Soil Screening Sampling Plan
Monroe Electronics
NYSDEC Site No. 837013
100 Housel Avenue
Lyndonville, New York 14098

Prepared for:
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233

Prepared by:
Marsh Engineering D.P.C.
271 Marsh Road, Suite 2
Pittsford, New York 14534

October 2022

870.001

Soil Screening Sampling Plan

Prepared for: New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233180 Main Street

Site: Monroe Electronics
NYSDEC Site No. 837013
100 Housel Avenue
Lyndonville, New York 14098

I, Dixon Rollins, certify that I am currently a New York State Professional Engineer as defined in 6 NYCRR Part 375 and that this Soil Screening Sampling Plan was prepared in accordance with all applicable statues and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Dixon Rollins
Signature

10/11/22
Date

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FIGURES

ATTACHMENT

1.0 Introduction and Purpose

Marsh Engineering D.P.C. ("Marsh") prepared this Soil Screening Sampling Plan ("SSSP") for the Monroe Electronics No. 837013 site located at 100 Housel Avenue, Town of Lyndonville, New York ("Site"). This SSSP is provided to detail the scope of the soil screening and sampling activities to be employed during the cover system and soil remediation remedy discussed in Section 4.3.3 of the NYSDEC approved Remedial Design Work Plan ("RDWP") dated January 2020.

2.0 Site Soil Sampling Background

Findings from the Site's May 2015 Supplemental Remedial Investigation Report ("SRI") demonstrated that Arsenic was found in surface soils above the New York State Department of Environmental Conservation ("NYSDEC") Restricted Commercial Use Soil Cleanup Objectives ("RCSCOs") to the east ("Area A") and south ("Area B and Area C") of the Site's manufacturing building, herein referred to as the Targeted Areas. However, the extent of the Arsenic contamination was not defined during the SRI.

In October 2020, Leader Professional Services Inc. ("Leader") in conjunction with Marsh conducted additional soil sampling in the targeted areas identified during the SRI in an attempt to delineate the extent of the arsenic impacted soils prior to implementing the construction of the cover system as the selected remedy. Leader collected nineteen (19) surface samples immediately below the vegetative layer surrounding the Targeted Areas. Arsenic was detected above the RCSCO of 16 parts per million ("ppm") in thirteen (13) of the nineteen surface samples. Ten (10) samples representing the subsurface soils within the targeted areas were collected from one to two feet below the surface layer. Arsenic was found to be below the NYSDEC Unrestricted Use SCO ("UUSCO") of 13.0 ppm in all ten samples (See Figure 2).

Although the analysis results of the subsurface soil samples confirmed that the Arsenic levels are within NYSDEC UUSCO and are suitable for use as cover over the targeted area surface soils, it is anticipated that expansion of the cover system areas would be necessary to achieve the remedial objective as demonstrated by the surface soil sample results shown on Figure 1.

In lieu of analytical soil sampling to further delineate the extent of the Arsenic impacts at the targeted areas, Marsh is proposing that soil screening during soil turning activities using X-ray fluorescence ("XRF") spectroscopy for rapid on-Site detections of Arsenic contamination in conjunction with end-point confirmatory analysis be conducted during soil turning activities as described below.

3.0 SSSP Implementation

As discussed in the RDWP, the soil turning approach removes and temporarily stockpiles the top 0 to 6 inches of Arsenic impacted soil, followed by the removal and temporary stockpiling of the next one to two feet of clean soil. The Arsenic impacted soil is then placed down within the footprint of the scoured excavation and covered with the clean subsurface soil to provide a viable cover material, without the need to import additional clean fill to the Site.

To determine the volume of impacted soils to be removed during the soil turning process, Marsh will screen the soils in the field for the presence of total Arsenic with a field portable Thermo Scientific XL2 980 Gold XRF Analyzer ("XRF Analyzer") or similar on-Site real time measurements of Arsenic. Soils outside the excavation limits will also be measured for Arsenic concentrations using the XRF analyzer to provide a level of quality control for determining the extent of Arsenic impacted soils to be included in the cover system construction. A copy of the XRF product specification sheet is provided as Attachment A.

Although XRF spectroscopy is an excellent technology for qualitative analysis of elemental soil composition, it is understood that XRF devices are considered to provide screening level data to be used in conjunction with confirmatory analysis by other USEPA, NYSDEC and NYSDOH approved methods.

