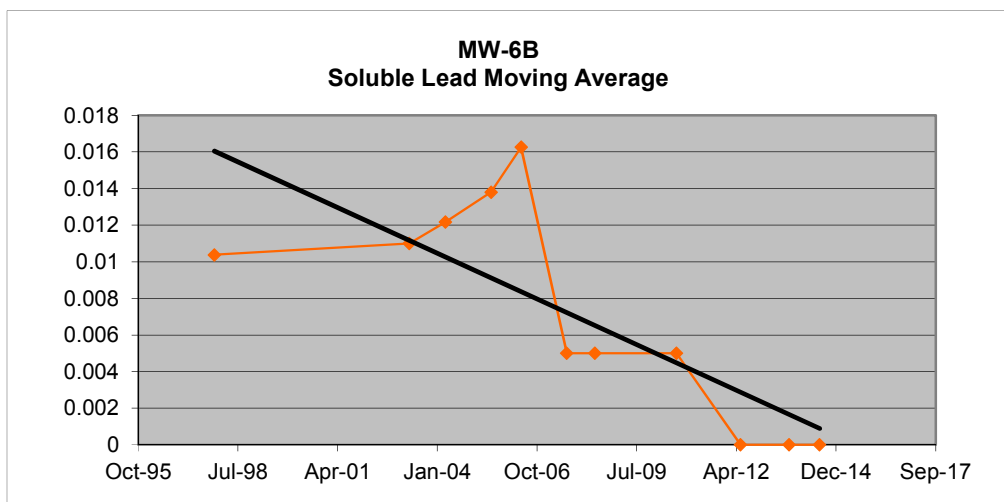


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Soluble Lead

Event No.	Event Date	Lead, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0160	0.0481	0.0104	0.0585
9	Apr-03	NA		0.0172	0.0516	0.0110	0.0626
10	Apr-04	NA		0.0185	0.0556	0.0122	0.0678
11	Jul-05	NA		0.0202	0.0607	0.0138	0.0745
12	May-06	NA		0.0225	0.0675	0.0163	0.0838
13	Aug-07	NA		0.0000	0.0000	0.0050	0.0050
14	May-08	NA		0.0000	0.0000	0.0050	0.0050
15	Aug-10	NA		0.0000	0.0000	0.0050	0.0050
16	May-12	NA		0.0000	0.0000	0.0000	0.0000
17	Sep-13	NA		0.0000	0.0000	0.0000	0.0000
18	Jul-14	0.0500	*	0.0000	0.0000	0.0000	0.0000

BMC 0.0148
3 S.D. 0.0599
BMC+3SD 0.0747

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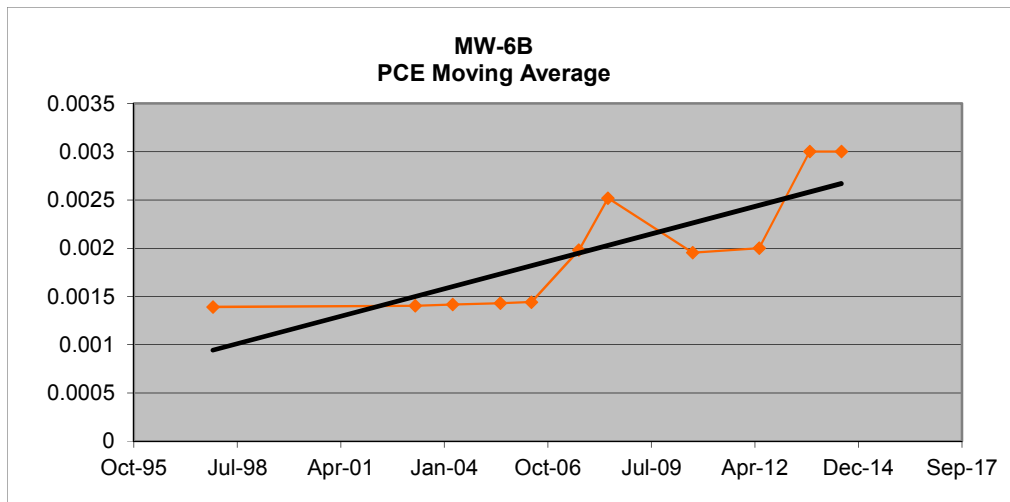


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
PCE

Event No.	Event Date	PCE (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		0.00167	0.00502	0.00139	0.00641
9	Apr-03	0.00100	*	0.00167	0.00501	0.00140	0.00641
10	Apr-04	0.00100	*	0.00167	0.00500	0.00142	0.00641
11	Jul-05	0.00100	*	0.00166	0.00498	0.00143	0.00641
12	May-06	0.00100	*	0.00166	0.00497	0.00144	0.00641
13	Aug-07	0.00500	*	0.00204	0.00611	0.00198	0.00809
14	May-08	0.00500	*	0.00221	0.00663	0.00252	0.00914
15	Aug-10	0.00100	*	0.00189	0.00566	0.00195	0.00761
16	May-12	0.00100	*	0.00185	0.00555	0.00200	0.00755
17	Sep-13	0.00500	*	0.00231	0.00693	0.00300	0.00993
18	Jul-14	0.00500	*	0.00231	0.00693	0.00300	0.00993

BMC 0.00206
3 S.D. 0.00584
BMC+3SD 0.00791

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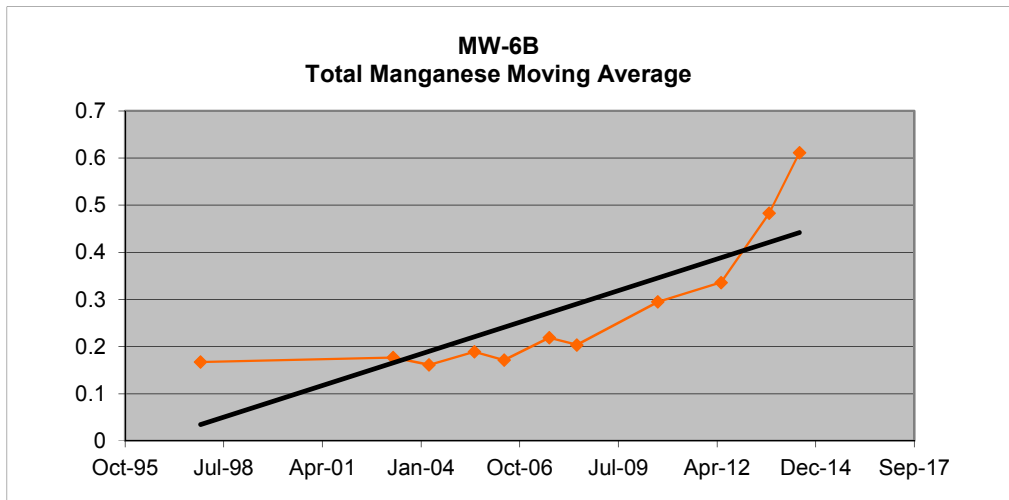


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Manganese

Event No.	Event Date	Manganese, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		0.0515	0.1545	0.1671	0.3216
9	Apr-03	0.1800		0.0454	0.1363	0.1763	0.3126
10	Apr-04	0.0754		0.0566	0.1698	0.1612	0.3309
11	Jul-05	0.4200		0.1082	0.3245	0.1889	0.5134
12	May-06	0.1200		0.1061	0.3183	0.1712	0.4894
13	Aug-07	0.4910		0.1511	0.4533	0.2184	0.6717
14	May-08	0.0540		0.1617	0.4852	0.2033	0.6885
15	Aug-10	0.8720		0.2827	0.8482	0.2947	1.1429
16	May-12	0.4740		0.2818	0.8454	0.3358	1.1812
17	Sep-13	0.5320		0.3356	1.0067	0.4830	1.4897
18	Jul-14	0.5670		0.1780	0.5340	0.6113	1.1453

BMC 0.2846
3 S.D. 0.6695
BMC+3SD 0.9541

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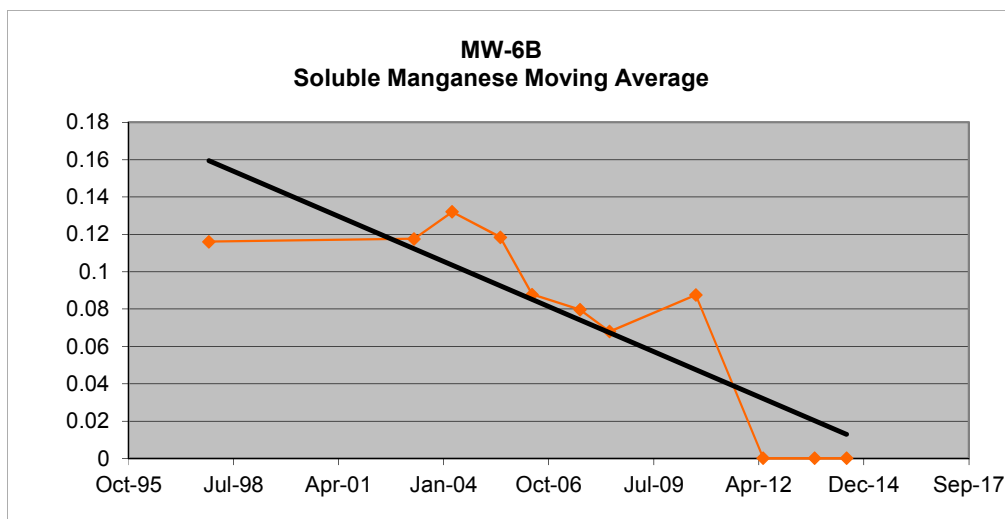


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Soluble Manganese

Event No.	Event Date	Manganese, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		0.0713	0.2139	0.1160	0.3299
9	Apr-03	NA		0.0769	0.2306	0.1176	0.3482
10	Apr-04	NA		0.0731	0.2193	0.1320	0.3513
11	Jul-05	NA		0.0727	0.2182	0.1184	0.3366
12	May-06	NA		0.0281	0.0843	0.0877	0.1720
13	Aug-07	NA		0.0281	0.0844	0.0796	0.1640
14	May-08	NA		0.0276	0.0829	0.0680	0.1509
15	Aug-10	NA		0.0000	0.0000	0.0875	0.0875
16	May-12	NA		0.0000	0.0000	0.0000	0.0000
17	Sep-13	NA		0.0000	0.0000	0.0000	0.0000
18	Jul-14	0.51		0.0000	0.0000	0.0000	0.0000

BMC 0.1598
3 S.D. 0.4419
BMC+3SD 0.6017

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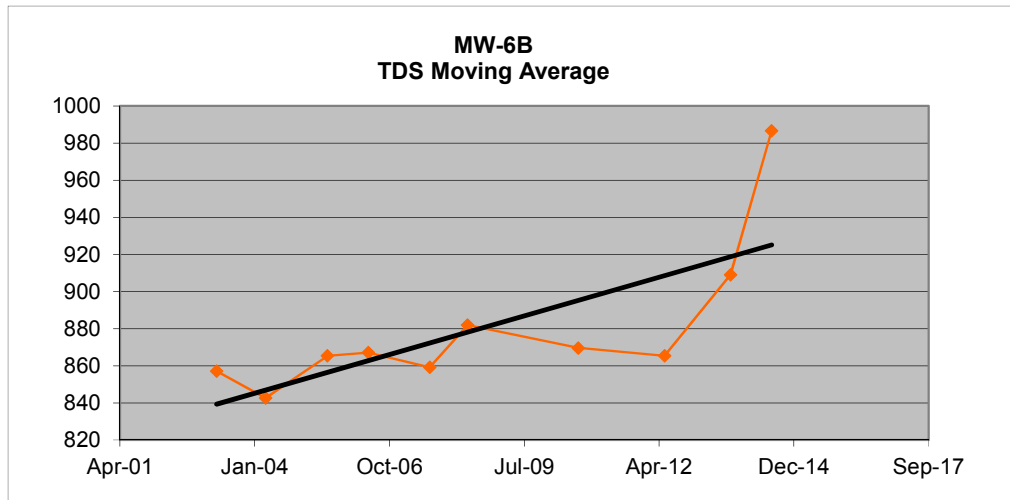


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Dissolved Solids

Event No.	Event Date	TDS (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	M.A. + 3 S.D.
1	Apr-01	885					
2	Oct-01	731					
3	Apr-02	914					
5	Apr-03	898		85	254	857	1111
6	Apr-04	785		80	241	843	1083
7	Jul-05	979		91	272	865	1138
8	May-06	877		83	249	867	1116
9	Aug-07	830		84	251	859	1110
10	May-08	890		62	185	882	1067
11	Aug-10	828		63	189	870	1058
12	May-12	868		62	185	865	1050
13	Sep-13	1050		97	292	909	1201
14	Jul-14	1200		172	516	987	1503

BMC 903
3 S.D. 360
BMC+3SD 1262

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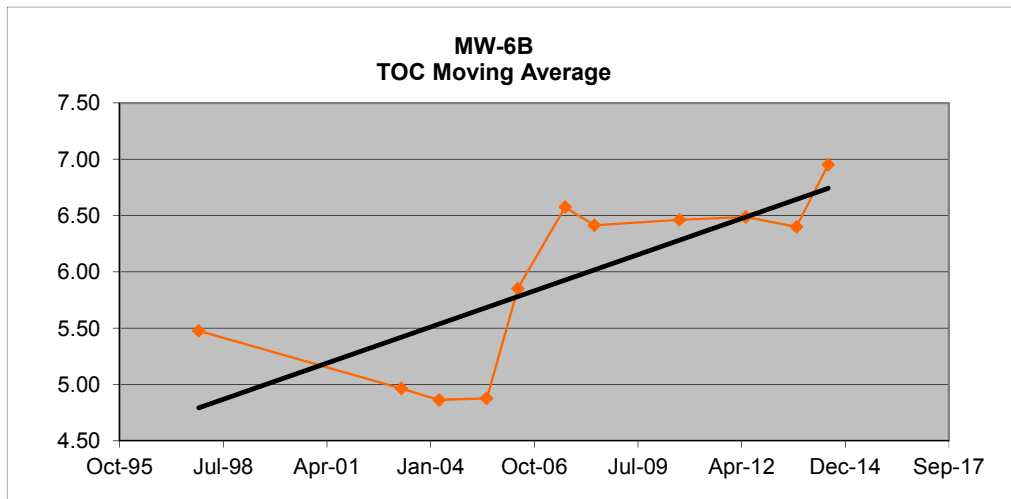


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Organic Carbon

Event No.	Event Date	TOC (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		0.55	1.65	5.48	7.12
9	Apr-03	1.00	*	1.69	5.06	4.96	10.02
10	Apr-04	4.30		1.70	5.10	4.86	9.96
11	Jul-05	5.90		1.71	5.13	4.88	10.00
12	May-06	13.20		3.42	10.26	5.85	16.11
13	Aug-07	11.20		3.89	11.68	6.58	18.25
14	May-08	5.40		3.91	11.74	6.41	18.15
15	Aug-10	5.60		3.90	11.70	6.46	18.16
16	May-12	5.30		3.89	11.67	6.49	18.16
17	Sep-13	9.30		1.94	5.81	6.40	12.21
18	Jul-14	7.60		1.87	5.61	6.95	12.56

BMC 6.26
3 S.D. 8.11
BMC+3SD 14.37

* = 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.

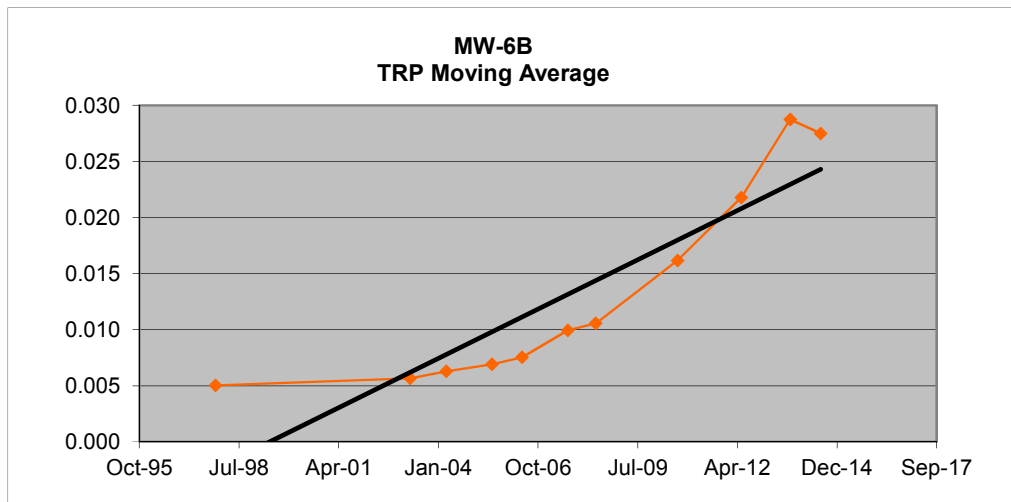


Appendix D
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Shallow Overburden Well MW-6B
Total Recoverable Phenolics

Event No.	Event Date	TRP (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.000	0.000	0.005	0.005
9	Apr-03	0.010	*	0.002	0.005	0.006	0.011
10	Apr-04	0.010	*	0.002	0.007	0.006	0.013
11	Jul-05	0.010	*	0.003	0.008	0.007	0.015
12	May-06	0.010	*	0.003	0.008	0.008	0.015
13	Aug-07	0.0243		0.006	0.019	0.010	0.029
14	May-08	0.010	*	0.006	0.018	0.011	0.028
15	Aug-10	0.050	*	0.015	0.044	0.016	0.060
16	May-12	0.050	*	0.018	0.054	0.022	0.076
17	Sep-13	0.005	*	0.025	0.074	0.029	0.103
18	Jul-14	0.005	*	0.026	0.078	0.028	0.105

