INTERIM REMEDIAL MEASURES (IRM) WORK PLAN

295 MARYLAND STREET SITE

295 MARYLAND STREET
BUFFALO, NEW YORK

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295 MARYLAND, LLC

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CERTIFICATION

I, Thomas H. Forbes, P.E., certify that I am currently a NYS registered professional engineer and that this Interim Remedial Measures (IRM) Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

7-7-11

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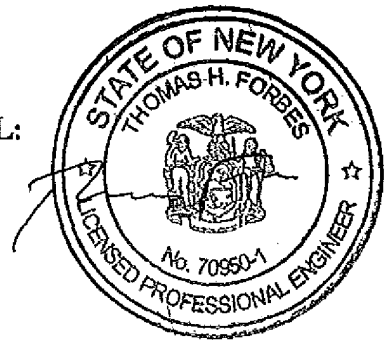

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1.0 INTRODUCTION

This document presents the proposed scope of work for completion of an Interim Remedial Measure (IRM) at the 295 Maryland Street Site in Buffalo, New York (see Figures 1 and 2). The IRM will be performed on behalf of 295 Maryland, LLC through the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP).

The BCP Site consists of 1.495 acres of contiguous property at 295 Maryland and 129 West Avenue. The IRM work will be performed for the purpose of expeditiously remediating impacted soil/fill to levels acceptable for redevelopment of the property in a restricted residential use capacity. 295 Maryland, LLC intends to integrate the remedial work with construction of a residential apartment complex comprised of approximately 54 living units in a three-story building (see Figure 3). The majority of the redevelopment activities will take place on the BCP Site, with some additional improvements (surface parking) on an adjoining parcel at 305 Maryland Street.

1.1 Background

The Site was historically used in a residential and commercial capacity, with the property at 295 Maryland Street most recently occupied by Lamar Advertising, Inc., a firm specializing in the sale of billboard advertising space and erection of billboard signs. Lamar relocated to another location within the City in December 2000; the associated commercial buildings and facilities on 295 Maryland Street as well as former residential dwellings at 121-129 West Avenue have been demolished. Currently, the Site is vacant and undeveloped; surrounding property is a mixed use commercial/residential neighborhood.

A Phase I Environmental Site Assessment (ESA) was performed for the former Lamar Advertising property in January 2000, prior to facility demolition (Ref. 1). A separate Phase I ESA was prepared in 2001 for 121-129 West Avenue on behalf of the Buffalo Neighborhood Revitalization Corporation (BNRC) (Ref. 2). The ESA reports indicate that 129 West Avenue was historically used for residential purposes, with 295 Maryland Street historically improved with an office, commercial building, and two multiple bay garages. Potential recognized environmental conditions (RECs) at 295 Maryland Street included:

- Vehicle maintenance
- Use and storage of paints, adhesives, and other flammables

- Underground gasoline storage tanks (USTs); 550-gallon and 4,000-gallon gasoline USTs were reportedly removed from the Site in 1974 and 1997, respectively. In addition, a small UST containing benzene was reportedly discovered and removed during facility decommissioning.

A Phase II Site Investigation (Ref. 3) was completed at 295 Maryland Street on behalf of the BNRC by Benchmark Environmental Engineering & Science, PLLC (Benchmark) in November 2001. The Phase II identified surface and subsurface soil/fill materials exceeding NY State soil cleanup guidance values (i.e., as compared to NYSDEC Technical Assistance and Guidance Memorandum [TAGM] HWR-94-4046, the applicable NYSDEC cleanup guidance in place at that time) for certain parameters, including arsenic, lead, mercury, and several polyaromatic hydrocarbons (PAHs). These same parameters are elevated with respect to more recent Soil Cleanup Objectives (SCOs) for restricted residential use as published in 6NYCRR Part 375.

In addition to the November 2001 Phase II, a site groundwater assessment and supplemental soil investigation was performed in September 2010 for the purpose of verifying the absence of significant groundwater impacts on the site and checking for the presence and character of fill soils on 129 West Avenue. A second round of groundwater sampling was conducted in March 2011. Groundwater impacts potentially associated with historic site-related conditions were identified at low levels in one of the wells, fill soils were identified on 129 West Avenue but with generally lower concentrations of the constituents identified on 295 Maryland. Section 2.0 discusses the findings of the November 2001 Phase II and supplemental investigations in greater detail.

295 Maryland, LLC submitted a BCP application to the NYSDEC on March 2011. The BCP application was accepted by the NYSDEC and public notice was made on April 13, 2011. The review and comment period concluded on May 13, 2011. The NYSDEC deemed 295 Maryland and 129 West Avenue eligible for the BCP.

1.2 Purpose and Scope

Based upon the extensive characterization of surface and subsurface soils performed in 2001, the supplemental investigation performed in 2010 & 2011, and the planned redevelopment of the property in a restricted residential use capacity (necessitating some degree of soil/fill remediation and confirmatory sampling), an IRM approach involving excavation of soil/fill having constituents exceeding restricted residential SCOs will be

undertaken. This approach will expedite the soil/fill remediation and allow for integration of the cleanup work with redevelopment activities, thereby providing for lower site preparation costs and fewer disruptions to the community while allowing the property to be placed back into productive use in a timely manner.

This IRM Work Plan has been prepared in accordance with Section 5.3.b of NYSDEC's May 2010 DER-10 Technical Guidance for Site Investigation and Remediation (Ref. 5). Accordingly, it addresses the following items:

- Site characterization with a description of the data from prior investigations and the results of groundwater characterization from 2010 and 2011 (Section 3.0).
- The approach for implementation of interim remedial measures (Section 3.0).
- Reporting requirements along with the anticipated schedule (Section 4.0).
- References for the report (Section 5.0).

1.3 Project Organization and Responsibilities

Benchmark will implement the interim remedial measure on a design-build basis on behalf of 295 Maryland, LLC. An experienced and qualified contractor will be retained to implement the soil/fill removal work; Benchmark will observe and document the remedial activities and perform community air monitoring. The NYSDEC Division of Environmental Remediation will monitor the remedial actions to verify that the work is performed in accordance with the approved Work Plan.

2.0 SITE CHARACTERIZATION

2.1 2001 Investigation Approach

Investigation activities undertaken on 295 Maryland Street in 2001 included an electromagnetic (EM) survey to check for the presence of buried metallic objects across the property, and a test pit investigation to further investigate the source of EM anomalies and allow for surface and subsurface soil/fill characterization. A summary of the 2001 investigation activities is presented below. Analytical results are discussed in Section 2.3.3.