The following three methods or combination thereof will be used to assess the Arsenic levels in soil using the XRF analyzer: 1) in-situ soil testing –measuring Arsenic concentrations in soil directly by placing the analyzer on the surface of the ground without any sample processing; 2) bagged soil testing – the soil sample is placed in a thin plastic bag and the XRF is used to measure the metal concentrations through the bag; and, 3) prepared soil – the soil samples are dried (if necessary), sieved and homogenized prior to measurement by XRF. The prepared soil method is considered the most accurate, while the in-situ and bagged soil sample testing are considered field-screening methods. In-situ soil testing will be the primary means to screen the soils. Under adverse weather conditions (e.g., rain or very cold temperatures), bagged soil sample testing will be conducted by Marsh's QEP under a protective cover or within a designated portion of the Site building.

4.0 Post-excavation Confirmatory Soil Sampling

After the XRF field analyzer measurements indicate that the impacted soils have been successfully removed, confirmatory soil samples will be collected and submitted to a NYSDOH ELAP-certified analytical laboratory to verify the XRF analyzer measurements and confirm that the subsurface soils are within the applicable and appropriate Standards, Criteria and Guidance ("SCGs") values for use as cover soils. The samples will be analyzed for Arsenic using EPA Method 6010 and delivered in a NYSDEC ASP Category B laboratory data format. Because the targeted area excavation footprints will likely extend beyond the surface soil exceedances shown on Figure 1, the number of confirmatory samples to be collected will be determined in part by the real-time XRF analyzer measurements as the excavations progress, and with consultation from the NYSDEC. In general, the number of confirmatory samples will be determined based on confirmation of sampling frequencies outlined in DER-10 Section 5.4(b)(5)(iii), or as determined by the NYSDEC.

Temporary flags marked with the sample identification number will be placed where the samples are collected to serve as a demarcation in the event additional soils in exceedance of the RCSCO for Arsenic necessitates removal. All samples and cover soil stockpile samples will be submitted for expedited analysis to reduce the exposure of bare soil until approval from the NYSDEC to conduct the excavations is provided. All stockpiled soils will be covered in plastic sheeting to protect against the elements and reduce human exposure.

5.0 Cover Soil Stockpile Sampling

Upon NYSDEC approval that the impacted surface soils have been sufficiently removed, the underlying clean cover soils will be excavated and stockpiled in accordance with the procedures outlined in the RDWP. Although no detections of Arsenic above Unrestricted Use SCOs in the subsurface soils were found in the October 2020 analysis results, the stockpiled subsurface soils will be sampled and submitted for analysis for Arsenic concentrations in accordance with Table 5.4(e)10 of DER-10 or as directed by the NYSDEC to confirm suitability as a cover. The analytical results will be compared to the lower of the 6 NYCRR Part 375 Protection of Groundwater or the Protection of Public Health SCOs, for the identified use of the Site as set forth in 6 NYCRR Part 375 Table 375-6.8(b). The sample analysis results will be submitted to the NYSDEC for approval prior to spreading the cover barrier soils.

6.0 Health & Safety

The Site-specific Health and Safety Plan ("HASP") included in Appendix A of the RDWP will be reviewed by Marsh prior to the onset of the construction activities. The HASP incorporates Site-specific Health and Safety protocols specific to the contaminants of concern found on the Site. A Community Air Monitoring Plan ("CAMP") will be prepared in accordance with DER-10. The HASP will also include Marsh's key personnel and the regulatory entities involved in the project. Marsh will implement the HASP and the CAMP during all intrusive activities at the Properties.

Dust controls and material handling procedures will be strictly enforced by Marsh and Leader. Exclusion zones will be established and communicated to the Site owner and visitors and CAMP monitoring will dictate the need for additional protective measures.

7.0 Construction Completion Report

At the conclusion of Site remediation activities, a Construction Completion Report ("CCR") will be prepared by Marsh Engineering D.P.C. The CCR will include the following components per DER-10:

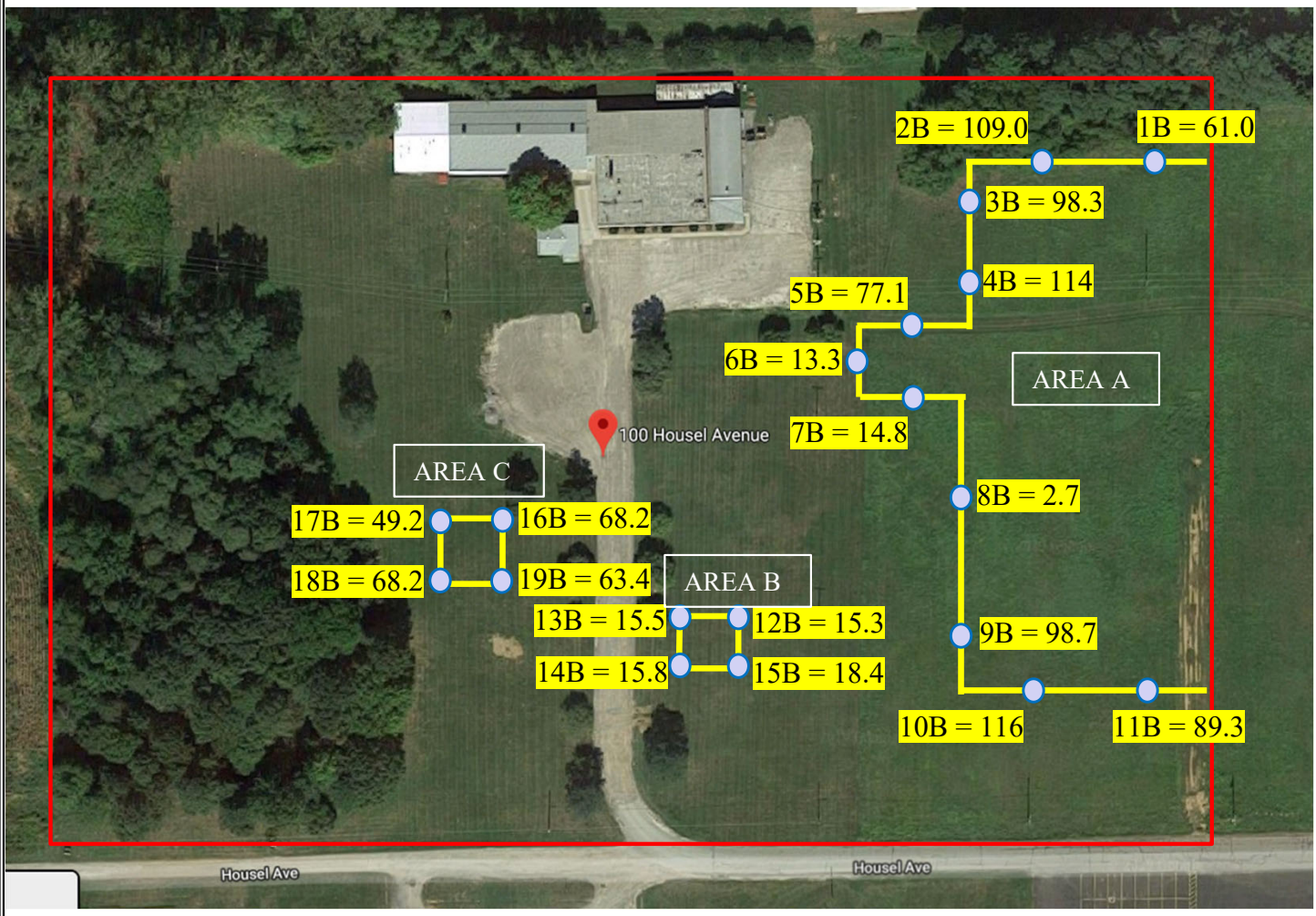
- A description of the remedy, as constructed.
- A summary of the remedial action completed, including:
    - a description of any problems encountered during remediation and the associated resolutions.
    - a description of any changes to the RDWP Plan with justification(s).
    - quantities and concentrations of soil temporarily removed; and restoration actions implemented.
- Summary tables and figures indicating soil data and post-excavation, confirmatory soil analytical data clearly showing the successful completion of the cover system.
- A detailed description of the applicable areas of remedial action compliance (e.g, NYSDEC SCOs, cover system, etc.).

- An As-Built drawing of the work, including but not limited to, all soil removals with surveyed limits of the excavations, buildings and landscape features.
- A Photograph log of the remedial events.
- The CCR will be submitted in an electronic format that complies with NYSDEC's Electronic Data Warehouse Standards ("EDWS") and all confirmatory analytical data will be submitted in an electronic data deliverable ("EDD") to the NYSDEC FTS site.