BMC 0.0125
3 S.D. 0.0433
BMC+3SD 0.0558

* = 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

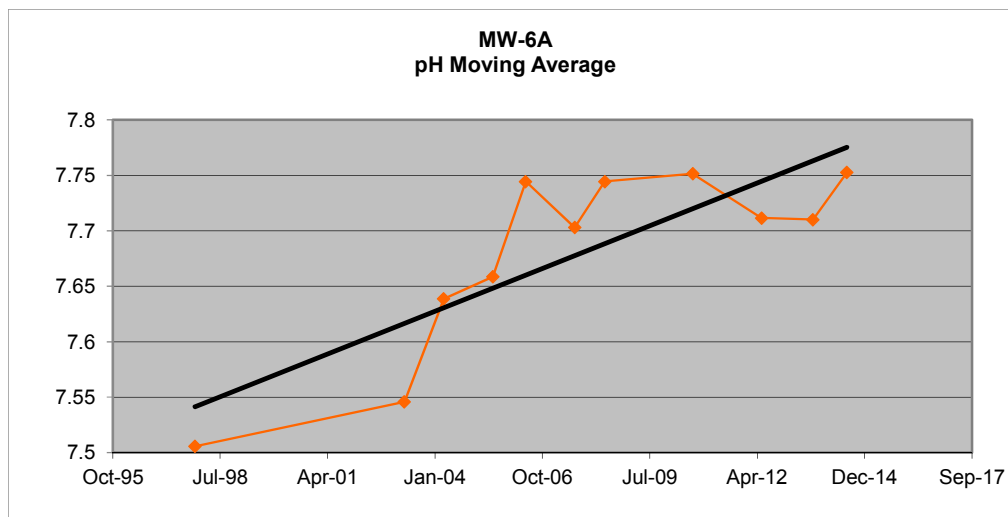
Historic Data for Deep Overburden Background Well MW-6A

Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
pH

Event No.	Event Date	pH	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	0.161	0.483	7.506	7.989	7.022
9	Apr-03	7.88	0.214	0.643	7.546	8.189	6.903
10	Apr-04	8.22	0.334	1.002	7.639	8.641	6.636
11	Jul-05	7.65	0.329	0.988	7.659	8.646	6.671
12	May-06	7.81	0.265	0.794	7.744	8.539	6.950
13	Aug-07	7.19	0.328	0.984	7.703	8.687	6.719
14	May-08	7.73	0.304	0.912	7.744	8.656	6.833
15	Aug-10	7.78	0.285	0.854	7.751	8.605	6.898
16	May-12	7.6	0.289	0.868	7.711	8.580	6.843
17	Sep-13	7.73	0.077	0.231	7.710	7.941	7.479
18	Jul-14	7.9	0.124	0.373	7.753	8.125	7.380

BMC 7.65
3 S.D. 0.754
BMC+3SD 8.40
BMC-3SD 6.89

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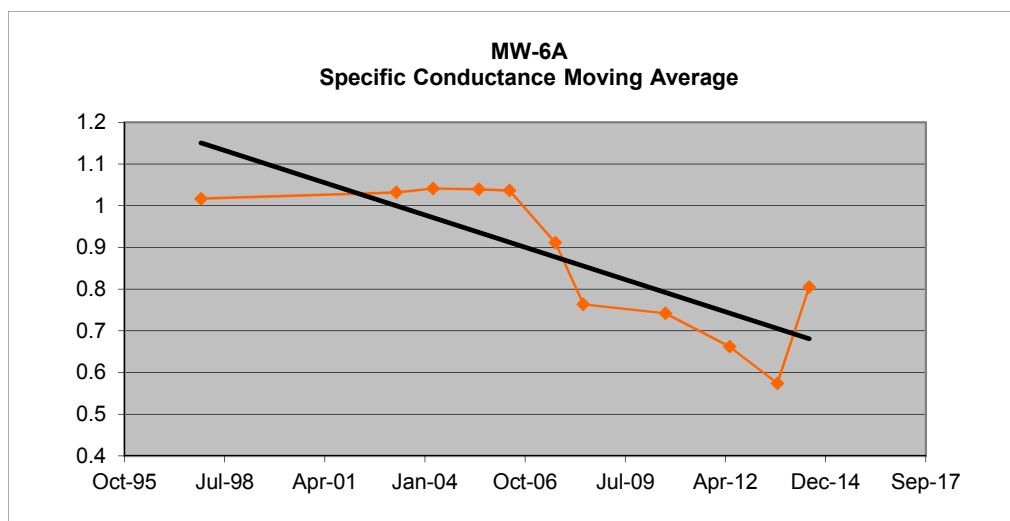


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Specific Conductance

Event No.	Event Date	Specific Conductance (Umhos/cm)	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	0.049	0.148	1.017	1.165
9	Apr-03	1.114	0.061	0.183	1.032	1.215
10	Apr-04	1.029	0.053	0.160	1.041	1.201
11	Jul-05	0.980	0.056	0.167	1.039	1.206
12	May-06	0.989	0.058	0.173	1.037	1.210
13	Aug-07	0.100	0.361	1.084	0.912	1.996
14	May-08	0.037	0.456	1.367	0.763	2.130
15	Aug-10	0.943	0.447	1.340	0.742	2.081
16	May-12	0.555	0.434	1.302	0.662	1.964
17	Sep-13	0.760	0.391	1.174	0.574	1.748
18	Jul-14	0.960	0.189	0.568	0.805	1.373

BMC 0.858
3 S.D. 0.974
BMC+3SD 1.832

* = 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.



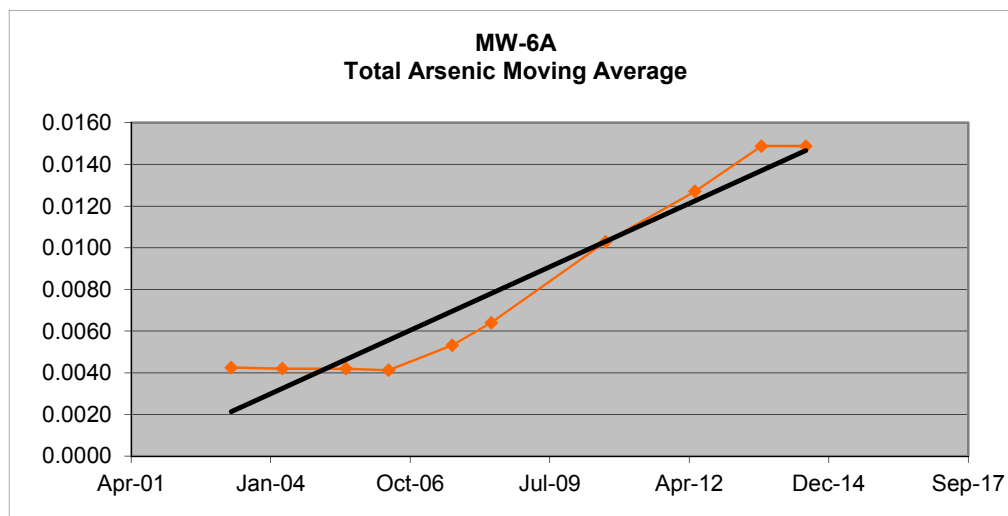
Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Arsenic

Event No.	Event Date	Arsenic, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0003	0.0009	0.0043	0.0052
5	Apr-04	0.0040	*	0.0003	0.0008	0.0042	0.0050
6	Jul-05	0.0040	*	0.0003	0.0008	0.0042	0.0050
7	May-06	0.0040	*	0.0003	0.0008	0.0041	0.0049
8	Aug-07	0.0100	*	0.0026	0.0079	0.0053	0.0132
9	May-08	0.0100	*	0.0033	0.0099	0.0064	0.0163
10	Aug-10	0.0234		0.0079	0.0238	0.0103	0.0341
11	May-12	0.0161		0.0074	0.0221	0.0127	0.0348
12	Sep-13	0.010	*	0.0064	0.0191	0.0149	0.0340
13	Jul-14	0.010	*	0.0064	0.0191	0.0149	0.0340

BMC 0.00835
3 S.D. 0.0178
BMC+3SD 0.0261

* = 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.



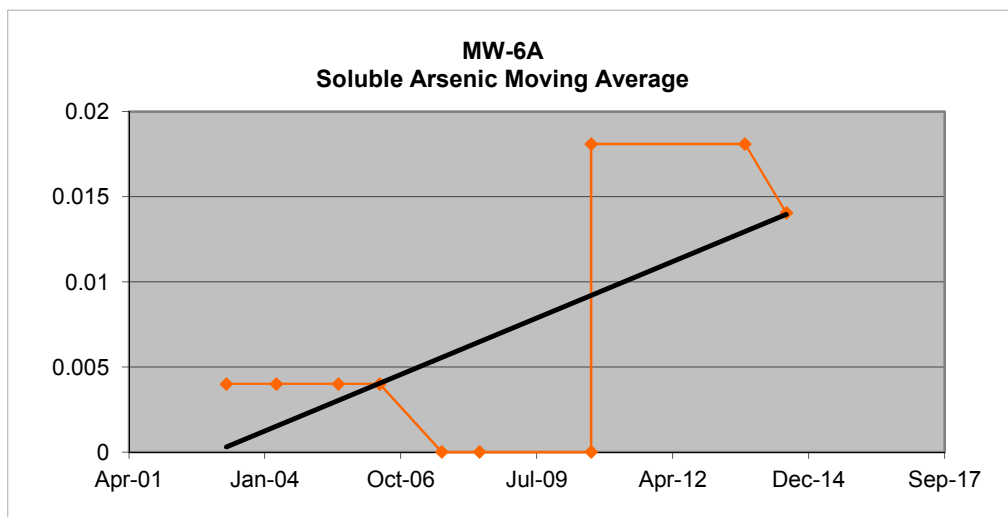
Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Soluble Arsenic

Event No.	Event Date	Arsenic, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	M.A. + 3 S.D.
1	May-01	0.0040	*				
2	Oct-01	NA					
3	Apr-02	NA					
4	Apr-03	NA		0.0000	0.0000	0.0040	0.0040
5	Apr-04	NA		0.0000	0.0000	0.0040	0.0040
6	Jul-05	NA		0.0000	0.0000	0.0040	0.0040
7	May-06	NA		0.0000	0.0000	0.0040	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		0.0000	0.0000	0.0181	0.0181
11	Sep-13	NA		0.0000	0.0000	0.0181	0.0181
12	Jul-14	0.0100	*	0.0041	0.0122	0.0141	0.0262

BMC 0.0107
3 S.D. 0.0212
BMC+3SD 0.0319

* = 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.

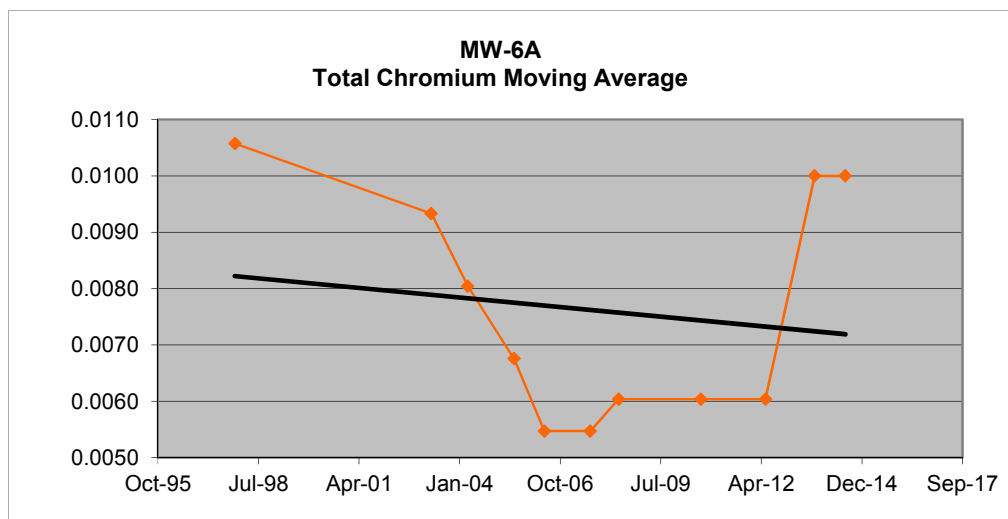


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Chromium

Event No.	Event Date	Chromium, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0005	0.0016	0.0106	0.0122
9	Apr-03	0.0023	*	0.0031	0.0094	0.0093	0.0187
10	Apr-04	0.0020	*	0.0041	0.0122	0.0080	0.0202
11	Jul-05	0.0020	*	0.0044	0.0131	0.0068	0.0199
12	May-06	0.0020	*	0.0042	0.0127	0.0055	0.0182
13	Aug-07	0.0100	*	0.0042	0.0127	0.0055	0.0182
14	May-08	0.0100	*	0.0042	0.0127	0.0060	0.0187
15	Aug-10	0.0100	*	0.0042	0.0127	0.0060	0.0187
16	May-12	0.0100	*	0.0042	0.0127	0.0060	0.0187
17	Sep-13	0.0100	*	0.0000	0.0000	0.0100	0.0100
18	Jul-14	0.0100	*	0.0000	0.0000	0.0100	0.0100

BMC 0.00837
3 S.D. 0.0109
BMC+3SD 0.0192

* = 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.

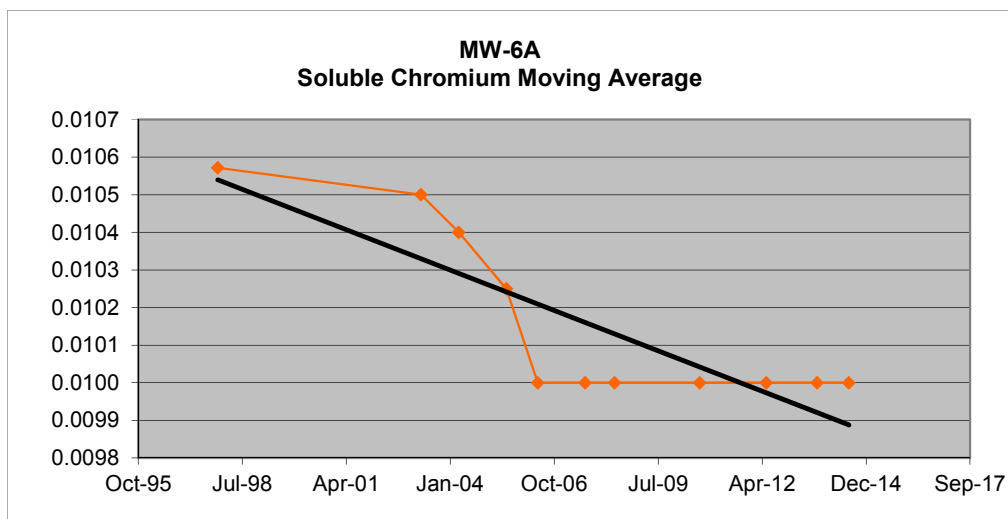


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Soluble Chromium

Event No.	Event Date	Chromium, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0005	0.0016	0.0106	0.0122
9	Apr-03	NA		0.0005	0.0016	0.0105	0.0121
10	Apr-04	NA		0.0005	0.0016	0.0104	0.0120
11	Jul-05	NA		0.0005	0.0015	0.0103	0.0118
12	May-06	NA		0.0000	0.0000	0.0100	0.0100
13	Aug-07	NA		0.0000	0.0000	0.0100	0.0100
14	May-08	NA		0.0000	0.0000	0.0100	0.0100
15	Aug-10	NA		0.0000	0.0000	0.0100	0.0100
16	May-12	0.0100	*	0.0000	0.0000	0.0100	0.0100
17	Sep-13	NA	*	0.0000	0.0000	0.0100	0.0100
18	Jul-14	0.0100	*	0.0000	0.0000	0.0100	0.0100

BMC 0.0104
3 S.D. 0.00158
BMC+3SD 0.0120

* = Concentration was reported as less than the laboratory detection limit; the laboratory detection limit is presented in this table.
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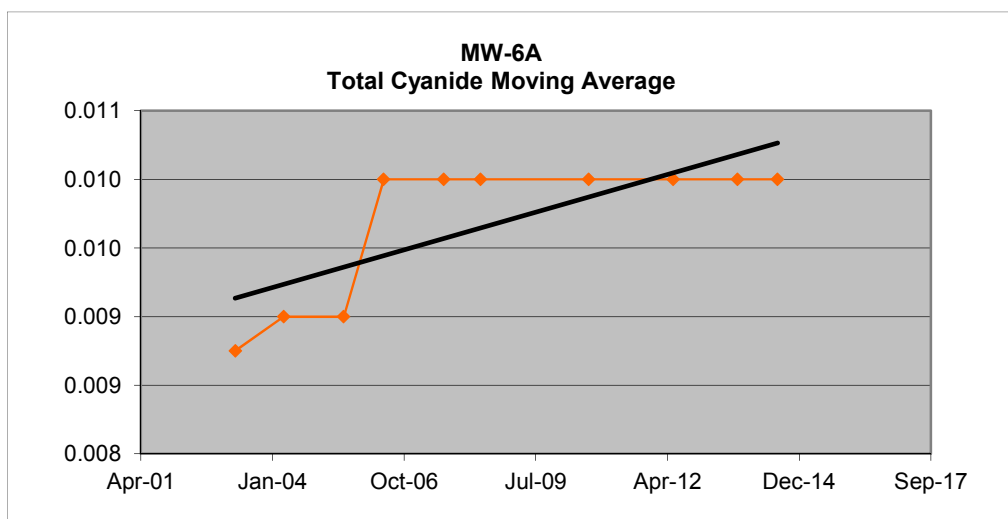
Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Cyanide

Event No.	Event Date	Cyanide, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.003	0.008	0.009	0.016
5	Apr-04	0.010	*	0.002	0.007	0.009	0.016
6	Jul-05	0.010	*	0.002	0.007	0.009	0.016
7	May-06	0.010	*	0.000	0.000	0.010	0.010
8	Aug-07	0.010	*	0.000	0.000	0.010	0.010
9	May-08	0.010	*	0.000	0.000	0.010	0.010
10	Aug-10	0.010	*	0.000	0.000	0.010	0.010
11	May-12	0.010	*	0.000	0.000	0.010	0.010
12	Sep-13	0.010	*	0.000	0.000	0.010	0.010
13	Jul-14	0.010	*	0.000	0.000	0.010	0.010