2.1.1 EM-61 Survey

On September 13-14, 2001, Benchmark's designated subcontractor, Geomatrix Consultants, Inc. performed an electromagnetic (EM-61) geophysical survey across 295 Maryland Street. The purpose of the EM-61 survey was to identify and define areas within the site boundary that may be indicative of buried metal or other highly conductive materials. A Geonics EM61 high-resolution time domain electromagnetic (TDEM) metal detector capable of detecting both ferrous and nonferrous metallic objects was used to collect the subsurface data. The EM61 has an approximate effective depth of up to 10 feet below ground surface (fbgs).

Results of the geophysical survey, included in Appendix A, indicated a number of suspect buried metallic anomalies across the property. Based on discussions with the former owner (Lamar advertising) several of the anomalies were suspected to be structural (reinforced) concrete. In addition, the prior owner provided documentation substantiating removal of two former underground storage tanks (USTs) historically used for gasoline storage and a small UST historically containing benzene. Nevertheless, Benchmark and the BNRC agreed that additional intrusive investigation would be required to positively identify the source of the anomalies.

2.1.2 EM Anomaly Test Pits

On October 22, 2001, a total of ten test pits (EM-1 through EM-10; see Figure 4) were excavated at suspect anomaly locations identified during the EM survey. The test

pits were excavated with a track-mounted excavator until the geophysical anomaly was positively identified, which occurred at depths ranging from 6-inches to 4 feet below ground surface (fbgs). During test pit excavation, a Benchmark engineer logged the test pit lithology and anomaly findings, and characterized excavated soil fill for visual and/or olfactory evidence of contamination. Soil/fill materials were also screened for volatile organic vapors with a photoionization detector (PID) as a further indicator of potential contamination.

Fill was generally present at each location to a depth of 3-4 feet below ground surface (bgs). A thin layer of native topsoil overlying native clayey soils with silt were typically encountered below the fill materials. Groundwater was not encountered, excluding some instances of perched water over clayey soils. The fill material consisted of generally fine grained and very loose soil with mixtures of brick, concrete, ash, slag and various metallic debris. All EM test pits positively identified each geophysical anomaly as metallic debris (e.g., steel channeling, plates, angles, etc.) and/or reinforced concrete; no vessels or containers were discovered. None of the test pits exhibited field evidence of impact with the exception of test pit EM-6, where a slight petroleum odor and staining was noted in the excavated fill soils. Based on these observations, the test pit was extended approximately 6 feet the northern direction to provide an indication of the extent of the impacts. As the test pit was continued in this direction, visual and olfactory evidence of petroleum became less evident to the point that no impacts were observed. In addition, perched water was encountered at the apparent native soil interface (approximately 3 feet below grade), with a slight sheen observed on the perched water surface.

In order to characterize the impacted soil/fill, a composite sample was collected from the side wall of test pit EM-6 for laboratory analysis of: "full list" volatile organic compounds (i.e. NYSDEC STARS List volatiles and Target Compound List volatiles); Target Compound List (TCL) semi-volatile organic compounds (SVOCs); Target Analyte List (TAL) inorganics; and PCBs.

2.1.3 Soil Characterization Test Pits

On October 23, 2001 ten soil characterization test pits (TP-1 through TP-10; see Figure 4) were completed across the 295 Maryland Street parcel. Each test pit was

completed to a depth of 8-feet below grade or refusal, whichever occurred first. At each location, Benchmark recorded pertinent field observations including fill types, depth to native soil (if encountered), visual or olfactory evidence of contamination, and photoionization detector (PID) readings. Test pit logs are presented in Appendix B.

As indicated in Appendix B, the investigation test pit lithology was similar to the EM test pits, with the upper 6 inches to 1 foot of soil at each test pit location generally comprised of topsoil and clayey soils mixed with fragments of brick and stone. Approximately 2 - 3 feet of reworked clay fill generally underlies this upper fill layer followed by a thin (2"-4") historic topsoil layer. Deeper native soils are characterized by brown clayey soils containing some silt.

Soil samples were collected by the on-site environmental engineer at each test pit location. Separate composite samples of the surficial (0-6"' below grade) and subsurface (1' below grade to completion) soils were collected from each test pit. Samples were either retrieved using a stainless steel trowel or the backhoe bucket, depending on sample depth. All shallow (0-6") samples were collected for analysis of TCL SVOCs, PCBs, and TAL inorganics. Deeper samples (6" to completion) were collected for these same parameters as well as TCL VOCs.

All environmental samples were cooled to 4°C and transferred under chain-of-custody to Friend Laboratory for analysis in accordance with USEPA Method SW-846 protocols.

2.2 2010-2011 Supplemental Investigation Approach

Benchmark installed four groundwater monitoring wells (MW-1 to MW-4) in September 2010 to allow for collection of representative groundwater samples across the site and determine groundwater elevation & flow direction. In addition, the drill rig advanced one soil boring (SB-5) on the 129 West Avenue parcel to establish soil lithology and allow for sample collection on that lot, which was not assessed during the 2001 Phase II investigation.

2.2.1 Soil Borings

Benchmark retained the services of Earth Dimensions, Inc. to drill the four well borings and SB-5 soil boring using 4-1/4-inch hollow stem augers. Drilling work was

undertaken on September 13-14, 2010. As shown on the field borehole logs in Appendix C, split-spoon samples were collected (2-inch diameter) at 2-foot intervals continuously through the fill and into the native soil. Stratigraphic field borehole logs were prepared by a qualified geologist from ground surface to the bottom of the borehole. Borings MW-1 through MW-4 were drilled to a nominal depth of 22 feet below ground surface (fbgs), and SB-5 to 6 fbgs. Each 2-foot split-spoon soil sample was scanned for total organic vapors with a MiniRae 2000 Photoionization Detector (PID) equipped with a 10.6 eV lamp. Soil descriptions, PID scan results, and visual/olfactory observations recorded during boring advancement are presented on the Field Borehole Logs in Appendix C. As indicated, there were no organic vapors detected above background levels or any visual observations of impact identified in any of the overburden soil samples collected except at MW-2 at a depth of 20 to 22 fbgs (1.6 ppm).