FIGURE 1

RDWP SURFACE SAMPLE LOCATION

Monroe Electronics Sie
RDWP Surface Sample Location Map



Arsenic Results in PPM

Area targeted for shallow soil turning

Approximate site property boundary

Targeted soil sample locations

*Unrestricted Use SCO = 13 ppm
*Commercial Use SCO = 16 ppm

Sample Coordinates (Degrees, minutes, seconds)

1B	*43 19 30.63N / 78 23 40.31W*	10B	*43 19 26.87N / 78 23 41.23W*
2B	*43 19 30.50N / 78 23 41.29W*	11B	*43 19 26.80N / 78 23 40.43W*
3B	*43 19 30.18N / 78 23 42.07W*	12B	*43 19 27.33N / 78 23 44.33W*
4B	*43 19 29.76N / 78 23 41.91W*	13B	*43 19 27.28N / 78 23 44.93W*
5B	*43 19 29.47N / 78 23 42.55W*	14B	*43 19 26.88N / 78 23 44.98W*
6B	*43 19 29.06N / 78 23 43.22W*	15B	*43 19 26.80N / 78 23 44.30W*
7B	*43 19 28.89N / 78 23 42.59W*	16B	*43 19 27.95N / 78 23 46.88W*
8B	*43 19 28.21N / 78 23 42.22W*	17B	*43 19 28.02N / 78 23 47.10W*
9B	*43 19 27.02N / 78 23 41.86W*	18B	*43 19 27.60N / 78 23 47.03W*
		19B	*43. 19 2763N / 78 23 46.63W*

Title: Arsenic Surface Sampling Locations/Results
100 Housel Avenue
Lyndonville, New York

Prepared For: Digital Alert Systems
100 Housel Avenue
Lyndonville, New York

MARSH ENGINEERING D.P.C.

Project 870.001
Date 10/2020
Scale NTS

Drawn FRT
Checked DFR
File Name Soil Delineation

Figure 1

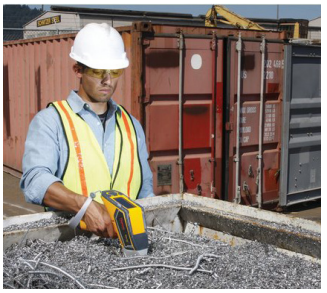
ATTACHMENT A

THERMAL SCIENTIFIC XL2 980 GOLD XRF ANALYZER SPECIFICATIONS

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

X-Ray Fluorescence (XRF) & Positive Material Identification (PMI) Analyzers

Nondestructive Testing (NDT)



Thermo Scientific

Thermo Scientific Niton XL2 980 GOLDD XRF Analyzer

Pine Item #54322

DESCRIPTION:

Thermo Scientific Niton XL2 Series x-ray fluorescence (XRF) analyzers are purpose-built for your most demanding needs.

The performance-leading Niton XL2 GOLDD™ is a lightweight, rugged, handheld XRF analyzer perfectly suited for your particular testing applications.

Ergonomically designed and featuring daylight-readable icons, the Niton XL2 provides customizable menus for ease of use, multi-language options, and a standard analytical range of more than 25 elements, plus light element detection (Mg-S) with the Niton XL2 GOLDD.

The Niton XL2 XRF analyzer provide you with many distinct advantages:

- Very easy to use - even by non-technical personnel
- Rugged design for real-world industrial applications
- Truly nondestructive test
- From turn on to trigger pull to results in seconds
- Confident analysis with technology from the industry leader

FEATURES:

- Niton XL2 analyzer - High-performance semiconductor detector
- Niton XL2 GOLDD analyzer - Geometrically optimized large area drift detector
- Fixed-angle color touch-screen display
- USB and Bluetooth communications
- 45 kV miniaturized x-ray tube

Product Specifications

Tube - Precious Metals & Environmetal applications	Ag anode 45 kV maximum 100 µA maximum
Detector	High-performance semiconductor
System Electronics	400 MHz ARM 11 CPU\n300 MHz dedicated DSP\n80 MHz ASICS DSP for signal processing\n4096 channel MCA\n64 MB internal system memory/ 128MB interna
Display	Fixed angle color touch-screen display
Standard Analytical Range	14 elements including all precious metals
Data Storage	Internal >10000 readings with spectra
Data Transfer	USB Bluetooth and RS-232 serial communication
Security	Password-protected user security
Data Entry	Touch-screen keyboard\nUser-programmable pick lists\nOptional wireless remote bar-code reader
Standard Accessories and\nFeatures	Locking shielded carrying case\nShielded belt holster\nOne 6-cell lithium-ion battery pack\n110/220 VAC battery charger/ AC adaptor\nPC connecti
Optional Features and\nAccessories	Thermo Scientific portable test stand\nAdditional battery pack\nWireless portable printer\nBarcode scanner
Compliance	CE RoHS
Dimension	US: 10.25 x 11 x 4 in Metric: 256 x 275 x 100 mm
Weight	US: < 3 lbs 10.7 oz Metric: 1.66 kg

Video:
https://youtu.be/v-h1n7ro-qyg

Local Delivery Pick-up

In-Stock Equipment

Repair & Calibration

Rental Protection Plan