BMC 0.00962
3 S.D. 0.00416
BMC+3SD 0.0138

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

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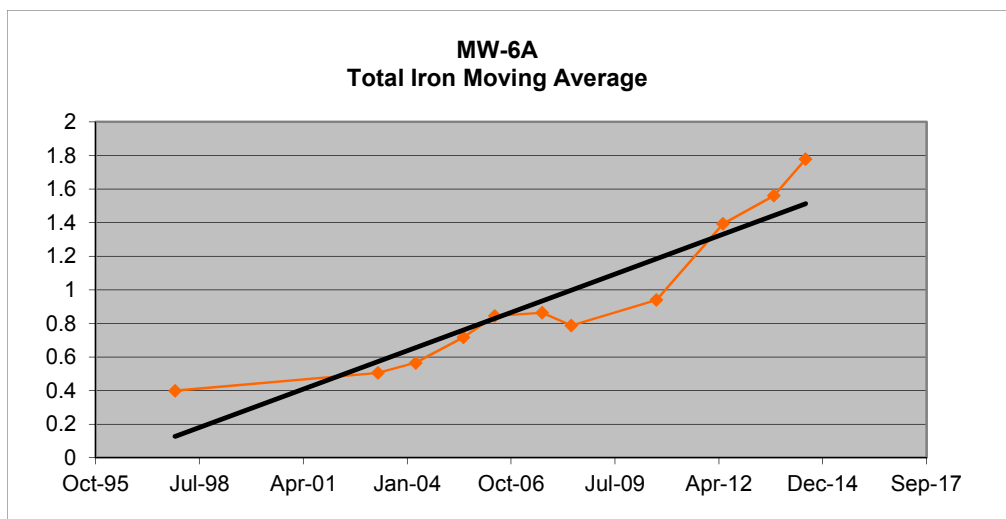


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Iron

Event No.	Event Date	Iron, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		0.249	0.748	0.398	1.146
9	Apr-03	1.300		0.424	1.273	0.504	1.777
10	Apr-04	0.507		0.383	1.150	0.564	1.714
11	Jul-05	1.400		0.478	1.434	0.715	2.149
12	May-06	1.100		0.437	1.312	0.843	2.155
13	Aug-07	0.916		0.437	1.311	0.862	2.173
14	May-08	0.260		0.457	1.372	0.787	2.159
15	Aug-10	1.440		0.446	1.339	0.938	2.277
16	May-12	4.120		1.185	3.555	1.392	4.947
17	Sep-13	0.420		1.785	5.355	1.560	6.915
18	Jul-14	1.130		1.619	4.857	1.778	6.634

BMC 0.905
3 S.D. 2.815
BMC+3SD 3.720

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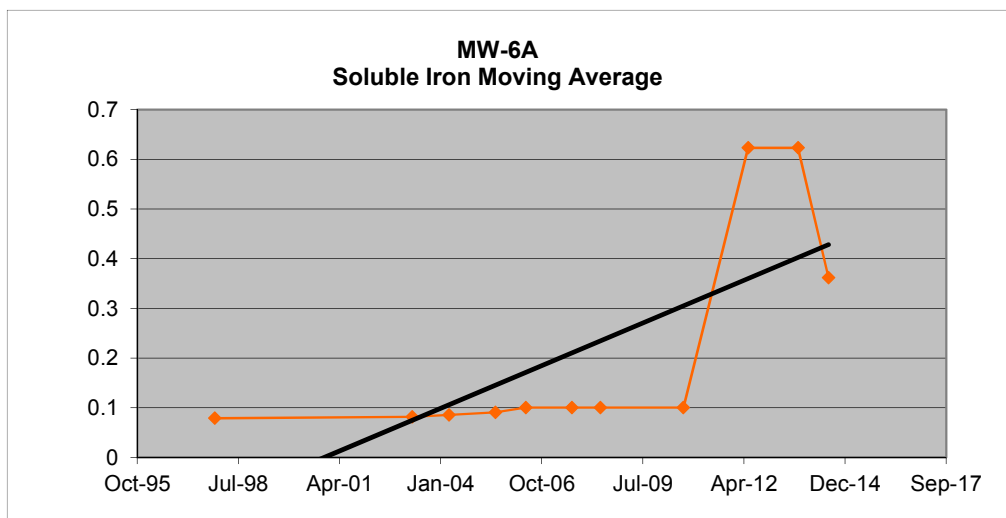


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Soluble Iron

Event No.	Event Date	Iron, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.020	0.059	0.079	0.138
9	Apr-03	NA		0.020	0.061	0.082	0.142
10	Apr-04	NA		0.020	0.061	0.085	0.146
11	Jul-05	NA		0.019	0.056	0.091	0.146
12	May-06	NA		0.000	0.000	0.100	0.100
13	Aug-07	NA		0.000	0.000	0.100	0.100
14	May-08	NA		0.000	0.000	0.100	0.100
15	Aug-10	NA		0.000	0.000	0.100	0.100
16	May-12	0.623		0.000	0.000	0.623	0.623
17	Sep-13	NA		0.000	0.000	0.623	0.623
18	Jul-14	0.1	*	0.370	1.109	0.362	1.471

BMC 0.142
3 S.D. 0.544
BMC+3SD 0.686

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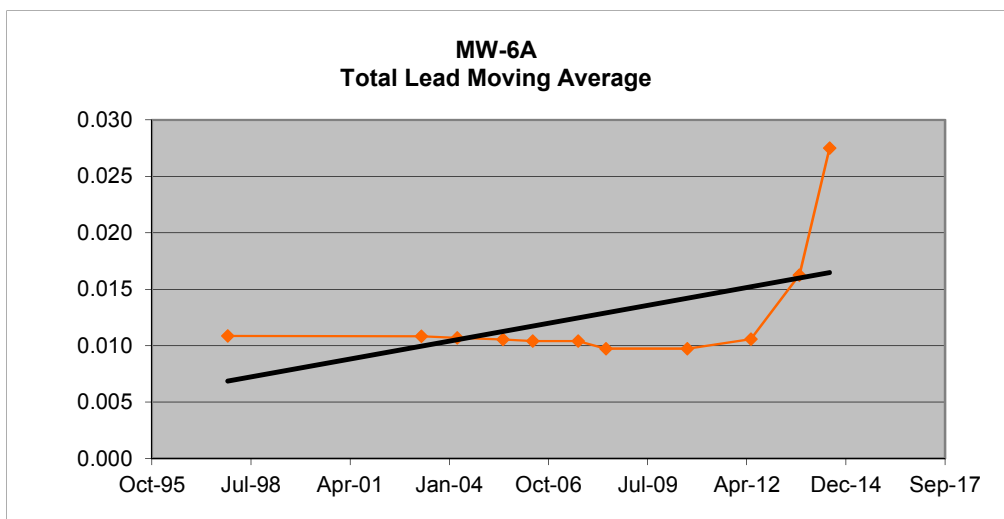


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Lead

Event No.	Event Date	Lead, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0173	0.0518	0.0109	0.0627
9	Apr-03	0.0038	*	0.0173	0.0518	0.0108	0.0627
10	Apr-04	0.0030	*	0.0174	0.0521	0.0107	0.0627
11	Jul-05	0.0030	*	0.0174	0.0523	0.0105	0.0628
12	May-06	0.0030	*	0.0175	0.0525	0.0104	0.0629
13	Aug-07	0.0500	*	0.0175	0.0525	0.0104	0.0629
14	May-08	0.0050	*	0.0163	0.0489	0.0097	0.0586
15	Aug-10	0.0050	*	0.0163	0.0489	0.0097	0.0586
16	May-12	0.0050	*	0.0163	0.0489	0.0106	0.0595
17	Sep-13	0.0500	*	0.0225	0.0675	0.0163	0.0838
18	Jul-14	0.0500	*	0.0260	0.0779	0.0275	0.1054

BMC 0.0149
3 S.D. 0.0602
BMC+3SD 0.0751

* = 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.

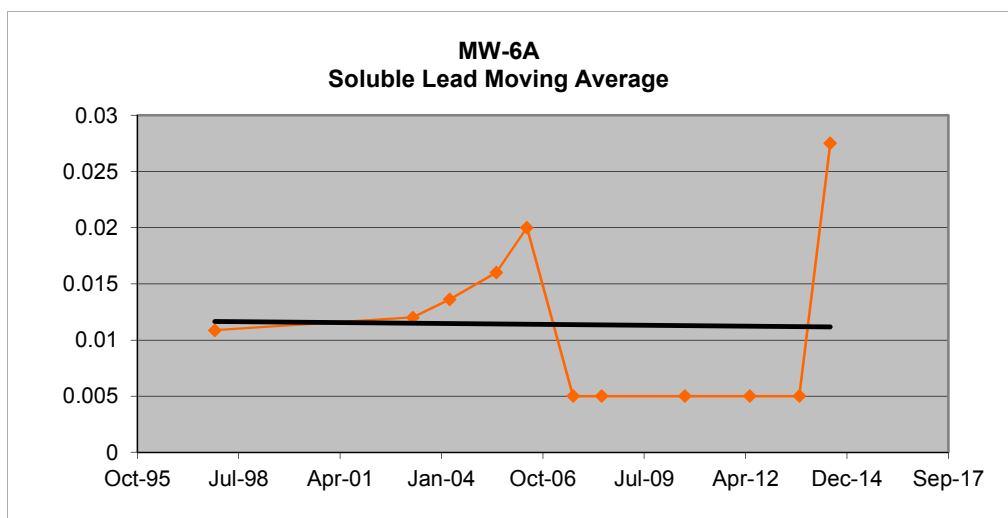


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Soluble Lead

Event No.	Event Date	Lead, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.0173	0.0518	0.0109	0.0627
9	Apr-03	NA		0.0186	0.0559	0.0120	0.0679
10	Apr-04	NA		0.0204	0.0611	0.0136	0.0747
11	Jul-05	NA		0.0227	0.0680	0.0160	0.0840
12	May-06	NA		0.0260	0.0779	0.0200	0.0979
13	Aug-07	NA		0.0000	0.0000	0.0050	0.0050
14	May-08	NA		0.0000	0.0000	0.0050	0.0050
15	Aug-10	NA		0.0000	0.0000	0.0050	0.0050
16	May-12	0.0050	*	0.0000	0.0000	0.0050	0.0050
17	Sep-13	NA	*	0.0000	0.0000	0.0050	0.0050
18	Jul-14	0.0500	*	0.0318	0.0955	0.0275	0.1230

BMC 0.0146
3 S.D. 0.0603
BMC+3SD 0.0749

* = 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.



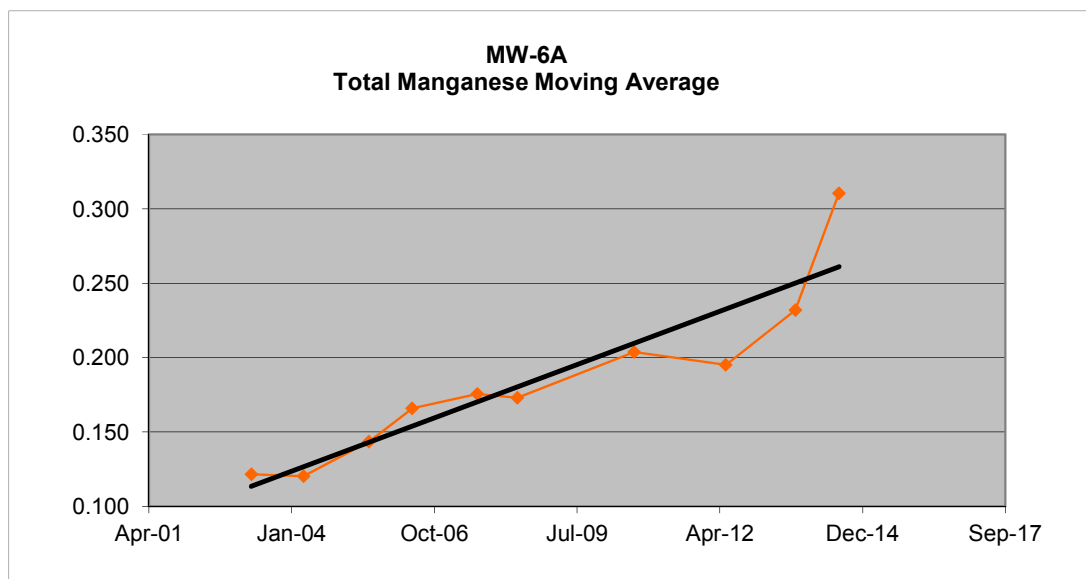
Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Manganese

Event No.	Event Date	Manganese, T (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		0.083	0.249	0.122	0.370
5	Apr-04	0.115		0.069	0.207	0.120	0.327
6	Jul-05	0.260		0.064	0.192	0.144	0.336
7	May-06	0.300		0.080	0.239	0.166	0.404
8	Aug-07	0.117		0.096	0.288	0.176	0.464
9	May-08	0.039		0.122	0.366	0.173	0.539
10	Aug-10	0.375		0.156	0.469	0.204	0.672
11	May-12	0.160		0.144	0.432	0.195	0.627
12	Sep-13	0.354		0.161	0.483	0.232	0.715
13	Jul-14	0.353		0.101	0.303	0.311	0.613

BMC 0.197
3 S.D. 0.365
BMC+3SD 0.562

* = 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.



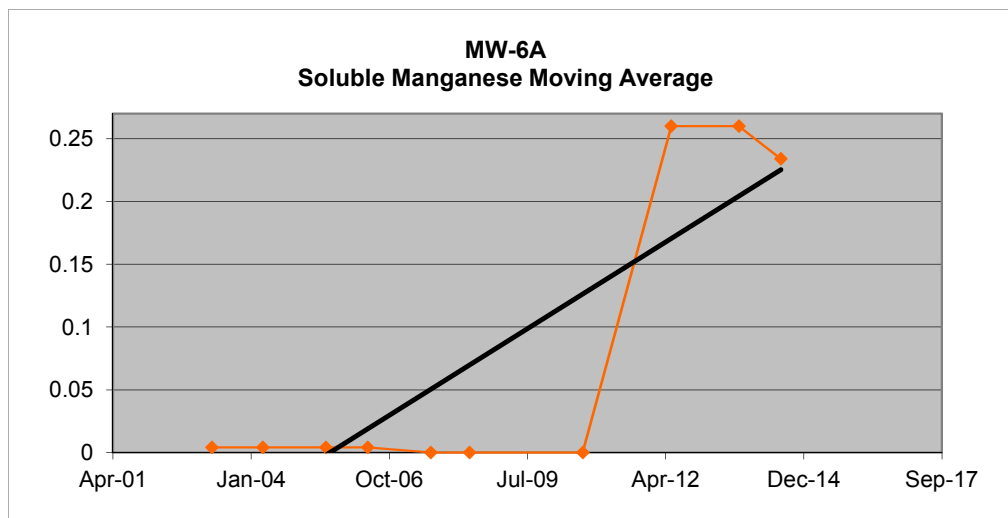
Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Soluble Manganese

Event No.	Event Date	Manganese, S (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	M.A. + 3 S.D.
1	May-01	0.0041					
2	Oct-01	NA					
3	Apr-02	NA					
4	Apr-03	NA		0.0000	0.0000	0.0041	0.0041
5	Apr-04	NA		0.0000	0.0000	0.0041	0.0041
6	Jul-05	NA		0.0000	0.0000	0.0041	0.0041
7	May-06	NA		0.0000	0.0000	0.0041	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		0.0000	0.0000	0.2600	0.2600
12	Sep-13	NA		0.0000	0.0000	0.2600	0.2600
13	Jul-14	0.208		0.0260	0.0780	0.2340	0.3120

BMC 0.157
3 S.D. 0.406
BMC+3SD 0.563

* = 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.



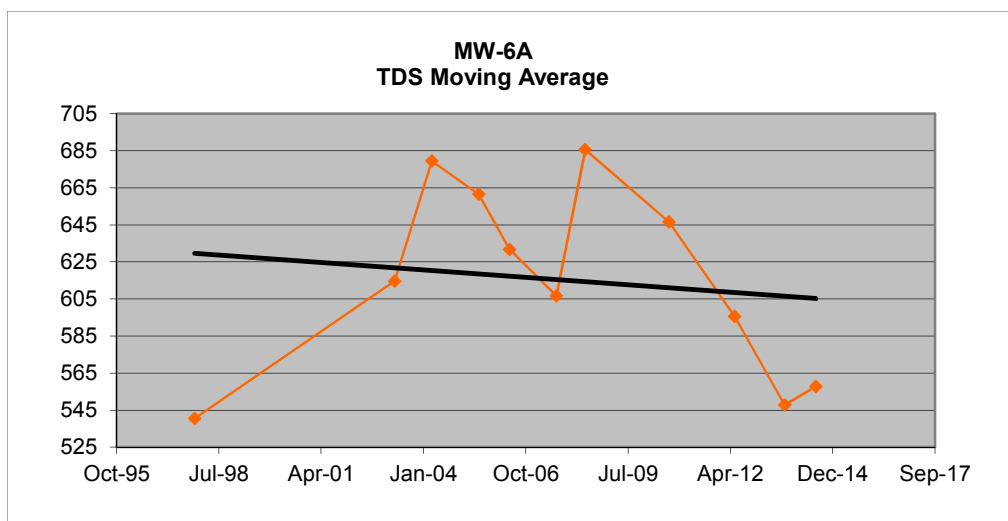
Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Dissolved Solids

Event No.	Event Date	TDS (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		374	1121	541	1662
9	Apr-03	729		339	1018	615	1633
10	Apr-04	672		283	850	680	1530
11	Jul-05	662		279	837	662	1498
12	May-06	691		258	774	632	1406
13	Aug-07	564		253	759	607	1366
14	May-08	633		69	207	686	892
15	Aug-10	452		100	299	647	945
15	May-12	361		128	385	596	980
16	Sep-13	745		173	520	548	1068
17	Jul-14	673		181	543	558	1101

BMC 584
3 S.D. 778
BMC+3SD 1362

* = 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.