Two soil samples were collected during soil boring advancement. Sample MW-3 (4-6') was collected to discretely characterize native soil layer, as the 2001 program involved collection of a composite of subsurface soil/fill samples which straddled both the fill and native soil intervals. Sample SB-5 (0-2') was collected to characterize fill materials on the 129 West Avenue Parcel. Soil samples were collected from borings using dedicated stainless steel sampling tools. Representative soil samples were placed in pre-cleaned sample bottles. Two soil samples were submitted under chain-of-custody to Test America Laboratories Inc., for analysis of TCL VOCs, TCL SVOCs, PCBs, pesticides, and TAL inorganics.

2.2.2 Monitoring Well Construction and Sampling

Following borehole advancement, 2-inch diameter monitoring wells were installed within soil borings MW-1 to MW-4 at the locations shown on Figure 4. Appendix C includes the monitoring well installation logs. The well screens were installed from approximate depths of 12 to 22 fbgs, and were set into the sandy silt layer underlying the native clay soils. The wells were constructed with 2-inch diameter, flush-joint Schedule 40 PVC, and completed in flush mount protective locking curb boxes. The newly installed monitoring wells were developed on September 18, 2010.

Elevations of the wells were made relative to an arbitrary vertical datum designated at 500.00 feet. The survey was completed on October 12, 2010 by Benchmark personnel. Groundwater was sampled on September 23, 2010 and March 1, 2011. Prior to and

immediately following collection of groundwater samples, field measurements for pH, specific conductance, temperature, turbidity, dissolved oxygen, water level, and visual and olfactory field observations were recorded.

Groundwater grab samples were collected from each monitoring well using dedicated disposable polyethylene bailers. The samples were transferred into laboratory provided pre-preserved sample vials for analysis of TCL VOCs, TCL SVOCs, Pesticides/PCBs, and TAL inorganic compounds and general chemistry parameter total cyanide. The samples were cooled to 4°C in the field, and transported under chain-of-custody to Test America Laboratories, Inc. The soil and groundwater samples were analyzed using United States Environmental Protection Agency (USEPA) SW-846 methods, and a Category B deliverable package was prepared. Appendix D contains the groundwater sampling summary logs and laboratory analytical reports.

2.3 Investigation Findings

2.3.1 Physical Soil Description

As represented by 20 test pits and 5 borings, the soil at the Site consists of fill generally present at each location on 295 Maryland Street to a depth between 3 and 4 fbgs. Reworked and native clay soils underlying a thin layer of native topsoil were typically encountered below the fill materials. No fill materials were encountered during advancement of MW-1, suggesting that fill thickness thins toward West Avenue consistent with Site topography (see Figure 4). Groundwater was not encountered within the fill, excluding some instances of perched water over clayey soils. The fill material generally consisted of fine-grained soil (silt and clay) with mixtures of brick, concrete, ash, slag, and varying types of metallic debris. Underlying the fill material was a layer of brown clayey soils containing some silt typically extending to approximately 15 fbgs (20 fbgs in MW-4). A sandy silt layer beneath the clay layer was saturated and represents the uppermost water bearing unit at the Site.

2.3.2 Groundwater Contours

Table 3 summarizes the groundwater elevations measured on September 23, 2010. As shown on the groundwater isopotential map (see Figure 7), overburden groundwater

flows toward the southwest, MW-2 is a downgradient well, and MW-4 is an upgradient well for the Site.

2.3.3 Soil Sample Results

Table 1 summarizes the analytical results of soil samples collected during the 2001 Phase II investigation and the 2010 soil boring program. Sample locations are identified on Figure 4.

As indicated on Table 1, surficial (0-0.5') and subsurface soil (>0.5') testing identified several polyaromatic hydrocarbons (PAHs) and five inorganic compounds at levels in excess of the NYSDEC soil cleanup objectives (SCOs) for restricted-residential use (see Figures 5 and 6), primarily in the central portion of 295 Maryland Street. The compounds detected above restricted-residential SCOs in at least one of the samples include: benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo (a)pyrene, indeno(1,2,3)pyrene, dibenz(a,h)anthracene, arsenic, barium, cadmium, lead, and mercury.

In general, concentrations were higher in the samples from 0-0.5' as compared to the deeper samples (>0.5'). A sample from the clay layer (MW-3 at 4-6') did not contain any exceedances of the unrestricted use SCOs, suggesting that removal of the upper few feet of soil/fill may achieve the unrestricted use SCOs. This is supported by the concentrations detected below unrestricted-use SCOs in TP-1 (0.5-8'), TP-2 (0.5-8'), and TP-5 (0.5-8').

2.3.4 Groundwater Sample Analytical Results

Table 2 summarizes the groundwater sample analytical results. As indicated, VOCs and SVOCs were detected in the sample from well MW-2 at concentrations exceeding NYSDEC groundwater quality standards and guidance values (GWQSGVs). The VOCs and SVOCs detected above the standards include: benzene, ethylbenzene, toluene, and xylenes (BTEX); 1,2,4-trimethylbenzene; isopropylbenzene; benzo(a)anthracene; and naphthalene, all of which are constituents of petroleum products (e.g., gasoline or diesel). Individual VOC and SVOC concentrations at MW-2 were less than 100 micrograms per liter (ug/L). The total VOC concentration from each of the two sampling rounds was 196 and 263 ug/L, respectively; well below the 1,000 ug/L threshold typically employed

by the NYSDEC for inactivation of petroleum spill sites. Benzo(a)anthracene and naphthalene are relatively immobile in groundwater (i.e., high octanol-water partition coefficient and low water solubility). No other VOCs or SVOCs exceeded GWQS.

Pesticides were also detected in the groundwater from all four wells. Pesticide exceedances of the GWQS were reported in wells MW-2, MW-3, and MW-4 for one or more of the following: alpha-BHC, beta-BHC, dieldrin, gamma-chlordane, and heptachlor. Concentrations were all less than 1 ug/L. Higher levels of pesticides were identified in wells MW-4 (upgradient) and MW-3, suggesting groundwater transport onto the Site from an upgradient source. Downgradient well MW-2 had one exceedance (beta-BHC) of the GWQS at a concentration of 0.06 ug/L during the September 23, 2010 sampling event. Well MW-1 did not contain any exceedances for pesticides.

Groundwater from all four wells contained levels of sodium greater than the GWQS. Groundwater from well MW-4 contained a slight exceedance of manganese (0.315 mg/L) as compared to the GWQS (0.3 mg/L). Sodium and manganese are naturally-occurring minerals. Their presence in the upgradient wells indicates ambient conditions.

2.3.5 Chemicals of Potential Concern

Based on the foregoing, chemicals of potential concern (COPCs) in soil as defined by exceedances of restricted-residential SCOs include the following PAHs: benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3)pyrene, and dibenz(a,h)anthracene. In addition, the following inorganic compounds were detected in at least one sample in excess of the restricted-residential SCOs and are considered COPCs: arsenic, barium, cadmium, lead, and mercury.

The groundwater contamination apparently attributable to the Site (i.e., in lieu of upgradient conditions) includes VOC and SVOC compounds commonly associated with petroleum products (e.g., gasoline or diesel). While groundwater samples from well MW-2 exceeded GWQSGVs for certain petroleum VOCs and SVOCs, the concentrations present are not indicative of a large release; rather, these results are indicative of residual contamination in *de minimis* quantities. Further, the contaminants are subject to natural degradation due to sorption and biodegradation. The likely source of VOCs has been removed (i.e., historic USTs) and the soil/fill removal IRM proposed herein will further

mitigate the potential for any remaining sources of impact. Consequently, the levels of VOCs will naturally continue to degrade over time. In addition, residents in Buffalo are served by municipal-supplied public water obtained from Lake Erie; therefore, exposure to contaminants is unlikely as there are no drinking water receptors.

3.0 IRM Approach

3.1 Purpose and Scope

Based on the findings of the investigation work described in Section 2.0, an IRM will be performed to address contaminated soil/fill. The primary goal of the IRM will be removal of the fill layer across the BCP Site as necessary to achieve restricted-residential SCOs. This will assure levels protective of site reuse under the anticipated redevelopment scenario without reliance on engineering controls (i.e., Track II cleanup approach).

To the extent practical, the soil/fill removal work may be extended to achieve residential or unrestricted use SCOs, further reducing site use restrictions. Conversely, if unanticipated conditions are encountered which preclude achieving restricted residential SCOs throughout the site the excavation will be of sufficient depth to allow for 2 feet of clean soil import in areas not anticipated to be covered by hardscape, facilitating a Track IV cleanup approach.

This section of the IRM Work Plan describes the excavation and off-site disposal of impacted soil/fill. The primary tasks of the planned remedial work are:

- Testing of the soil/fill to determine waste profile.
- Excavation of impacted soil/fill across the Site to achieve the above-described cleanup goal (i.e., conformance with restricted residential SCOs).
- Verification sampling on a grid basis to assess the degree of residual contamination and evaluate possibility of additional removal to achieve a higher degree of protection (e.g., unrestricted SCOs).
- Off-site transportation and disposal of impacted soil/fill at a permitted solid waste disposal facility.

This Work Plan also addresses the following tasks:

- Pre-mobilization tasks
- Health, safety, and community air monitoring procedures
- Dust, storm water, and erosion control measures required for minimizing potential release of soils outside the work zone during construction
- Equipment decontamination requirements
- IRM documentation
- Implementation scheduling

- Post-IRM reporting

3.2 Pre-Mobilization Tasks

3.2.1 Public Information and Outreach

A fact sheet containing information about the planned IRM will be direct-mailed by 295 Maryland, LLC to those individuals on the Brownfield Site Contact List, including property owners and residents adjacent to the Site, environmental groups, local political representatives, and interested regulatory agencies. Furthermore, a copy of this Work Plan will be made available for public review at the NYSDEC Region 9 office and the Niagara Branch of the Buffalo and Erie County Public Library, the designated document repository.

3.2.2 Underground Utilities Location

The remediation contractor will contact underground facilities protection organization (Dig Safely New York, UFPO) to locate utility lines within the work area.

3.2.3 Health and Safety Plan Development

As described in Section 3.4, a Health and Safety Plan (HASP) has been prepared to cover all on-site remedial activities, and will be enforced by the remediation contractor in accordance with the requirements of 29 CFR 1910.120. Benchmark will be responsible for Site control and for the health and safety of its authorized Site workers. For informational purposes, Benchmark's HASP is provided in Appendix E. The remediation contractor will be required to develop and implement a HASP as or more stringent than Benchmark's HASP.

3.2.4 Waste Disposal Characterization

Benchmark will coordinate with the Solid Waste Disposal Facility (SWDF) for disposition of the soil/fill to be removed from the Site. Given the detected concentrations of lead in soil (i.e., maximum 8,160 mg/kg in TP-5 (0-0.5')), the soil/fill must be tested to determine whether it is considered a hazardous waste. A composite sample will be collected from the vicinity of TP-4 and TP-5 where the highest

concentrations of total lead were observed. As illustrated on Figure 8, representative samples will be collected by compositing discrete samples of soil/fill at a frequency agreeable to the SWDF. A grab sample from the fill interval will be obtained at each of the nine locations and composited. The composite sample will be tested by the Toxic Characteristic Leaching Procedure (TCLP) for full list of parameters, ignitability, reactivity, and corrosivity. For the purposes of the discussion below, the assumption has been made that the impacted soil/fill is non-hazardous. If the soil/fill is determined to be a characteristic hazardous waste, this Work Plan will be modified.

3.3 IRM Activities

3.3.1 Mobilization and Site Preparation

The remediation contractor's field operations at the Site will commence with mobilizing equipment and materials to the Site and erecting safety fencing and other temporary controls as described below.

3.3.2 Temporary Facilities and Controls

Temporary facilities for use during the remedial work may include a construction field trailer and portable toilets. Temporary controls will be employed for protection against off-site migration of soil and safety hazards during construction, including safety fencing, dust suppression, and erosion control as further described below.

3.3.2.1 Access Controls

Temporary safety construction fencing (i.e., 3-foot high orange plastic or 6-foot chain link) will be placed around the perimeter of the work area(s) to distinguish the work zone and discourage trespassing. The fencing will not be removed until the excavation/backfilling work is complete.

As a requirement of the Program, a sign will be placed along Maryland Street to identify the Site as a BCP Site. The sign will conform to NYSDEC standards.