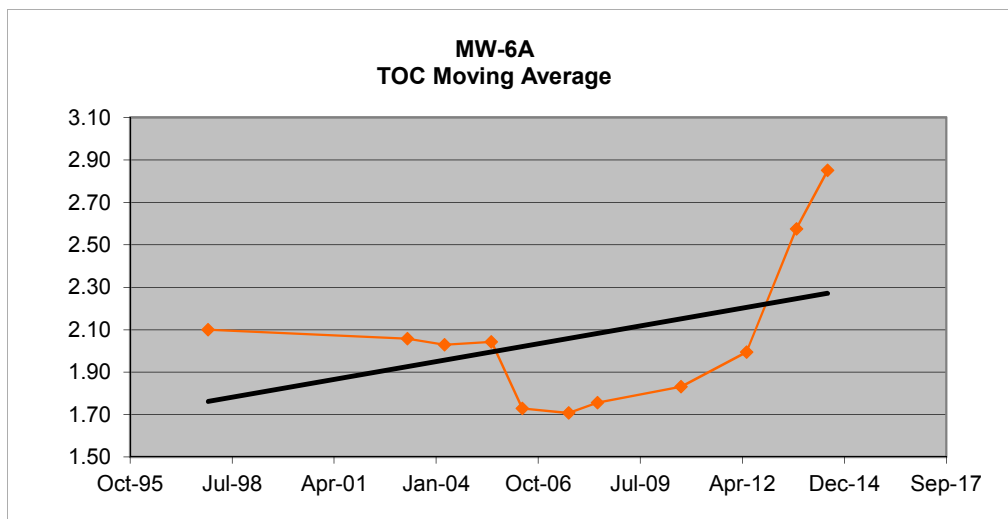


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Organic Carbon

Event No.	Event Date	TOC (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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		0.75	2.24	2.10	4.34
9	Apr-03	1.00	*	0.81	2.42	2.06	4.47
10	Apr-04	1.40		0.83	2.48	2.03	4.51
11	Jul-05	2.10		0.83	2.49	2.04	4.53
12	May-06	1.40		0.49	1.46	1.73	3.19
13	Aug-07	1.85		0.47	1.42	1.71	3.13
14	May-08	2.10		0.46	1.38	1.76	3.14
15	Aug-10	3.00		0.61	1.82	1.83	3.65
16	May-12	3.10		0.75	2.26	1.99	4.25
17	Sep-13	2.10		0.55	1.65	2.58	4.23
18	Jul-14	3.20		0.51	1.52	2.85	4.37

BMC 2.11
3 S.D. 2.20
BMC+3SD 4.32

* = 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.

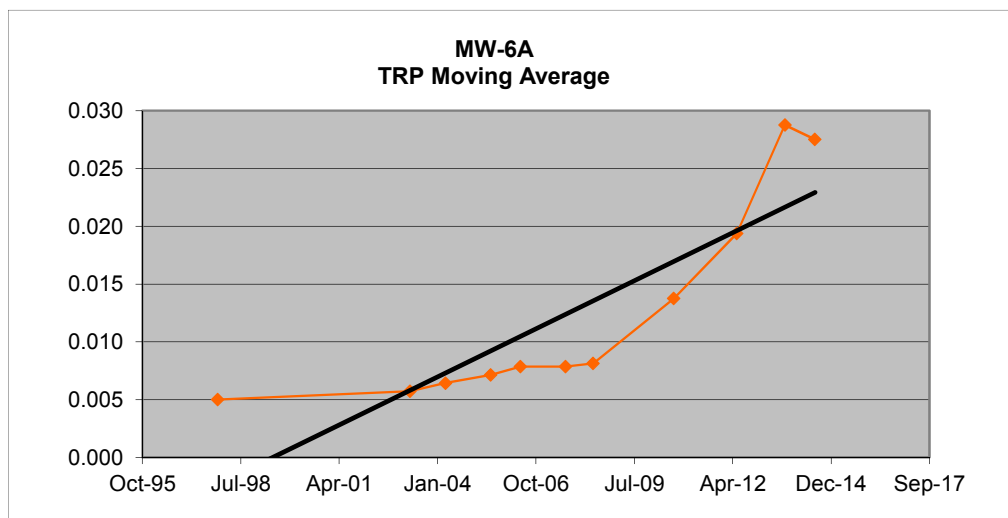


Appendix E
Marilla Street Landfill
July 2014 Annual Sampling Event
Background Deep Overburden Well MW-6A
Total Recoverable Phenolics

Event No.	Event Date	TRP (mg/L)	*	Standard Deviation (S.D.)	S.D. x 3	Moving Average (M.A.)	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	*	0.000	0.000	0.005	0.005
9	Apr-03	0.010	*	0.002	0.006	0.006	0.011
10	Apr-04	0.010	*	0.002	0.007	0.006	0.014
11	Jul-05	0.010	*	0.003	0.008	0.007	0.015
12	May-06	0.010	*	0.003	0.008	0.008	0.016
13	Aug-07	0.005	*	0.003	0.008	0.008	0.016
14	May-08	0.010	*	0.003	0.008	0.008	0.016
15	Aug-10	0.050	*	0.015	0.044	0.014	0.058
16	May-12	0.050	*	0.019	0.057	0.019	0.076
17	Sep-13	0.005	*	0.025	0.074	0.029	0.103
18	Jul-14	0.005	*	0.026	0.078	0.028	0.105

BMC 0.0118
3 S.D. 0.0437
BMC+3SD 0.0555

* = 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
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for MW-2B

Event Date	pH	Moving Average	TRP	Moving Average	TOC	Moving Average
Sep-13	13.9	-	0.09	-	0.081	-

Notes:

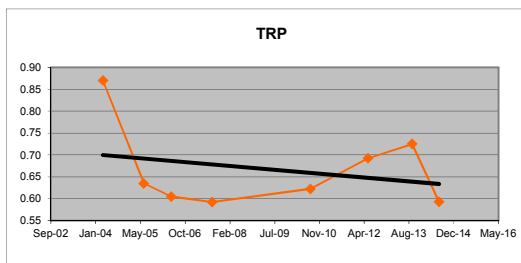
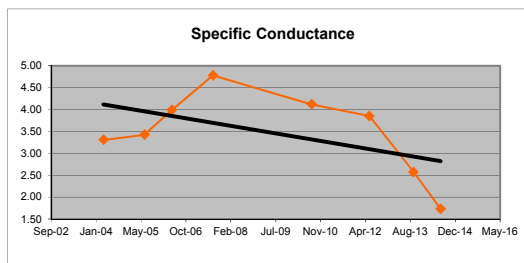
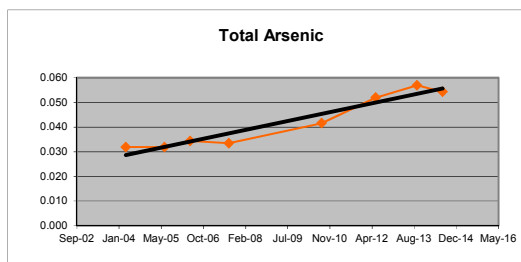
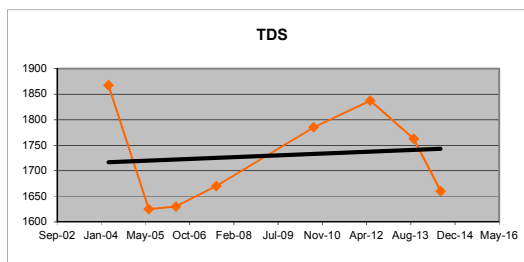
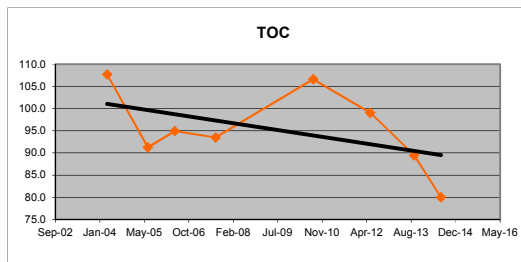
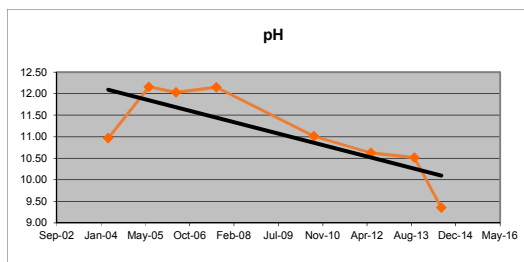
- (1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.
- (2) - Data prior to September 2013 sampling event was unavailable, and/or MATA was not previously conducted.

Appendix F **Marilla Street Landfill** **July 2014 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

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.

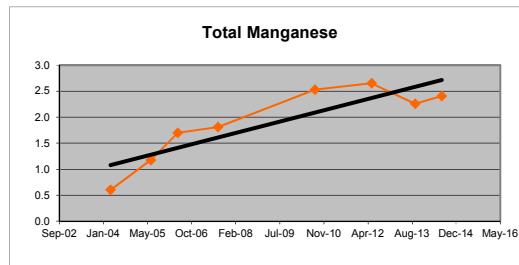
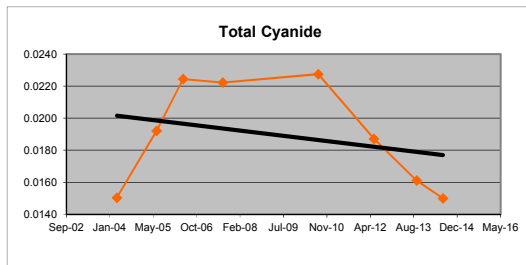


Appendix F **Marilla Street Landfill** **July 2014 Annual Sampling Event** **Summary of MATA Tracked Parameters for MW-3B**

Event Date	Total Cyanide	Moving Average	Total Manganese	Moving Average	Soluble Manganese	Moving Average	Total Chromium	Moving Average	Total Iron	Moving Average	Total Lead	Moving Average
Oct-01	0.0095	-	0.610	-	NA	-						
Apr-02	0.0124	-	0.510	-	NA	-						
Apr-03	0.0183	-	0.560	-	0.460	-						
Apr-04	0.0199	0.0150	0.727	0.602	NA	0.460						
Jul-05	0.0262	0.0192	2.900	1.174	0.930	0.695						
May-06	0.0254	0.0225	2.600	1.697	0.800	0.730						
Aug-07	0.0174	0.0222	1.020	1.812	NA	0.865						
Aug-10	0.0220	0.0228	3.600	2.530	0.115	0.615						
May-12	0.0100	0.0187	3.380	2.650	0.105	0.340						
Sep-13	0.0150	0.0161	1.030	2.258	0.055	0.092	0.129	-	73.3	-	0.763	-
Jun-14	0.0130	0.0150	1.610	2.405	0.051	0.082	0.133	-	94.4	-	0.582	-

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
July 2014 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	-

Notes:

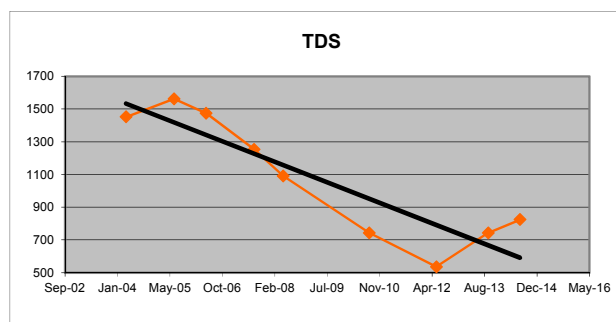
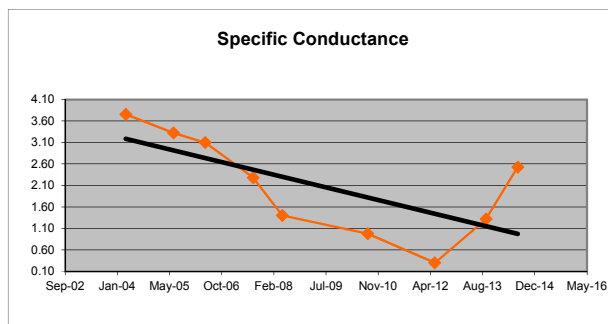
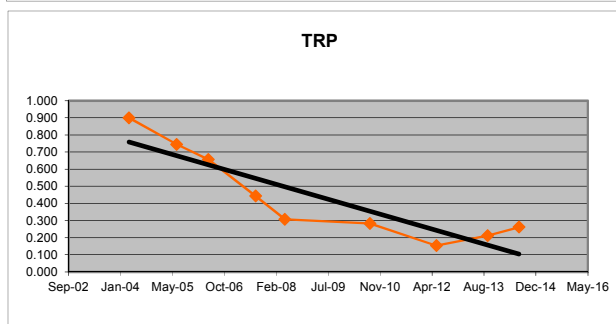
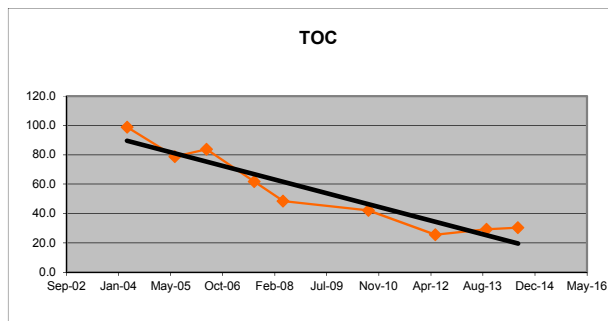
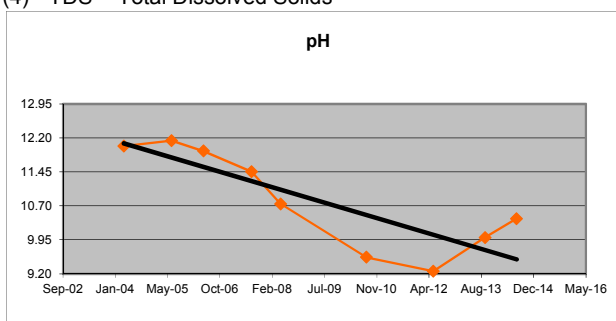
- (1) - If the concentration was reported at less than the laboratory detection limit, the detection limit is presented in the table.
- (2) - TOC = Total Organic Carbon
- (3) - TRP = Total Recoverable Phenolics
- (4) - NA = Parameter not analyzed at this location.
- (5) - ND = No data available for this location.

Appendix F **Marilla Street Landfill** **July 2014 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

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

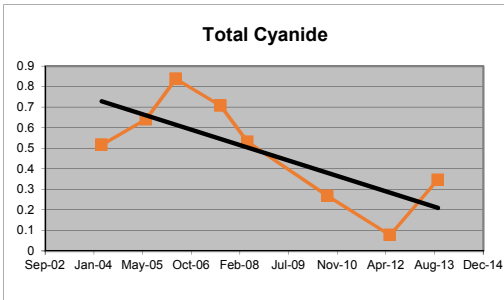
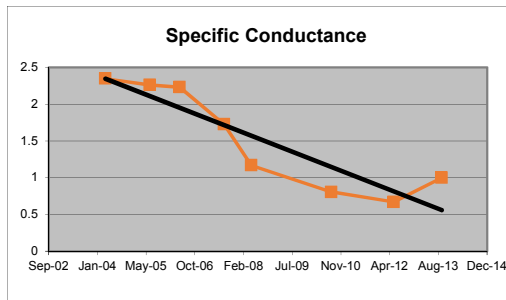
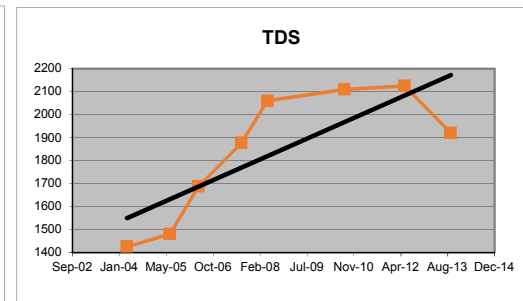
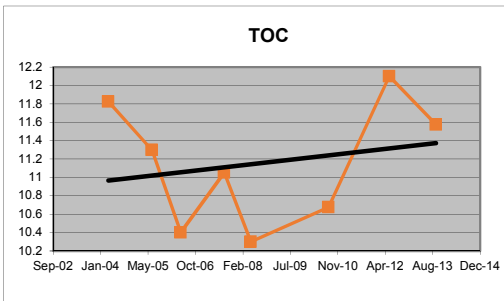
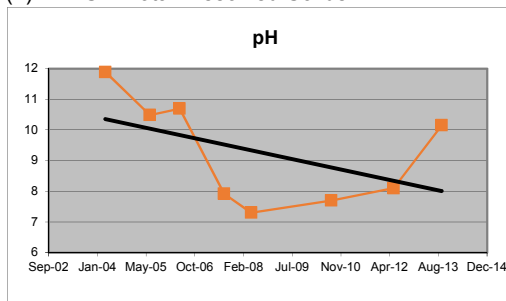


Appendix F **Marilla Street Landfill** **July 2014 Annual Sampling Event** **Summary of MATA Tracked Parameters for MW-14BR**

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	0.010	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	0.009	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	1.17	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

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

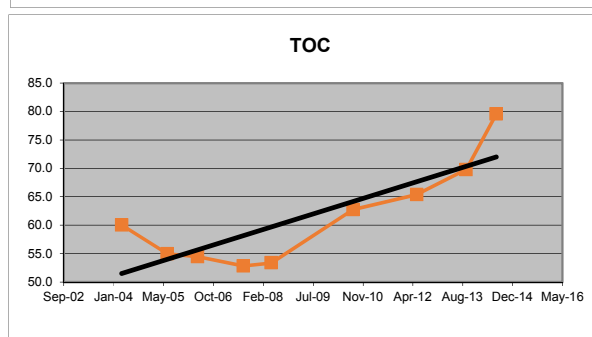
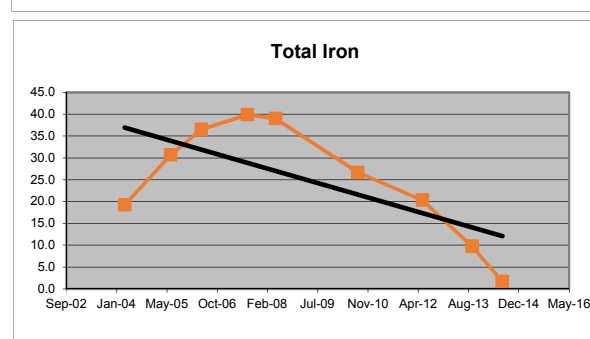
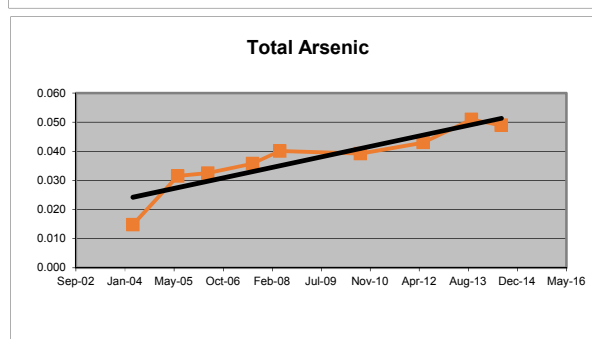
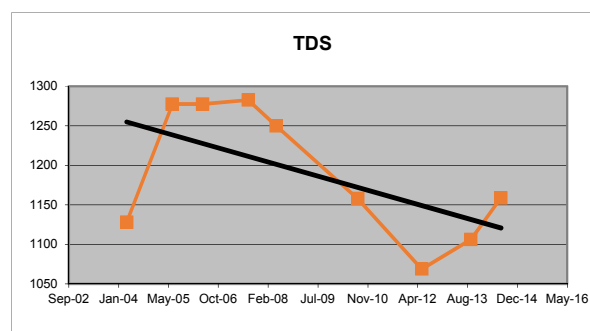
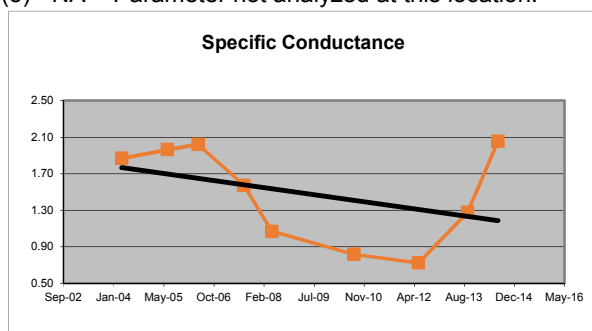
July 2014 Annual Sampling Event

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

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
- (4) - TRP = Total Recoverable Phenolics
- (5) - NA = Parameter not analyzed at this location.