3.3.2.2 Dust Monitoring and Controls

As described in Section 3.4, a Community Air Monitoring Plan (CAMP) will be implemented during Site excavation work. If community air monitoring indicates the need for dust suppression or if dust is visually observed leaving the Site, the remediation contractor will apply a water spray across the excavation and surrounding areas, and on haul areas as necessary to mitigate airborne dust formation and migration. Potable water will be obtained from either a public hydrant or the on-site water service, if available. Other dust suppression techniques that may be used to supplement the water spray include:

- Hauling materials in properly tarped containers or vehicles
- Restricting vehicle speeds on-site
- Hydro-seeding of final grades

3.3.2.3 Erosion and Sedimentation Control

Provisions will be made for erosion and sedimentation control at the work perimeter during remediation activities. Erosion and sedimentation controls to be followed during remedial activities include silt fencing, hay baling, mulching, and other measures as warranted to prevent offsite migration of soil/fill materials.

3.3.2.4 Haul Road/Driveway

A haul road will be built on site that will consist of slag/gravel/crushed concrete that will be used to maintain traffic flow across the site and will keep the truck tires from contacting the contaminated soil. This will also prevent the haul trucks from carrying the soil into the streets.

3.3.3 Soil/Fill Excavation

Based on observations during the subsurface investigations as documented in the test pit and boring logs, the average excavation depth is estimated to be approximately 4 feet below grade. Although fill is expected to be shallower within the western portion of 129 West Avenue, the southern portion of 295 Maryland contains more substantial impacts from PAHs and metals in the upper 4-ft soil horizon. Accordingly, it is assumed

that an additional 2 feet of soil on average would be removed from this portion of the Site, with the overall quantity of soil/fill to be excavated estimated between 9,500 to 11,800 cubic yards. The depth of excavation will be determined from verification sample results, the presence of nuisance conditions, and PID readings. Depending on the results of the soil sampling and other site conditions (such as presence of subsurface obstructions or utilities), a decision will be made to determine whether to excavate further. Specifically, if the conditions of the soil/fill are favorable for excavation (no obstructions and perimeter sample test results are below unrestricted SCOs), then additional soil/fill will be excavated in an attempt to achieve residential or unrestricted use SCOs.

Excavation of impacted subsurface soil/fill will proceed methodically across the Site digging progressively from one side of the Site to the other. A track-mounted crawler excavator with a mechanically operated bucket will be used to unearth the soil/fill. Verification samples will be collected to confirm that restricted-residential SCOs have been attained. If active utilities (e.g., electric service) are encountered or anticipated, hand digging will be performed to expose the utility line within the planned excavation horizon (2 feet or deeper if needed) and limit the potential for damage to the utility(s).

Excavated materials will be direct-loaded into dump trucks or trailers for off-site disposal at a SWDF. All excavation work will be observed by an experienced Benchmark environmental scientist. If disposal truck scheduling necessitates stockpiling of excavated soil/fill, the stockpiles will be placed on and covered with plastic sheeting during non-working hours.

3.3.4 Post-Excavation Verification Sampling

Post-excavation verification composite samples will be collected from the side walls and bottom of the excavations. The perimeter of the excavation is expected to be approximately 1,600 linear feet. Per the requirements of DER-10 (Ref. 5), the following discrete samples are proposed:

- One sample from the sidewall surface soils (0-0.5') every 30 feet along the perimeter.
- One sample from the sidewall subsurface soils at the base of the excavation.
- One sample for each 900 square feet of excavation bottom will be collected.

All samples will be analyzed by a NYS ASP-CLP certified analytical laboratory for TCL PAHs and TAL inorganic compounds for the parameter list shown below.

TCL PAHs	TAL Inorganic Compounds
Benzo(a)anthracene	Arsenic
Benzo(a)pyrene	Barium
Benzo(b)fluoranthene	Cadmium
Benzo(k)fluoranthene	Copper
Chrysene	Lead
Dibenz(a,h)anthracene	Mercury
indeno(1,2,3)pyrene	Silver
	Zinc

Samples will be tested using USEPA Methodology with an equivalent Category B deliverables package to facilitate data evaluation by a third-party validation expert. A two to three-business day turnaround time will be requested for the analytical results to minimize the time that the excavation remains open.

Quality assurance (QA) samples will be collected to support the verification sample data evaluation. The QA samples will include a minimum of one matrix spike (MS), one matrix spike duplicate (MSD), and one blind duplicate per 20 verification samples. Dedicated equipment will be used to avoid the need for equipment blanks.

3.3.5 Off-Site Disposal

To confirm that the impacted soil/fill is acceptable for disposal at a permitted solid waste disposal facility, samples will be collected from the impacted area and analyzed for waste profile characterization parameters as required by the disposal facility (see Section 3.2.4). Waste profile samples will be collected prior to excavation activities to characterize the soil/fill and facilitate disposal. Samples will be analyzed in accordance with USEPA SW-846 methodology. QA samples will not be collected for the waste characterization.

3.3.6 Backfill and Compaction

A "select fill" or virgin source of soil will be identified and pre-qualified in accordance with DER-10 Section 5.4(e) and Table 5.4(e) 10 (Ref. 5), as appropriate.

Assuming the soil test results show consistency and meet all of the restricted-residential SCOs requirements (or less restrictive use limits, as may be appropriate depending on the results of the verification sampling) a reduced sampling and testing frequency is proposed as shown for soil volumes in excess of 5,000 CY.

Soil Quantity	Discrete Samples[1] - VOCs	Composite Samples[2]
Initial 5,000 CY	15 + 1 MS, 1 MSD, 1 Blind Duplicate	6 + 1 MS, 1 MSD, 1 Blind Duplicate
Additional Soil	1/1,000 CY	1/2,000 CY

1. Discrete grab samples will be tested for VOCs per Section 5.3.6.1.
2. Composite samples will be tested for SVOCs, inorganic compounds, PCBs, and pesticides per Section 5.3.6.1.

Each composite will be comprised of a minimum of three grab samples. The grab samples will be mixed then placed in laboratory provided jars.

3.3.6.1 Testing Requirements

Samples will be analyzed for the following constituents in accordance with USEPA SW-846 methodology:

- TCL VOCs (plus TICs) - Method 8260B
- TCL SVOCs (plus TICs)- Method 8270C
- TCL Organochlorine Pesticides and PCBs - Method 8081A/8082
- TAL Metals - Method 6010B
- Cyanide - Method 9013
- Herbicides - Method 8051A

Characterization testing for off-site sources will be performed by an independent, NYSDOH ELAP-approved laboratory. An equivalent Category B deliverables package will be furnished with the data to allow data evaluation and preparation of a Data Usability Summary Report (DUSR) by an independent, third-party data validation expert. QA samples will be collected to support the data evaluation. The QA samples will include a minimum of one MS, one MSD, and one blind duplicate per 20 verification samples.

The NYSDEC will be copied on sample test results for all materials proposed for import for approval prior to import of materials to the Site.

3.3.6.2 Placement and Compaction

Backfilling will closely follow the excavation work to minimize the amount of open excavation, but will necessarily pend the results of the analytical testing. Backfill soil will be maintained at a sufficient distance from the working face of the excavation to prevent contact or mixing with soil/fill designated for removal. Wetting of the backfill soil during placement, spreading, and compacting will be performed as required to control fugitive dust within the CAMP action limits.

Backfilling of select material will be completed to the final subgrade elevations established by the owner's architect. Backfill will be placed in maximum 1-ft thick lifts and compacted by compaction equipment approved by the on-site engineer's representative. Compaction testing of each borrow source will be completed. Standard proctor tests will be employed to establish a maximum compaction. Backfill will be compacted to achieve at least 90% of maximum dry density as determined by the Modified Proctor Test (or as approved by the Owner's geotechnical engineer). The handling, spreading, and compacting will be directed toward obtaining a stable and homogeneous fill that is free of stratifications, lenses, or pockets. Backfill will not occur when soils are frozen or moisture content is too high/low to achieve compaction requirements. Admixing of wet soils with dry backfill material and addition of water will be permitted to achieve suitable moisture content.

3.4 Health and Safety Plan

Benchmark has prepared a HASP for use by Benchmark employees in accordance with 40 CFR 300.150 of the NCP and 29 CFR 1910.120. The HASP, provided as Appendix E, includes the following site-specific information:

- Hazard assessment
- Training requirements
- Definition of exclusion, contaminant reduction, and other work zones
- Monitoring procedures for Site operations
- Safety procedures
- Personal protective clothing and equipment requirements for various field operations
- Disposal and decontamination procedures

- Emergency response plan that addresses potential site-specific emergencies

Health and safety activities will be monitored throughout the remedial field activities. A member of the field team will be designated to serve as the Site Safety and Health Officer (SSHO) throughout the field program. This person will report directly to the Project Manager and the Corporate Health and Safety Coordinator. The HASP will be subject to revision as necessary, based on new information that is discovered during the remedial activities.

Real-time community air monitoring will be performed during remedial activities at the Site. Particulate monitoring will be performed along the downwind perimeter of the work area during subgrade excavation, backfilling, grading, and soil/fill handling activities in accordance with the Community Air Monitoring Plan (CAMP), a component of the HASP. The CAMP is consistent with the requirements for community air monitoring at remediation sites as established by the NYSDOH and NYSDEC. Accordingly, it follows procedures and practices outlined under NYSDOH's Generic Community Air Monitoring Plan (Appendix 1A of DER-10) and Fugitive Dust and Particulate Monitoring (Appendix 1B of DER-10).

4.0 REPORTING AND SCHEDULE

4.1.1 IRM Activities Reporting

Benchmark will provide full-time on-site inspection to document all IRM activities. Monitoring and documentation of the field activities will include: construction stake-out; record drawings; daily reports of activities; community air monitoring results; pre- and post-excavation sampling and analysis; and progress photographs and sketches.

4.1.2 Construction Monitoring

Standard daily reporting procedures will include preparation of an Inspector's Daily Report and, when appropriate, problem identification and corrective measures reports. Appendix F contains sample project documentation forms. Information that may be included on the daily report form includes:

- Processes and locations of construction under way
- Equipment and personnel working in the area, including subcontractors
- Number and type of truckloads of soil/fill removed from the Site
- Approximate sampling locations (sketches) or GPS (Trimble) coordinates and sample designations for pre-excavation characterization and post-excavation verification
- Grid locations and depths being excavated

The completed reports will be available on-site and submitted to the NYSDEC as part of the Final Engineering Report. The NYSDEC will be promptly notified of problems requiring modifications to this Work Plan prior to proceeding or completion of the construction item.

Photo documentation of the remedial activities will be prepared by a field representative throughout the duration of the project as necessary to convey typical work activities, changed conditions, and/or special circumstances.

4.1.3 Alternatives Analysis Report (AAR)

Following completion of IRM activities an Alternatives Analysis Report (AAR) will be prepared in accordance with the requirements of Section 4.1 of DER-10.

The primary goal of the AAR will be to screen the "no further action" alternative (i.e., considering successful completion of the IRM activities) against the following criteria as described in 6NYCRR 375-1.8(f):

- Protection of Human Health and the Environment
- Compliance with Standards, Criteria, & Guidance (SCGs)
- Short-term Effectiveness & Impacts
- Long-term Effectiveness & Permanence
- Reduction of Toxicity, Mobility, or Volume
- Implementability
- Cost
- Land Use

In addition, the AAR will screen other alternatives, if applicable (e.g., achieving a less restrictive site use condition, if the IRM has not achieved unrestricted use). The "protection of human health and the environment" criteria will consider residual concentrations in soil and groundwater in considering whether the IRM is fully protective and satisfies site-specific Remedial Action Objectives (RAOs) designed to meet this criterion.

Following the screening of alternatives, a comparative analysis will be performed against the above criteria. The comparative analysis will allow for better understanding of the relative advantages and disadvantages of each of the alternatives, and will facilitate recommendation of a remedial action or justifying the IRM as the final remedial measure.

Upon NYSDEC review and acceptance of the final AAR, it is anticipated that a Decision Document will be issued by the Department. Notice of the Decision Document findings and solicitation of comments will be made via a Fact Sheet similar to that described in Section 3.2.1.

4.1.4 Final Engineering Report

A Final Engineering Report (FER) will be prepared at the conclusion of remedial activities and recording of the final Decision Document. The FER will include the following information and documentation, consistent with the NYSDEC's DER-10 Technical Guidance for Site Remediation (Ref. 5):

- Introduction and background

- A Site or area planimetric map showing the parcel(s) remediated, including significant site features
- A Site map showing the lateral limits of any excavations
- Tabular summaries of unit quantities including: volume of soil excavated and disposition of excavated soil
- Planimetric map showing location of all verification and other sampling locations with sample identification labels/codes
- Tabular comparison of verification and other sample analytical results to SCOs. An explanation shall be provided for any results exceeding acceptance criteria
- Documentation on the disposition of impacted soil removed from the Site
- Copies of daily inspection reports and, if applicable, problem identification and corrective measure reports
- Photo documentation of remedial activities
- Text describing the remedial activities performed; a description of any deviations from the Work Plan and associated corrective measures taken; and other pertinent information necessary to document that the Site activities were carried out in accordance with this Work Plan

In addition, Benchmark will subcontract for third-party data review of post-excavation verification data by a qualified, independent data validation expert. Specifically, a DUSR will be prepared, with appropriate data qualifiers added to the results. The DUSR format will follow the NYSDEC's September 1997 DUSR guidelines and DER-10 guidance (Ref. 5). The DUSR and any necessary qualifications to the data will be appended to the FER.