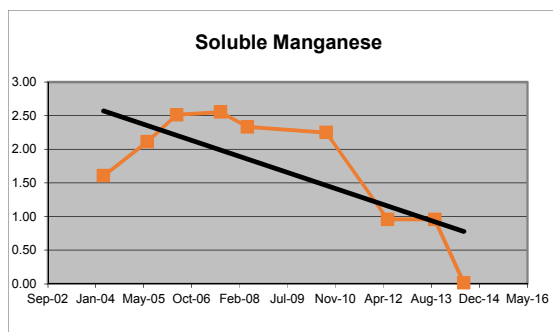
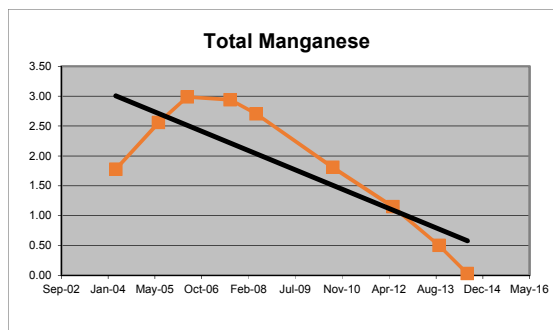


Appendix F
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for MW-15B

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	-		
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	-

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
- (4) - TRP = Total Recoverable Phenolics
- (5) - NA = Parameter not analyzed at this location.

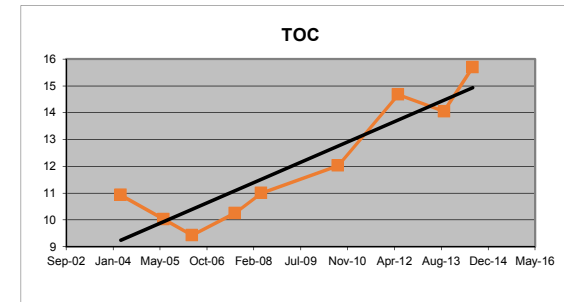
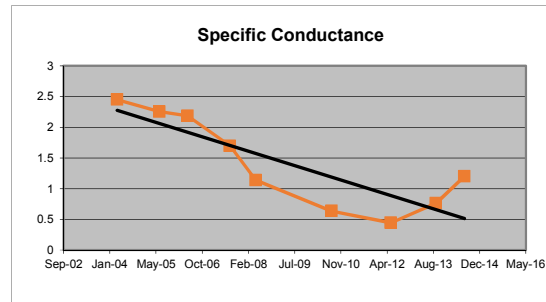
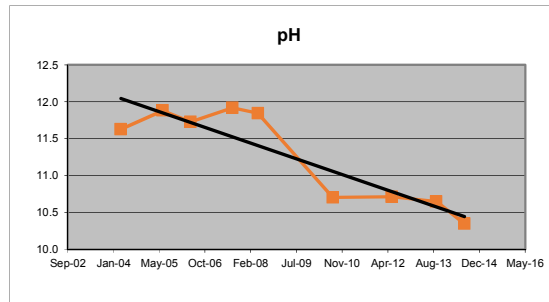


Appendix F
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for MW-16B

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

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) - ND = No data available for this location.
- (5) - NA = Parameter not analyzed at this location.

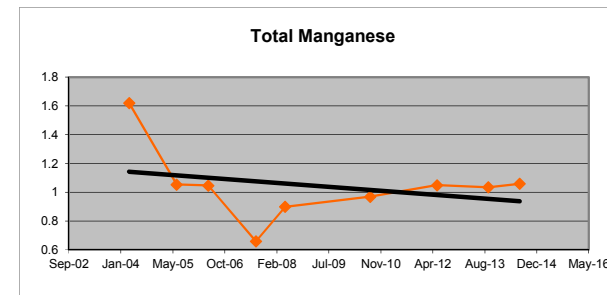
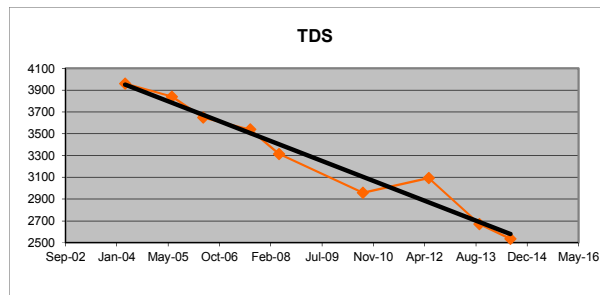
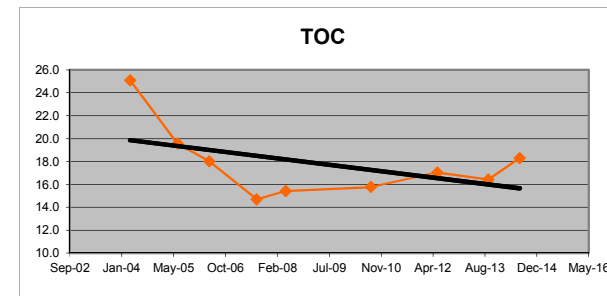
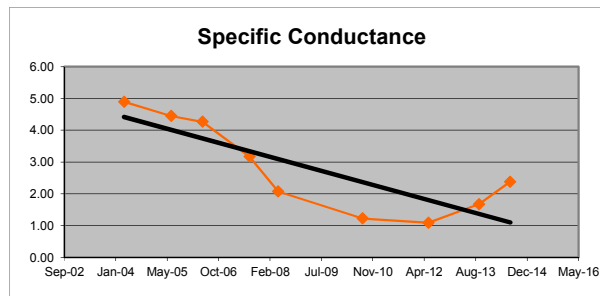


Appendix F **Marilla Street Landfill** **July 2014 Annual Sampling Event** **Summary of MATA Tracked Parameters for MW-18B**

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	-

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 G

Moving Average Trend Analysis of Tracked Parameters for Deep Overburden Wells

Appendix G
Marilla Street Landfill
July 2014 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
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	70.50	18.84	0.081	-	2.84	-

Notes:

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

Appendix G

Marilla Street Landfill

July 2014 Annual Sampling Event

Summary of MATA Tracked Parameters for MW-3A

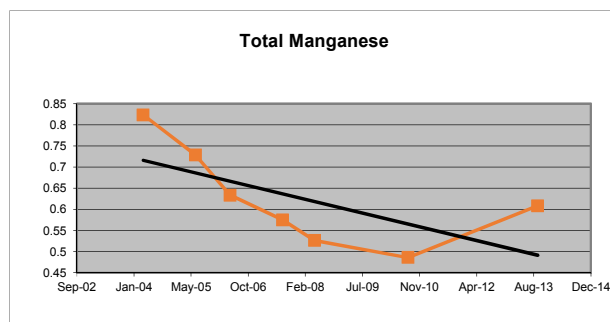
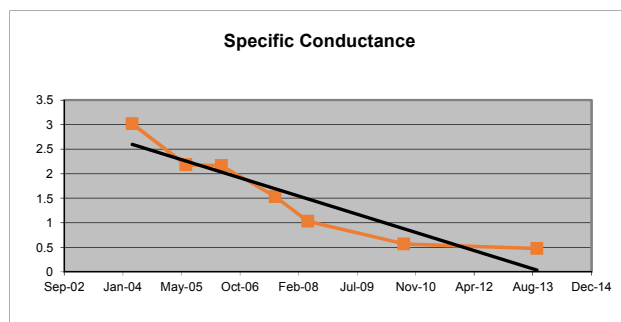
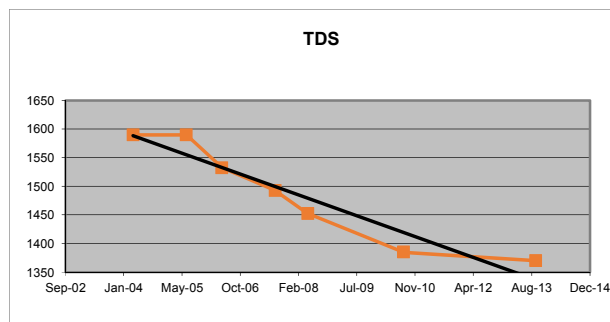
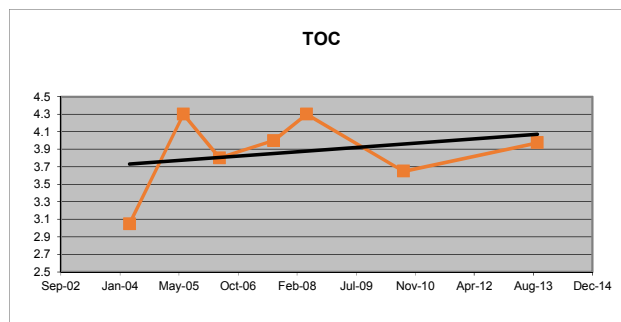
Event Date	pH	Moving Average	TOC	Moving Average	TDS	Moving Average	Total Iron	Moving Average	Specific Conductance	Moving Average	Total Manganese	Moving Average
Oct-01	11.9	-	1.0	-	1510	-	6.3	-	5.30	-	0.990	-
Apr-02	7.15	-	5.4	-	1770	-	0.5	-	2.02	-	0.900	-
Apr-03	7.15	-	2.6	-	1580	-	1.8	-	2.74	-	0.770	-
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

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

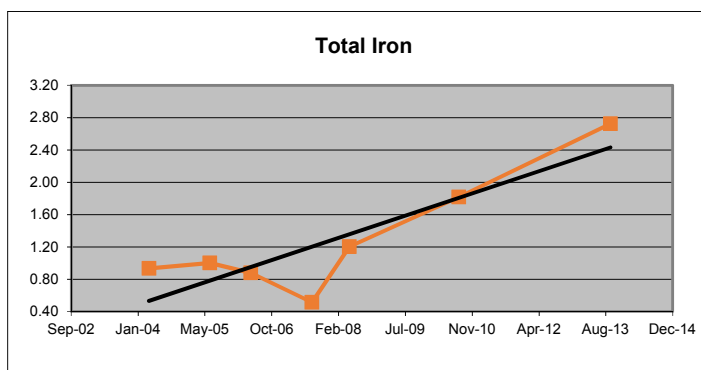
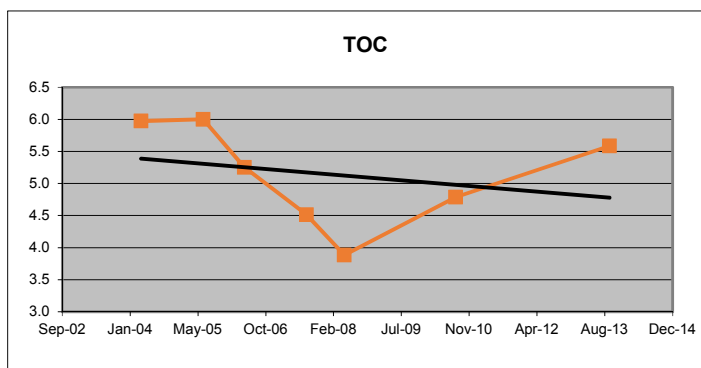


Appendix G
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for MW-4A

Event Date	pH	Moving Average	TOC	Moving Average	TRP	Moving Average	Total Iron	Moving Average
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

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

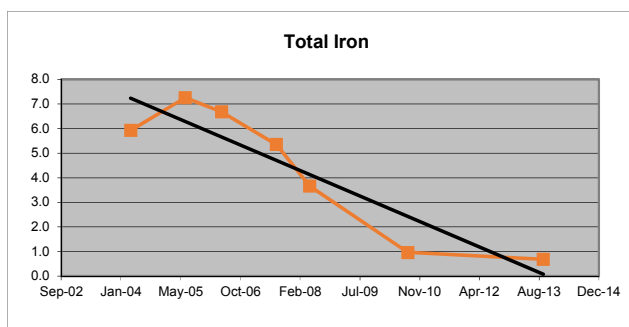
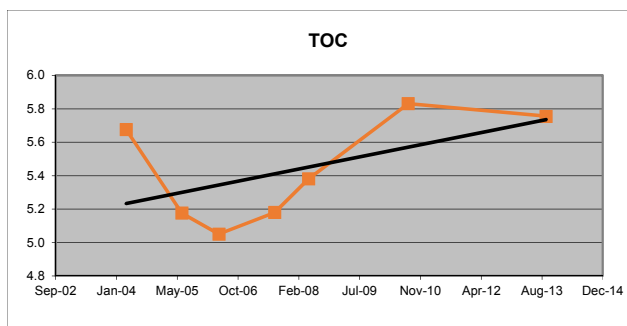
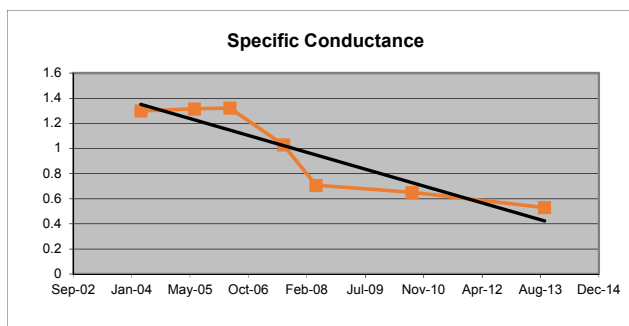


Appendix G **Marilla Street Landfill** **July 2014 Annual Sampling Event** **Summary of MATA Tracked Parameters for MW-15A**

Event Date	Specific Conductance	Moving Average	TOC	Moving Average	Total Iron	Moving Average	Soluble Iron	Moving Average	Total Manganese	Moving Average
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

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

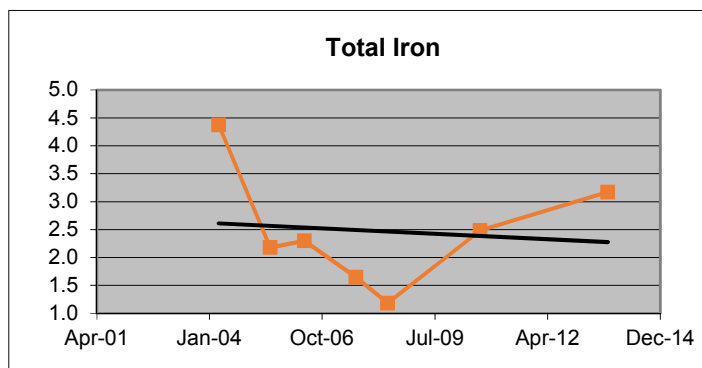


Appendix G
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for MW-16A

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

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.