4.1.5 Site Management Plan

For any BCP site not cleaned up to NYSDEC Part 375 unrestricted SCOs, preparation of a Site Management Plan (SMP) that describes site-specific Institutional Controls and/or Engineering Controls (IC/EC) is a required component of the final remedy. Therefore, an SMP will be prepared as part of the final remedy for the Site. Consistent with NYSDEC BCP requirements, components of the SMP will include:

- ***Engineering and Institutional Controls Plan.*** Engineering controls include any physical barrier or method employed to actively or passively contain, stabilize, or monitor contaminants; restrict the movement of contaminants; or eliminate potential exposure pathways to contaminants. Institutional controls

at the Site will include groundwater use restrictions and restrictions for use of the Site (i.e., residential or commercial purposes). Should the excavation of soil/fill achieve unrestricted (Track 1) SCOs, IC/ECs will not be required for the Site.

- ***Operation and Maintenance Plan*** will not be a requirement of the SMP as there are no systems containing mechanical components that will be operated, monitored, and maintained.
- ***Excavation Work Plan*** to assure that future intrusive activities and soil/fill handling at the Site are completed in a safe and environmentally responsible manner unless the Site has been remediated to unrestricted SCOs.
- ***Site Monitoring Plan*** that includes: provisions for a groundwater monitoring plan and a Site-wide inspection program to assure that the IC/ECs have not been altered and remain effective.
- ***Environmental Easement*** filed with Erie County.

4.1.6 Project Schedule

The anticipated project schedule for the major tasks to be performed in support of the IRM is as follows:

- *July 2011* – Conduct pre-excavation characterization sampling
- *August-September 2011* – Perform remedial excavation fieldwork
- *September 2011* – Submit Alternatives Analysis Report
- *November 2011* – NYSDEC issues Decision Document
- *November 2011* – Submit Site Managent Plan (if required) and Final Engineering Report
- *September 2011 to February 2012* – Construct building

5.0 REFERENCES

1. Clayton Group Services, Inc. Excerpts of the January 2000 *Phase I Environmental Site Assessment and Trench Sampling Report of the Lamar Outdoor Advertising Facility, 295 Maryland Street, Buffalo, New York*.
2. Benchmark Environmental Engineering & Science, PLLC. 2001. *Phase I Environmental Site Assessment at 291 Maryland Street & 121-129 West Avenue.*
3. Benchmark Environmental Engineering & Science, PLLC. November 2001. *Phase II Environmental Site Investigation Report 295 Maryland Street Buffalo, NY*.
4. New York State Department of Environmental Conservation. 2004. *Draft Brownfield Cleanup Program Guide*. May.
5. New York State Department of Environmental Conservation. May 3, 2010. *DER-10/Technical Guidance for Site Investigation and Remediation*.