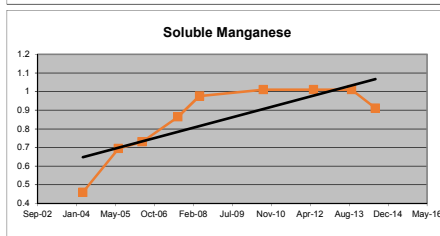
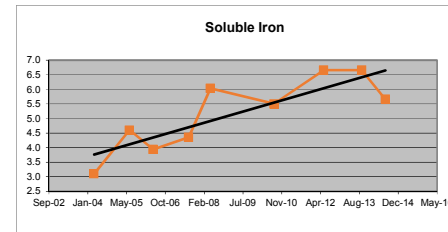
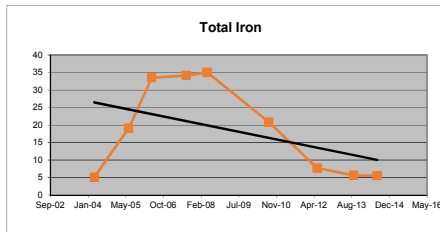
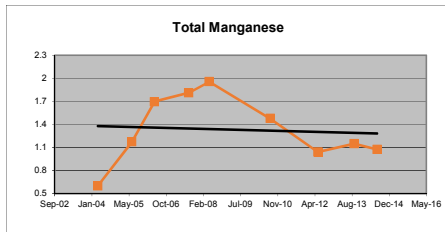
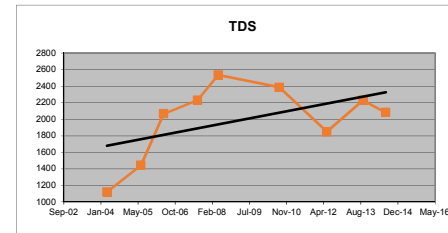
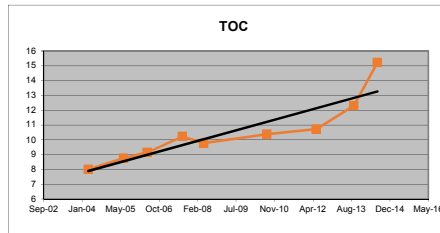
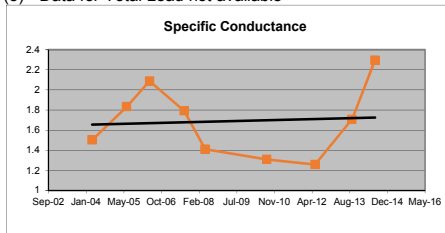


Appendix G **Marilla Street Landfill** **July 2014 Annual Sampling Event** **Summary of MATA Tracked Parameters for MW-18A**

Event Date	Specific Conductance	Moving Average	TOC	Moving Average	TDS	Moving Average	Soluble Arsenic	Moving Average	Total Chromium	Moving Average	Total Iron	Moving Average	Soluble Iron	Moving Average	Total Manganese	Moving Average	Soluble Manganese	Moving Average
Oct-01	1.699	-	9.0	-	1100	-	NA	-	0.0020	-	4.7	-	NA	-	0.610	-	NA	-
Apr-02	1.357	-	8.4	-	1160	-	NA	-	0.0020	-	3.3	-	NA	-	0.510	-	NA	-
Apr-03	1.417	-	6.3	-	933	-	0.0046	-	0.0035	-	6.3	-	3.1	-	0.560	-	0.460	-
Apr-04	1.531	1.501	8.3	8.0	1280	1118	NA	0.0046	0.0020	0.0024	6.1	5.1	NA	3.1	0.727	0.602	NA	0.460
Jul-05	3.029	1.834	12.0	8.8	2400	1443	0.004	0.0043	0.0580	0.0164	60.7	19.1	6.1	4.6	2.900	1.174	0.930	0.695
May-06	2.376	2.088	10.0	9.2	3650	2066	0.004	0.0042	0.0600	0.0309	61.0	33.5	2.6	3.9	2.600	1.697	0.800	0.730
Aug-07	0.230	1.792	10.6	10.2	1590	2230	NA	0.0040	0.0100	0.0325	8.8	34.2	NA	4.4	1.020	1.812	NA	0.865
May-08	0.000	1.409	6.5	9.8	2500	2535	NA	0.0040	0.0040	0.0330	9.8	35.1	9.4	6.0	1.300	1.955	1.200	0.977
Aug-10	2.630	1.309	14.4	10.4	1800	2385	0.004	0.0040	0.0100	0.0210	3.6	20.8	4.5	5.5	0.987	1.477	1.030	1.010
May-12	2.170	1.258	11.4	10.7	1500	1848	0.004	0.0040	0.0100	0.0085	8.7	7.7	6.1	6.7	0.863	1.043	0.802	1.011
Sep-13	2.030	1.708	16.9	12.3	3110	2228	NA	0.0040	0.0100	0.0085	0.24	5.6	NA	6.7	1.450	1.150	NA	1.011
Jul-14	2.350	2.295	18.2	15.2	1920	2083	0.010	0.0060	0.010	0.0100	9.52	5.5	6.41	5.7	0.993	1.073	0.901	0.911

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 H

Moving Average Trend Analysis of Tracked Parameters for Surface Water

Appendix H

Marilla Street Landfill

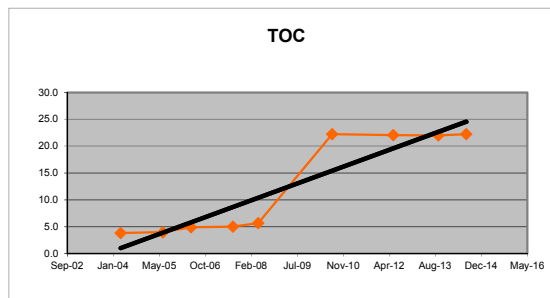
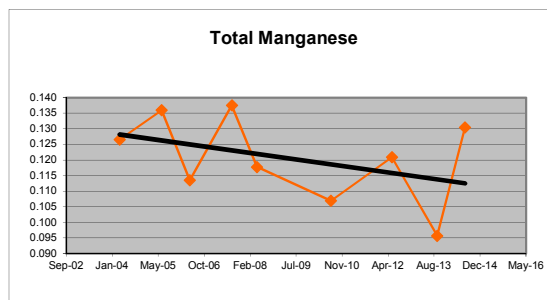
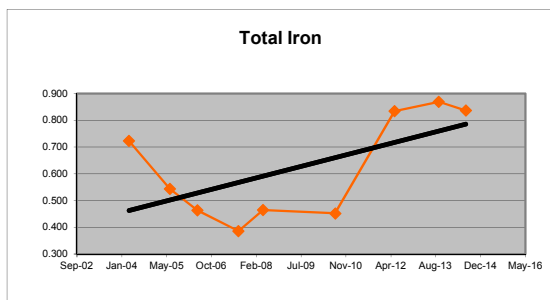
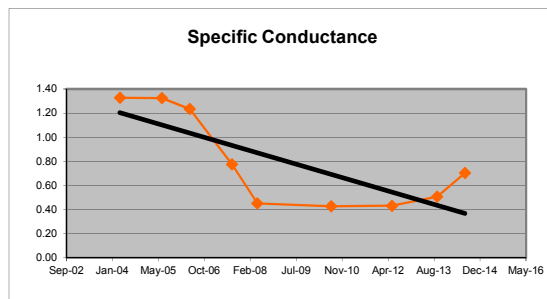
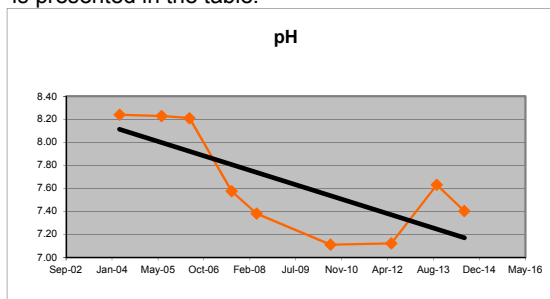
July 2014 Annual Sampling Event

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
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
Sep-13	8.05	7.63	0.48	0.51	4.5	22.0	0.570	0.870	0.077	0.096
Jul-14	7.16	7.40	0.79	0.70	6.1	22.2	0.750	0.837	0.279	0.130

Notes:

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



Appendix H
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for SW-1

Event Date	TDS	Moving Average	TRP	Moving Average	Total Arsenic	Moving Average	Total Chromium	Moving Average	Total Cyanide	Moving Average	Total Lead	Moving Average
Apr-01												
Oct-01												
Apr-02												
Apr-03												
Apr-04												
Jul-05												
May-06												
Aug-07												
May-08												
Jul-10												
May-12	366	-	0.050	-	0.004	-	0.010	-	0.010	-	0.005	-
Sep-13	267	-	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-
Jul-14	414	-	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-

Appendix H

Marilla Street Landfill

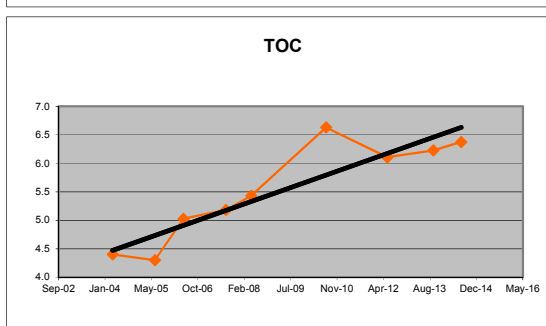
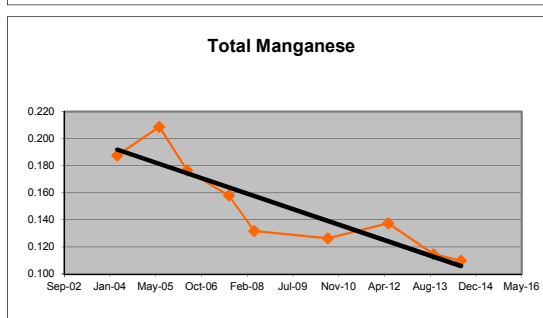
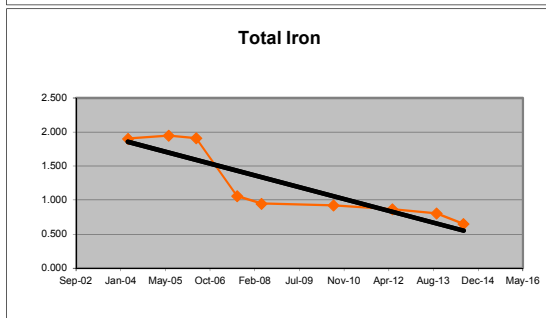
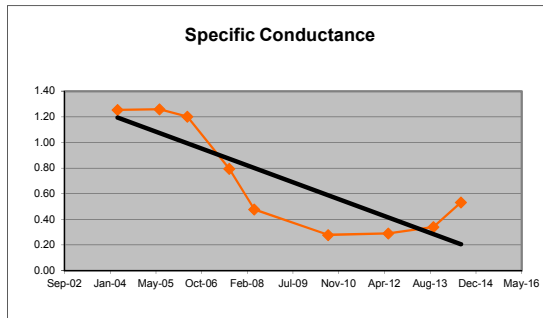
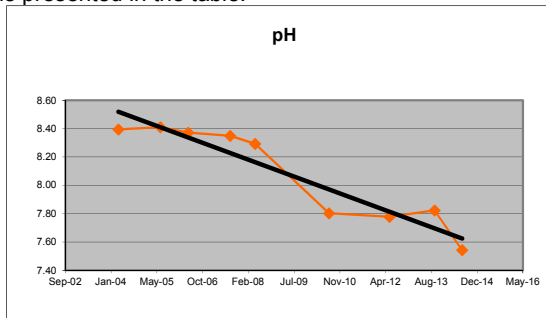
July 2014 Annual Sampling Event

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
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
Sep-13	8.35	7.82	0.43	0.34	5.4	6.2	0.550	0.805	0.045	0.115
Jul-14	7.50	7.54	0.77	0.53	5.8	6.4	0.480	0.650	0.141	0.110

Notes:

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



Appendix H
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for SW-2A

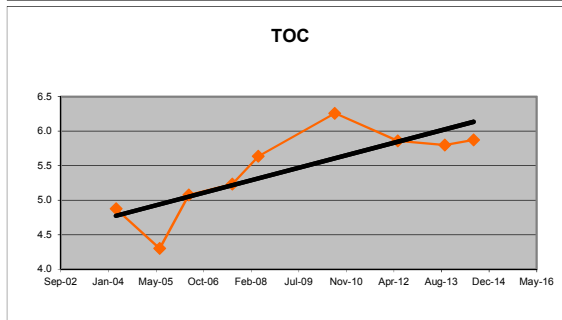
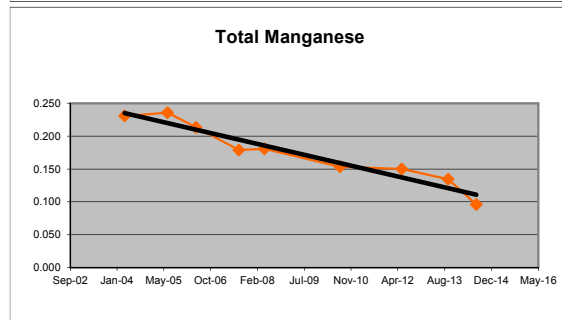
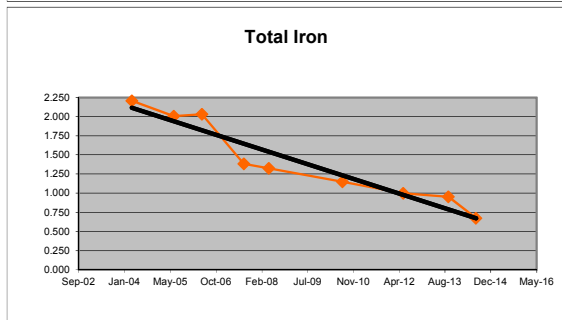
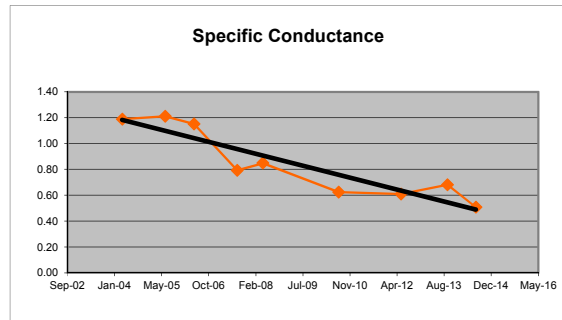
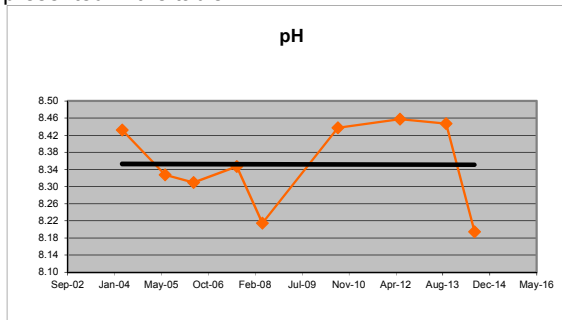
Event Date	TDS	Moving Average	TRP	Moving Average	Total Arsenic	Moving Average	Total Chromium	Moving Average	Total Cyanide	Moving Average	Total Lead	Moving Average
Apr-01												
Oct-01												
Apr-02												
Apr-03												
Apr-04												
Jul-05												
May-06												
Aug-07												
May-08												
Jul-10												
May-12	365	-	0.050	-	0.004	-	0.010	-	0.010	-	0.005	-
Sep-13	293	-	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-
Jul-14	409	-	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-

Appendix H **Marilla Street Landfill** **July 2014 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
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
Sep-13	8.29	8.45	0.45	0.68	5.6	5.8	0.620	0.954	0.080	0.135
Jul-14	7.50	8.20	0.77	0.51	6.3	5.9	0.380	0.674	0.116	0.096

Notes:

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



Appendix H
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for SW-3A

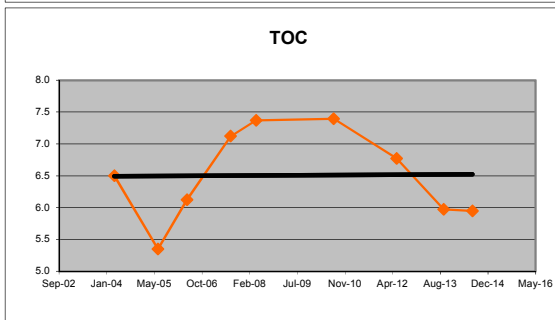
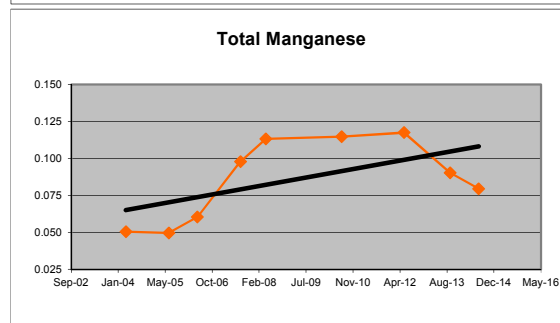
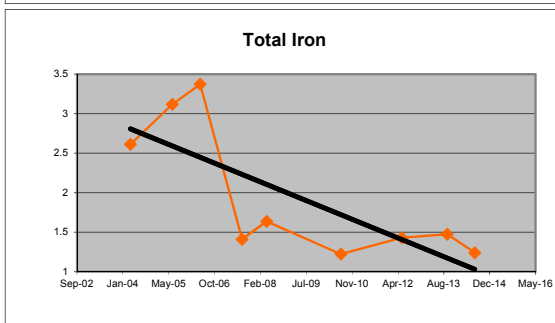
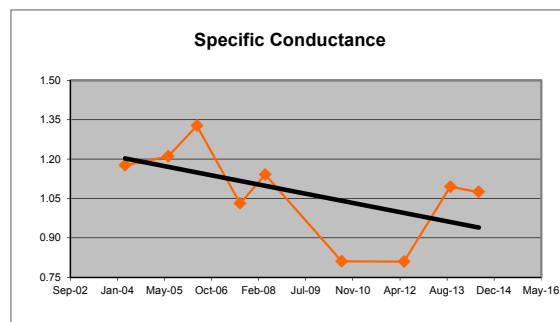
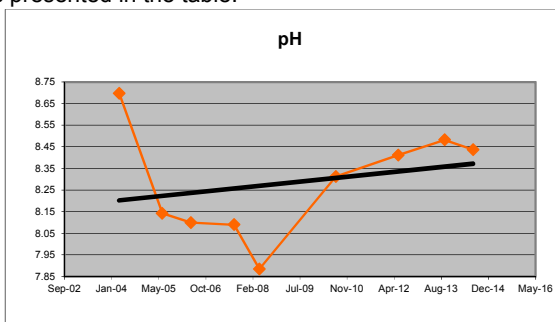
Event Date	TDS	Moving Average	TRP	Moving Average	Total Arsenic	Moving Average	Total Chromium	Moving Average	Total Cyanide	Moving Average	Total Lead	Moving Average
Apr-01												
Oct-01												
Apr-02												
Apr-03												
Apr-04												
Jul-05												
May-06												
Aug-07												
May-08												
Jul-10												
May-12	396	-	0.050	-	0.004	-	0.010	-	0.010	-	0.005	-
Sep-13	324	-	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-
Jul-14	427	-	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-

Appendix H **Marilla Street Landfill** **July 2014 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
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
Sep-13	8.62	8.48	1.29	1.10	6.0	6.0	0.840	1.477	0.057	0.090
Jul-14	8.30	8.44	1.58	1.08	5.7	6.0	0.660	1.242	0.054	0.080

Notes:

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



Appendix H
Marilla Street Landfill
July 2014 Annual Sampling Event
Summary of MATA Tracked Parameters for SW-5

Event Date	TDS	Moving Average	TRP	Moving Average	Total Arsenic	Moving Average	Total Chromium	Moving Average	Total Cyanide	Moving Average	Total Lead	Moving Average
Apr-01												
Oct-01												
Apr-02												
Apr-03												
Apr-04												
Jul-05												
May-06												
Aug-07												
May-08												
Jul-10												
May-12	646	-	0.050	-	0.004	-	0.010	-	0.010	-	0.005	-
Sep-13	873	-	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-
Jul-14	40	-	0.005	-	0.010	-	0.010	-	0.010	-	0.050	-

APPENDIX I

2014 Post-Closure Inspection and Maintenance Report

**MARILLA STREET LANDFILL
POST-CLOSURE INSPECTION REPORT**

DATE: 7/15/14

WEATHER: SUN, WIND, 75°F

PERSONNEL: AMZ

Instructions: Complete the checklist of visual evaluation items then complete specific data items. Field measurements should be made with a cloth tape, provided instrumentation on equipment or other suitable means. Estimated measurements shall be noted. Attach hand sketches or photographs to further define conditions or problems.

I. VISUAL EVALUATION ITEMS	Acceptable	Not Acceptable	Not Present	Present	Remarks
1. Vegetative Cover					
a. Within Landfill Disposal Area	X				
b. Around Landfill Perimeter	X				
2. Integrity of Drainage Ditches					
a. Sediment Build-up	X				
b. Pooling or Ponding	X				
c. Slope Integrity	X				
d. Overall Adequacy	X				
3. General Conditions of Site					
a. Road Construction	X				
b. Gates/Fences/Locks		X			• NO LOCK OR BOLT ON MW-6B • NO LOCKS ON MW10B + 5B • NEED NEW BOLT ON MW4A (LOCK NOT ACTUALLY LOCK- ING WELL)
c. Grass Height	X				
d. Illegal Dumping	X	X		X	NEAR ENTRANCE ROAD UNDER HOPKINS ST. BRIDGE DEBRIS OFF SITE - NOT STEELEFIELDS RESPONSIBILITY JAD
e. Wetland Shrub Plantings ⁽¹⁾	X				
4. Integrity of Groundwater	X				
5. Integrity of Landfill Cap					
a. Erosion Damage		X		X	SEE ATTACHED FIGURE FOR LOCATIONS
b. Leachate Breakthrough	X		X		
c. Settlement	X		X		
d. Cracking	X				
e. Slope	X				
f. Undesirable plants			X		
g. Benchmark	X				
h. Animal Burrowing		X		X	SEE ATTACHED FIGURE FOR LOCATIONS

Notes: (1) Until Year 2002

II. SPECIFIC DATA ITEMS (Write N.A. if not applicable)

A. Erosion and Settlement:

1. Approximate size in feet of cap ended area(s). (List separately)

- a. ~ 3' DIAMETER 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. ~ 3 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.

N.A.

4. Attach a hand sketch or photograph showing the location of the eroded area(s). Identify each area by using the letter a, b, c, etc. from Question 1.

5. Approximate size in feet of leachate breakouts. (List separately)

N.A.

- 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)

N.A.

- a. _____ feet _____ feet
- b. _____ feet _____ feet
- c. _____ feet _____ feet

7. Approximate depth of each settlement area when measured from adjacent surface. (List separately)

N.A.

- 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).

See 9-8-14 Report

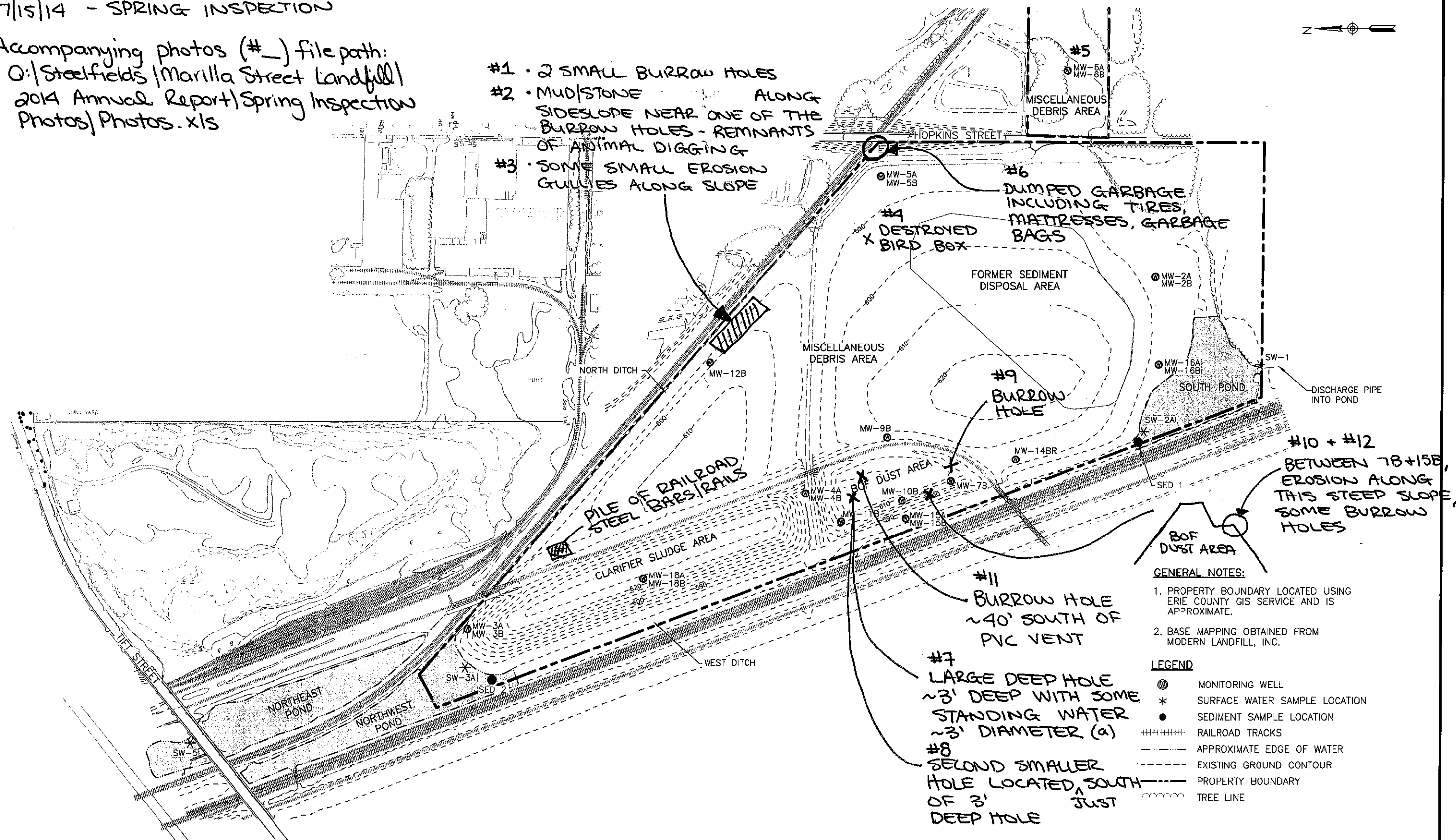
2. Date of corrective action:

Page 2 of 2

9-4, 9-8 & 10-8

Accompanying photos (#_) file path:
O:\Steelfields\Marilla Street Landfill\2014 Annual Report\Spring Inspection Photos\Photos.xls

- #1 • 2 SMALL BURROW HOLES
- #2 • MUD/STONE ALONG SIDESLOPE NEAR ONE OF THE BURROW HOLES - REMNANTS OF ANIMAL DIGGING
- #3 • SOME SMALL EROSION GULLIES ALONG SLOPE



GENERAL NOTES:

1. PROPERTY BOUNDARY LOCATED USING ERIE COUNTY GIS SERVICE AND IS APPROXIMATE.
2. BASE MAPPING OBTAINED FROM MODERN LANDFILL, INC.

LEGEND

- MONITORING WELL
* SURFACE WATER SAMPLE LOCATION
● SEDIMENT SAMPLE LOCATION
+++++ RAILROAD TRACKS
- - - - - APPROXIMATE EDGE OF WATER
- - - - - EXISTING GROUND CONTOUR
- - - - - PROPERTY BOUNDARY
~~~~~ TREE LINE

**DAIGLER ENGINEERING P.C.**

.....engineering • science • design .....

REDUCED: HALF SCALE

JAMES A. DAIGLER, P.E.  
NYSPE NO. 061689

DATE: November 2013

SCALE: 1"=400'

PREPARED FOR:

STEELFIELDS, LTD.

DES. BY:

DRW. BY:

CHK. BY:

## SITE PLAN

MARILLA STREET LANDFILL PERIODIC REVIEW REPORT

DWG

FIG 2-SITE PLAN.dwg

CITY OF BUFFALO

ERIE COUNTY

STATE OF NEW YORK

FIGURE  
2

| ACCORDANCE WITH SECTION 7206 PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW |          |    |      |
|------------------------------------------------------------------------------|----------|----|------|
|                                                                              |          |    |      |
|                                                                              |          |    |      |
|                                                                              |          |    |      |
|                                                                              |          |    |      |
|                                                                              |          |    |      |
|                                                                              |          |    |      |
|                                                                              |          |    |      |
| NO.                                                                          | REVISION | BY | DATE |



**Animal burrow hole along northeast side of Miscellaneous Debris Area  
between access road and MW-12B**

**#1**



**Animal burrow hole with mud/stone along northeast side of Miscellaneous  
Debris Area between access road and MW-12B**

**#2**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2014 SPRING INSPECTION**

**Photographs**

Page 1 of 6





**Start of small erosion gullies along northeast side of Miscellaneous Debris  
Area between access road and MW-12B**

**#3**



**Destroyed bird box near MW-5 cluster**

**#4**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2014 SPRING INSPECTION**

**Photographs**

Page 2 of 6





No well cap anchor bolt or lock on MW-6B

#5



Illegally dumped material between entrance road and Hopkins St (includes garbage, tires, mattresses)

#6

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2014 SPRING INSPECTION**

**Photographs**

Page 3 of 6



**Large hole ~3 feet deep at top of BOF Dust Area with accumulated stormwater.  
Approximately 40 feet south of PVC gas vent**

**#7**



**Second smaller hole at top of BOF Dust Area. Approximately 40 feet south of  
PVC gas vent**

**#8**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2014 SPRING INSPECTION**

**Photographs**

Page 4 of 6





**Animal burrow hole along southeast side of BOF Dust Area**

**#9**



**Animal burrow hole along west side of BOF Dust Area between MW-7B and MW-10B**

**#10**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2014 SPRING INSPECTION**

**Photographs**

Page 5 of 6





**Animal burrow hole along west side of BOF Dust Area. Approximately 40 feet south of PVC gas vent**

**#11**



**Some erosion along west side of BOF Dust Area where grade becomes steeper**

**#12**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
2014 SPRING INSPECTION**

**Photographs**

Page 6 of 6



# MARILLA STREET LANDFILL POST -CLOSURE INSPECTION REPORT

DATE: 9/8/2014

WEATHER: sunny 76°F

PERSONNEL: AMZ

*Instructions: Complete the checklist of visual evaluation items then complete specific data items. Field measurements should be made with a cloth tape, provided instrumentation on equipment or other suitable means. Estimated measurements shall be noted. Attach hand sketches or photographs to further define conditions or problems.*

| I. VISUAL EVALUATION ITEMS                | Acceptable | Not Acceptable | Not Present | Present | Remarks                                                                                |
|-------------------------------------------|------------|----------------|-------------|---------|----------------------------------------------------------------------------------------|
| 1. Vegetative Cover                       |            |                |             |         |                                                                                        |
| a. Within Landfill Disposal Area          | X          |                |             |         |                                                                                        |
| b. Around Landfill Perimeter              | X          |                |             |         |                                                                                        |
| 2. Integrity of Drainage Ditches          |            |                |             |         |                                                                                        |
| a. Sediment Build-up                      | X          |                |             |         |                                                                                        |
| b. Pooling or Ponding                     | X          |                |             |         |                                                                                        |
| c. Slope Integrity                        | X          |                |             |         |                                                                                        |
| d. Overall Adequacy                       | X          |                |             |         |                                                                                        |
| 3. General Conditions of Site             |            |                |             |         |                                                                                        |
| a. Road Construction                      | X          |                |             |         |                                                                                        |
| b. Gates/Fences/Locks                     |            | X              |             |         | • NO LOCK OR BOLT ON 10B<br>• CUT OFF LOCK AT MW-98<br>• REPLACE W/ UNIVERSAL KEY LOCK |
| c. Grass Height                           | X          |                |             |         |                                                                                        |
| d. Illegal Dumping                        |            | X              |             | X       | • ON TOP OF BOF DUST AREA NEAR 10B (OLD FOAM SEAT + BROKEN SNOW BOARD)                 |
| e. Wetland Shrub Plantings <sup>(1)</sup> | X          |                |             |         |                                                                                        |
| 4. Integrity of Groundwater               | X          |                |             |         |                                                                                        |
| 5. Integrity of Landfill Cap              |            |                |             |         |                                                                                        |
| a. Erosion Damage                         | X          |                | X           |         |                                                                                        |
| b. Leachate Breakthrough                  | X          |                | X           |         |                                                                                        |
| c. Settlement                             | X          |                | X           |         |                                                                                        |
| d. Cracking                               | X          |                | X           |         |                                                                                        |
| e. Slope                                  | X          |                | X           |         |                                                                                        |
| f. Undesirable plants                     | X          |                | X           |         |                                                                                        |
| g. Benchmark                              | X          |                |             |         |                                                                                        |
| h. Animal Burrowing                       |            | X              |             | X       | • ANIMAL BURROW OUT OF NEWLY FIXED HOLE NEAR MW-12B                                    |

Notes: (1) Until Year 2002

## II. SPECIFIC DATA ITEMS (Write N.A. if not applicable)

### A. Erosion and Settlement: N.A.

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.

N.A.

4. Attach a hand sketch or photograph showing the location of the eroded area(s).

Identify each area by using the letter a, b, c, etc. from Question 1.

5. Approximate size in feet of leachate breakouts. (List separately) N.A.

- 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) N.A.

- a. \_\_\_\_\_ feet \_\_\_\_\_ feet
- b. \_\_\_\_\_ feet \_\_\_\_\_ feet
- c. \_\_\_\_\_ feet \_\_\_\_\_ feet

7. Approximate depth of each settlement area when measured from adjacent surface. (List separately) N.A.

- 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).

- BACKFILLED, SEED, + PLACED HAY AT HOLES/BURROW HOLES IDENTIFIED DURING 7/15/14 INSPECTION
- ANCHOR BOLT REPLACED ON MW-4A
- ANCHOR BOLT + LOCK ADDED TO MW-6B

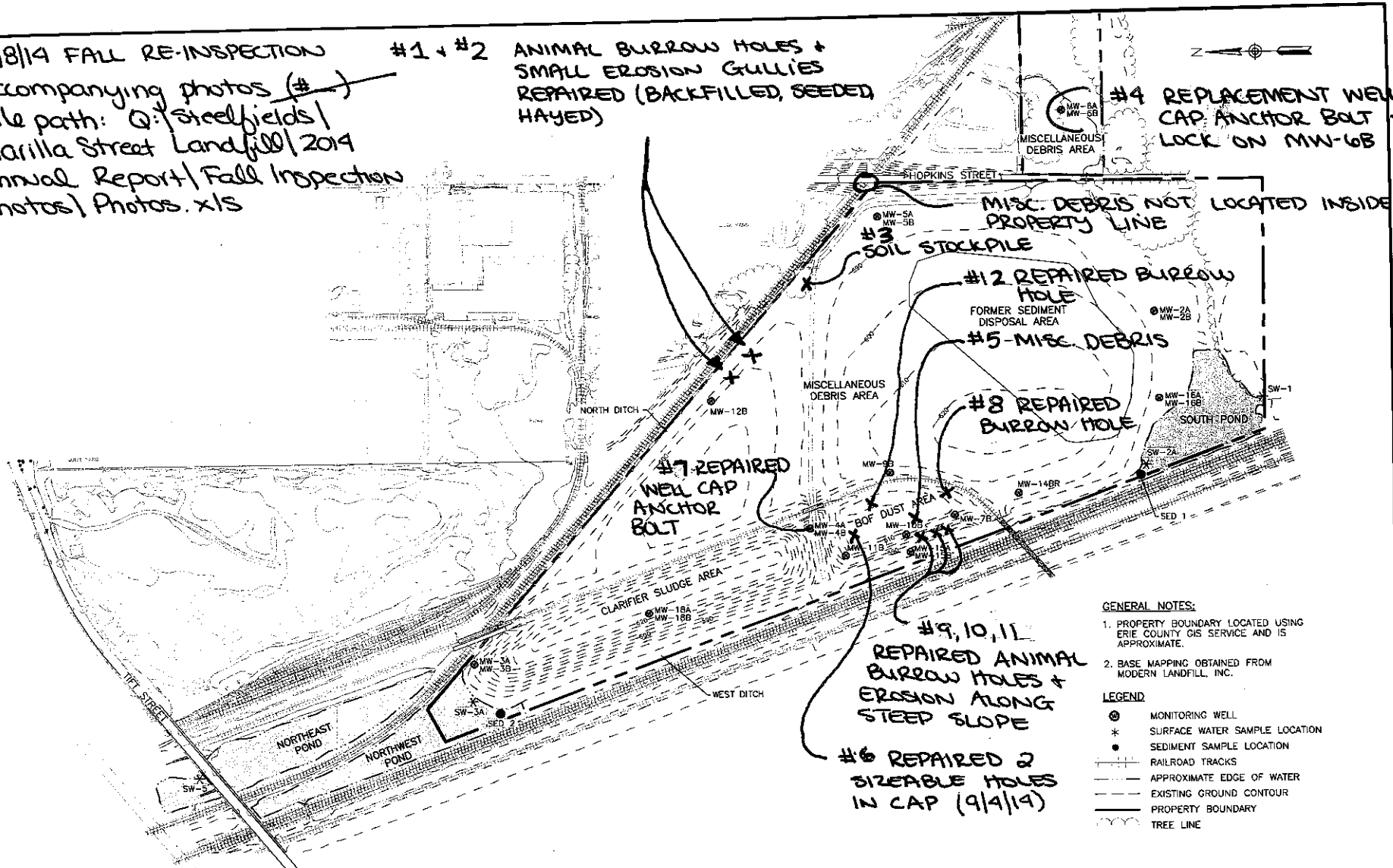
2. Date of corrective action:

9/4/14  
9/8/14

Accompanying photos (#) ~~\_\_\_\_\_~~  
 file path: Q:\Steelfields/  
 Marilla Street Landfill\2014  
 Annual Report\Fall Inspection  
 Photos\Photos.xls

#1 + #2 ANIMAL BURROW HOLES +  
SMALL EROSION GULLIES  
REPAIRED (BACKFILLED, SEEDING,  
HAYED)

#4 REPLACEMENT WELL  
CAP ANCHOR BOLT +  
LOCK ON MW-6B



1. PROPERTY BOUNDARY LOCATED USING ERIE COUNTY GIS SERVICE AND IS APPROXIMATE.
2. BASE MAPPING OBTAINED FROM MODERN LANDFILL, INC.

 MONITORING WELL  
 SURFACE WATER SAMPLE LOCATION  
 SEDIMENT SAMPLE LOCATION  
 RAILROAD TRACKS  
 APPROXIMATE EDGE OF WATER  
 EXISTING GROUND CONTOUR  
 PROPERTY BOUNDARY  
 TREE LINE

ALTERATION OF ANY SURVEY, DRAWING, DESIGN, SPECIFICATION OR REPORT MUST BE COMPLETED IN ACCORDANCE WITH SECTION 7209 PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

DAIGLER ENGINEERING P.C.

.....engineering • science • design.....  
2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072

JAMES A. DAIGLER, P.  
NYSP# NO. 081829

DATE: September 2014

SCALE: 1"=400'

PREPARED FOR: STEELFIELDS, LTD

DES. BY:

DRW. BY:

CHK BY:

DWG: FIG 2-SITE PLAN.dwg

## SITE PLAN

MARILLA STREET LANDFILL PERIODIC REVIEW REPORT

CITY OF BUFFALO

ERIE COUNTY

NEW YORK

FIGURE

2





**Backfilled, seeded, and mulched animal burrow hole along northeast side of Miscellaneous Debris Area between access road and MW-12B**

**#1**



**Backfilled, seeded, and mulched animal burrow hole with mud/stone along northeast side of Miscellaneous Debris Area between access road and MW-12B**

**#2**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
SEPTEMBER 8, 2014 FALL INSPECTION**

**Photographs**

Page 1 of 6



**Soil stockpile near entrance gate**

**#3**



**Repaired well cap anchor bolt and replacement lock on MW-6B**

**#4**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
SEPTEMBER 8, 2014 FALL INSPECTION**

**Photographs**

Page 2 of 6





Miscellaneous debris on top of BOF Dust Area

#5



Backfilled, seeded, and mulched 2 holes on top of BOF Dust Area.  
Approximately 40 feet south of PVC gas vent

#6

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MARILLA STREET LANDFILL  
SEPTEMBER 8, 2014 FALL INSPECTION**

**Photographs**

Page 3 of 6



**Repaired well cap anchor bolt on MW-4A**

**#7**



**Backfilled, seeded, and mulched animal burrow hole along southeast side of  
BOF Dust Area**

**#8**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
SEPTEMBER 8, 2014 FALL INSPECTION**

**Photographs**

Page 4 of 6





**Backfilled, seeded, and mulched animal burrow hole along west side of BOF  
Dust Area between MW-7B and MW-10B**

**#9**



**Backfilled, seeded, and mulched animal burrow hole along west side of BOF  
Dust Area. Approximately 40 feet south of PVC gas vent**

**#10**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
SEPTEMBER 8, 2014 FALL INSPECTION**

**Photographs**

Page 5 of 6



**Backfilled, seeded, and mulched erosion along west side of BOF Dust Area  
where grade becomes steeper**

**#11**



**Backfilled, seeded, and mulched animal burrow hole along northeast side of  
BOF Dust Area. Approximately 40 feet south of PVC gas vent**

**#12**

**STEELFIELDS LTD  
MARILLA STREET LANDFILL  
SEPTEMBER 8, 2014 FALL INSPECTION**

**Photographs**

Page 6 of 6

**MARILLA STREET LANDFILL  
POST -CLOSURE INSPECTION REPORT**

DATE: 10-8-14

WEATHER: Cloudy / windy

PERSONNEL: Sam Daigler

*Instructions: Complete the checklist of visual evaluation items then complete specific data items. Field measurements should be made with a cloth tape, provided instrumentation on equipment or other suitable means. Estimated measurements shall be noted. Attach hand sketches or photographs to further define conditions or problems.*

| I. VISUAL EVALUATION ITEMS                        | Acceptable | Not<br>Acceptable | Not<br>Present | Present | Remarks                                     |
|---------------------------------------------------|------------|-------------------|----------------|---------|---------------------------------------------|
|                                                   |            |                   |                |         |                                             |
| 1. Vegetative Cover                               |            |                   |                |         |                                             |
| a. Within Landfill Disposal Area                  | <u>X</u>   |                   |                |         |                                             |
| b. Around Landfill Perimeter                      | <u>X</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> <sup>N.A</sup> /Locks | <u>X</u>   |                   |                |         | <u>installed one lock on well</u>           |
| c. Grass Height                                   | <u>X</u>   |                   |                |         |                                             |
| d. Illegal Dumping                                | <u>X</u>   |                   |                |         |                                             |
| e. Wetland Shrub Plantings <sup>(1)</sup>         | <u>X</u>   |                   |                |         |                                             |
| 4. Integrity of Groundwater                       | <u>X</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>X</u>   |                   |                |         |                                             |
| h. Animal Burrowing                               | <u>X</u>   |                   |                |         | <u>Filled in multiple burrows - 10/8/14</u> |

Notes: (1) Until Year 2002



## II. SPECIFIC DATA ITEMS (Write N.A. if not applicable)

### A. Erosion and Settlement:

N/A

#### 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).

Installed lock  
Filled animal burrows

#### 2. Date of corrective action: 10/8/14





## **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, 2013 to September 12, 2014                                                                                                  |                                     |                                     |
|                                                                                                                                                             |                                     | 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.                                   |                                                              |
| <u>Richard A. Fabis</u><br>Signature of Owner, Remedial Party or Designated Representative                                        | <u>10.8.14</u><br>Date                                       |

*to the best of my knowledge*

## Description of Institutional Controls

| Parcel        | Owner           | Institutional Control |
|---------------|-----------------|-----------------------|
| 132.16-1-11.2 | Steelfields LTD |                       |

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010) was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
- ~~4. Maintenance of fence around the site.~~
5. Periodic Reporting of Site activities and evaluation of Site data.

SEE SECTION 2.5 OF  
PRR AS RELATED  
TO FENCE MAINTENANCE

132.16-1-13 Steelfields LTD

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010) was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
- ~~4. Maintenance of fence around the site.~~
5. Periodic Reporting of Site activities and evaluation of Site data.

132.16-1-14 Steelfields LTD

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010) was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
- ~~4. Maintenance of fence around the site.~~
5. Periodic Reporting of Site activities and evaluation of Site data.

132.16-1-9 Steelfields LTD

Monitoring Plan

Record of Decision: 3/27/1997

The Final Post-Closure Monitoring and Maintenance Plan (Revised November 2010) was approved on 11/22/2010. The Plan requires:

1. Maintenance and Monitoring of the landfill caps.
2. Groundwater Monitoring.
3. Surface water and sediment sampling.
- ~~4. 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.~~ JAD
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.~~ JAD
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.~~ JAD
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.~~ JAD
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.~~ JAD
5. Periodic Reporting of Site activities and evaluation of Site data.

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**

| <u>Parcel</u> | <u>Engineering Control</u>                        |
|---------------|---------------------------------------------------|
| 132.16-1-11.2 | <del>Fencing/Access Control</del><br>Cover System |
| 132.16-1-13   | Cover System<br><del>Fencing/Access Control</del> |
| 132.16-1-14   | Cover System<br><del>Fencing/Access Control</del> |
| 132.16-1-9    | Cover System<br><del>Fencing/Access Control</del> |

| <u>Parcel</u> | <u>Engineering Control</u>                            |
|---------------|-------------------------------------------------------|
| 132.20-1-2.2  | Cover System<br><del>Fencing/Access Control</del> JAD |
| 132.20-1-9    | Cover System<br><del>Fencing/Access Control</del> JAD |
| 133.13-1-8    | Cover System<br><del>Fencing/Access Control</del> JAD |
| 133.17-1-1    | Cover System<br><del>Fencing/Access Control</del> JAD |
| 133.17-1-10   | Cover System<br><del>Fencing/Access Control</del> JAD |
| 133.17-1-2    | Cover System<br><del>Fencing/Access Control</del> JAD |
| 133.17-1-6    | Cover System<br><del>Fencing/Access Control</del> JAD |
| 133.17-1-9    | Cover System<br><del>Fencing/Access Control</del> JAD |



### 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.

AS DESCRIBED IN PRR

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;

AS MODIFIED BY NYSDEC IN 2013 REGARDING FENCE MAINTENANCE

- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

YAD

- (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.

TO THE BEST OF MY KNOWLEDGE

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  
print name print business address 14072

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

10-10-14  
Date

IC/EC CERTIFICATIONS

Box 7

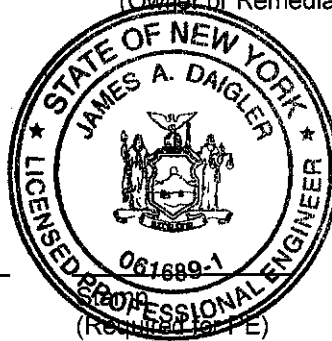
Professional Engineer Signature

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  
print name print business address 14072

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



10-10-14  
Date

## **APPENDIX K**

# **Instrument Calibration Confirmation Sheets**





Certificate Number:

## Calibration Certificate

Serial Number: R6549 Description: LAMOTTE 2020 E

Calibration Date: 07/ 01 /2014

Next Calibration: See Manufacturers specifications

Accuracy of Unit Under Test: See Manufacturers specifications

Adjustments made:

Calibration Technician: Vic Boccardo

Details of any limitations to the use of the equipment:

The following measurement equipment used during the calibration procedure is traceable to National Standards.

| <u>Equipment / Standard</u> | <u>Certificate/Lot Number</u> | <u>Expiration Date</u> | <u>UUT Results</u> |
|-----------------------------|-------------------------------|------------------------|--------------------|
| 0.0 NTU TURBIDITY           | C467883                       | 3/31/2015              | 0.0 NTU            |
| 1 NTU TURBIDITY             | C365163                       | 1/31/2015              | 1.01 NTU           |
| 10 NTU TURBIDITY            | C364881                       | 1/31/2015              | 10 NTU             |
| "                           |                               |                        |                    |
|                             |                               |                        |                    |
|                             |                               |                        |                    |
|                             |                               |                        |                    |

Calibrated by : \_\_\_\_\_ Vic Boccardo \_\_\_\_\_

Date Calibrated: \_\_\_\_\_ 07-01-2014 \_\_\_\_\_



Certificate Number:

## Calibration Certificate

Serial Number: 02075 Description: MINIRAE 2000

Calibration Date: 07/01/2014

Next Calibration: See Manufacturers specifications

Accuracy of Unit Under Test: See Manufacturers specifications

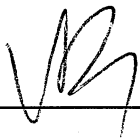
Adjustments made: 10.6 LAMP INSTALLED

Calibration Technician: Vic Boccardo

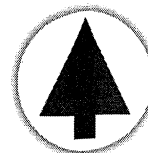
Details of any limitations to the use of the equipment:

The following measurement equipment used during the calibration procedure is traceable to National Standards.

| <u>Equipment / Standard</u> | <u>Certificate/Lot Number</u> | <u>Expiration Date</u> | <u>UUT Results</u> |
|-----------------------------|-------------------------------|------------------------|--------------------|
| 100 PPM ISOBUTYLENE         | 0128FF14                      | 01/28/2018             | 100 PPM            |
|                             |                               |                        |                    |
|                             |                               |                        |                    |
| "                           |                               |                        |                    |
|                             |                               |                        |                    |
|                             |                               |                        |                    |
|                             |                               |                        |                    |

Calibrated by : \_\_\_\_\_ Vic Boccardo \_\_\_\_\_  


Date Calibrated: \_\_\_\_\_ 07-01-2014 \_\_\_\_\_



## INSTRUMENT CALIBRATION REPORT

**Pine Environmental Services, LLC.**

5170 Hudson Drive, Suite E  
Hudson, OH 44236  
Toll-free: (877) 326-PINE (7463)

### Pine Environmental Services, Inc.

**Instrument ID** A00921  
**Description** Hanna HI 991301  
**Calibrated** 6/24/2014 1:59:44PM

|                                  |                        |
|----------------------------------|------------------------|
| <b>Manufacturer</b> Hanna        | <b>State Certified</b> |
| <b>Model Number</b> HI 991301    | <b>Status</b> Pass     |
| <b>Serial Number/ Lot</b> A00921 | <b>Temp °C</b> 24.8    |
| <b>Number</b>                    |                        |
| <b>Location</b> Ohio             | <b>Humidity %</b> 66   |
| <b>Department</b>                |                        |

#### Calibration Specifications

|                                   |                |                |                 |                             |               |             |                  |
|-----------------------------------|----------------|----------------|-----------------|-----------------------------|---------------|-------------|------------------|
| <b>Group # 1</b>                  |                |                |                 | <b>Range Acc %</b> 0.0000   |               |             |                  |
| <b>Group Name</b> PH              |                |                |                 | <b>Reading Acc %</b> 3.0000 |               |             |                  |
| <b>Stated Accy</b> Pct of Reading |                |                |                 | <b>Plus/Minus</b> 0.00      |               |             |                  |
| <b>Nom In Val / In Val</b>        | <b>In Type</b> | <b>Out Val</b> | <b>Out Type</b> | <b>Fnd As</b>               | <b>Lft As</b> | <b>Dev%</b> | <b>Pass/Fail</b> |
| 7.01 / 7.01                       | PH             | 7.01           | PH              | 7.04                        | 7.00          | -0.14%      | Pass             |
| 4.01 / 4.01                       | PH             | 4.01           | PH              | 4.02                        | 4.00          | -0.25%      | Pass             |

---

|                                   |                |                |                 |                             |               |             |                  |
|-----------------------------------|----------------|----------------|-----------------|-----------------------------|---------------|-------------|------------------|
| <b>Group # 2</b>                  |                |                |                 | <b>Range Acc %</b> 0.0000   |               |             |                  |
| <b>Group Name</b> Conductivity    |                |                |                 | <b>Reading Acc %</b> 3.0000 |               |             |                  |
| <b>Stated Accy</b> Pct of Reading |                |                |                 | <b>Plus/Minus</b> 0.000     |               |             |                  |
| <b>Nom In Val / In Val</b>        | <b>In Type</b> | <b>Out Val</b> | <b>Out Type</b> | <b>Fnd As</b>               | <b>Lft As</b> | <b>Dev%</b> | <b>Pass/Fail</b> |
| 12.880 / 12.880                   | ms/cm          | 12.880         | ms/cm           | 12.960                      | 12.880        | 0.00%       | Pass             |

#### Test Instruments Used During the Calibration

|                         |                    |                           |                     |                                       | <b>(As Of Cal Entry Date)</b>         |                        |
|-------------------------|--------------------|---------------------------|---------------------|---------------------------------------|---------------------------------------|------------------------|
| <b>Test Standard ID</b> | <b>Description</b> | <b>Manufacturer</b>       | <b>Model Number</b> | <b>Serial Number /<br/>Lot Number</b> | <b>Next Cal Date /</b>                |                        |
|                         |                    |                           |                     |                                       | <b>Last Cal Date/<br/>Opened Date</b> | <b>Expiration Date</b> |
| OH 12.880<br>COND       | OH COND 12.88      | Hanna                     | Conductivity        | 4459                                  |                                       | 5/1/2017               |
| OH PH 4                 | OH PH 4            | AquaPhoenix<br>Scientific |                     | 3AK570                                |                                       | 11/15/2014             |
| OH PH 7                 | OH PH 7            | Aurical                   |                     | 3AK280                                |                                       | 11/15/2014             |

#### Notes about this calibration

**Calibration Result** Calibration Successful  
**Who Calibrated** Bob Gainer



## INSTRUMENT CALIBRATION REPORT



**Pine Environmental Services, LLC.**

5170 Hudson Drive, Suite E  
Hudson, OH 44236  
Toll-free: (877) 326-PINE (7463)

### **Pine Environmental Services, Inc.**

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**Instrument ID** A00921

**Description** Hanna HI 991301

**Calibrated** 6/24/2014 1:59:44PM

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

**Notify Pine Environmental Services, LLC. of any defect within 24 hours of receipt of equipment**  
**Please call 866-960-7463 for Technical Assistance**