TABLES

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1

SUMMARY OF SOIL ANALYTICAL RESULTS

295 Maryland, LLC
295 Maryland Street Site
Buffalo, New York

Parameter	TP-1 0-0.5'	TP-1 0.5-8'	TP-2 0-0.5'	TP-2 0.5-8'	TP-3 0-0.5'	TP-3 0.5-8'	TP-4 0-0.5'	TP-4 0.5-8'	TP-5 0-0.5'	TP-5 0.5-8'	TP-6 0-0.5'	TP-6 0.5-8'	TP-7 0-0.5'	TP-7 0.5-5.5'	TP-8 0-0.5'	TP-8 0.5-8'	TP-9 0-0.5'	TP-9 0.5-8'	TP-10 0-0.5'	TP-10 0.5-8'	EM-6 Composite	MW-3 4-6'	SB-5 0-2'	SCOs Restricted Residential	SCOs Residential	SCOs Unrestricted
Volatile Organics (µg/kg)																										
Benzene	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	0.8	NA	ND	NA	ND	3	ND	ND	**4800**	**2900**	**60**
Methylene chloride	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	ND	7.9	3.5	**100,000**	**5,100**	**50**
Semi-Volatiles (µg/kg)																										
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	69 J	ND	ND	ND	**--**	**--**	**--**
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	250 J	ND	ND	ND	**100,000**	**100,000**	**20,000**
Anthracene	ND	ND	ND	ND	220 J	ND	2100 J	ND	330	ND	280 J	98 J	200 J	ND	440 J	200 J	2500 J	280 J	4700 J	930	ND	ND	20 J	**100,000**	**100,000**	**100,000**
Benzo(a)anthracene	150 J	ND	85 J	ND	840	ND	**4900**	110 J	**1200**	ND	**1800**	290 J	**1700**	290 J	**2000**	900	**8700**	760	**17000**	**2000**	**2700 J**	ND	73 J	**1,000**	**1,000**	**1,000**
Benzo(a)pyrene	110 J	ND	ND	ND	750	ND	**3600**	ND	**1200**	ND	**2100**	250 J	**3000**	370	**2000**	900	**7100**	670	**13000**	**1600**	ND	ND	59 J	**1,000**	**1,000**	**1,000**
Benzo(b)fluoranthene	ND	ND	ND	ND	**1100**	ND	**5100**	ND	1800	ND	**3000**	360	**3900**	350	**3000**	**1300**	**9900**	1000	**19000**	**2600**	ND	ND	84 J	**1,000**	**1,000**	**1,000**
Benzo(g,h,i)perylene	ND	ND	ND	ND	330	ND	1400 J	ND	770	ND	1800	99 J	2700	720	1300	470	3300 J	260 J	5700 J	680	ND	ND	47 J	**100,000**	**100,000**	**100,000**
Benzo(k)fluoranthene	ND	ND	ND	ND	410	ND	**1900 J**	ND	540	ND	900	140 J	**1200**	ND	**1100**	540	**3800 J**	330	**8100**	**980**	ND	ND	31 J	**3,900**	**1,000**	**800**
Bis-2-ethylhexyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	250 J	970	ND	ND	ND	ND	ND	ND	ND	ND	120 J	**--**	**--**	**--**
Butyl benzyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**--**	**--**	**--**
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	150 J	ND	ND	ND	ND	ND	ND	ND	ND	160 J	ND	400	ND	ND	ND	**--**	**--**	**--**
Chrysene	120 J	ND	75 J	ND	710	ND	**4100**	98 J	**1100**	ND	**1600**	240 J	**1700**	420	**1700**	830	**7400**	660	**14000**	**1700**	**2800 J**	ND	77 J	**3,900**	**1,000**	**1,000**
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**420**	ND	**610**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**330**	**330**	**330**
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	230 J	ND	ND	ND	**59,000**	**14,000**	**7,000**
Di-n-octyl phthalate	ND	ND	ND	73 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130 J	ND	ND	ND	**--**	**--**	**--**
Fluoranthene	230 J	ND	ND	ND	1700	ND	13000	240 J	2500	ND	2200	570	1400	320	3600	2400	19000	1600	38000	4800	ND	ND	150 J	**100,000**	**100,000**	**100,000**
Fluorene	ND	ND	ND	ND	ND	ND	610 J	ND	72 J	ND	61 J	ND	ND	ND	ND	61 J	ND	86 J	1200 J	250 J	ND	ND	ND	**100,000**	**100,000**	**30,000**
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	390	ND	**1700**	ND	**830**	ND	**1800**	ND	**3000**	410	**1300**	**550**	**4300**	290 J	**7000**	**740**	ND	ND	43 J	**500**	**500**	**500**
Naphthalene	ND	ND	ND	ND	61 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150 J	ND	ND	ND	**100,000**	**100,000**	**12,000**
Phenanthrene	190 J	ND	79 J	ND	980	63 J	10000	160 J	1500	ND	1200	510	740	250 J	2200	1300	13000	1200	25000	4000	ND	ND	100 J	**100,000**	**100,000**	**100,000**
Pyrene	230 J	ND	130 J	ND	1600	110 J	10000	190 J	3600	ND	6400	530	5500	1900	4800	2200	18000	1500	35000	4100	ND	ND	120 J	**100,000**	**100,000**	**100,000**
PCBs (µg/kg)																										
Aroclor 1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND*	ND	ND	ND	ND	ND*	ND	ND	**--**	**--**	**--**
Aroclor 1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND*	ND	ND	ND	ND	ND*	ND	ND	**--**	**--**	**--**
Aroclor 1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND*	ND	ND	ND	ND	ND*	ND	ND	**--**	**--**	**--**
Aroclor 1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND*	ND	ND	ND	ND	ND*	ND	ND	**--**	**--**	**--**
Aroclor 1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND*	ND	ND	ND	ND	ND*	ND	ND	**--**	**--**	**--**
Aroclor 1254	ND	ND	ND	ND	ND	42	12	ND	48	ND	61	ND	57	ND	91	ND*	211	ND	765	ND	ND*	ND	ND	**--**	**--**	**--**
Aroclor 1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND*	ND	ND	ND	ND	ND*	ND	ND	**--**	**--**	**--**
Total PCBs	ND	ND	ND	ND	ND	42	12	ND	48	ND	61	ND	57	ND	91	ND	**211**	ND	**765**	ND	ND	ND	ND	**1,000**	**1,000**	**100**
Pesticides (ug/kg)																										
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	**4.1**	**8900**	**1800**	**3.3**
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	**4**	**7900**	**1700**	**3.3**
Inorganic Compounds (mg/kg)																										
Aluminum	6,820	9,980	7,760	8,260	7,980	11,000	8,930	7,710	8,450	8,870	5,690	11,100	4,470	4,410	4,490	5,710	6,720	8,240	10,800	7,270	NA	11,600	13,800	**--**	**--**	**--**
Antimony	ND	ND	ND	ND	ND	ND	ND	8.11	ND	ND	ND	ND	7.18	ND	7.83	ND	ND	8.45	ND	ND	NA	ND	ND	**--**	**--**	**--**
Arsenic	2.9	3.5	7.8	2.8	7.2	3.3	**16**	2.4	**23**	3.1	4.2	5.2	3.1	4.1	4.7	7.8	4.1	7.5	1.1	3.2	NA	4.5	6.4	**16**	**16**	**13**
Barium	97	82.7	90.2	67.4	218	95.5	**327**	80	**516**	78.2	213	106	61.8	**552**	98.8	192	143	150	140	73.5	NA	136	133	**400**	**350**	**350**
Beryllium	0.486	0.539	0.646	0.477	0.536	0.676	0.596	0.46	0.601	0.506	0.603	0.628	0.543	0.244	0.493	0.478	0.778	0.508	2.03	0.467	NA	0.562	0.649	**72**	**14**	**7.2**
Cadmium	ND	0.608	ND	0.885	1.29	ND	**3.17**	0.775	**4.2**	0.673	1.44	0.599	0.872	1.41	0.651	2.26	**2.91**	1.81	1.87	0.697	NA	ND	0.621	**4**	**2.5**	**2.5**
Calcium	43,100	55,300	35,900	66,900	40,700	70,800	59,900	69,100	45,900	67,100	105,000	45,900	161,000	53,500	179,000	83,000	84,900	48,000	94,200	65,400	NA	55,100	13,200	**--**	**--**	**--**
Chromium	8.84	11.5	9.08	10.5	**65.4**	14.4	**37.4**	11.3	**71.6**	11.8	17.2	15.3	11	10.7	13.6	13.8	30	18.9	18	11	NA	14.3	19.2	**180**	**36**	**30**

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Parameter	TP-1 0-0.5'	TP-1 0.5-8'	TP-2 0-0.5'	TP-2 0.5-8'	TP-3 0-0.5'	TP-3 0.5-8'	TP-4 0-0.5'	TP-4 0.5-8'	TP-5 0-0.5'	TP-5 0.5-8'	TP-6 0-0.5'	TP-6 0.5-8'	TP-7 0-0.5'	TP-7 0.5-5.5'	TP-8 0-0.5'	TP-8 0.5-8'	TP-9 0-0.5'	TP-9 0.5-8'	TP-10 0-0.5'	TP-10 0.5-8'	EM-6 Composite	MW-3 4-6'	SB-5 0-2'	SCOs Restricted Residential	SCOs Residential	SCOs Unrestricted
Inorganic Compounds (mg/kg)																										
Cobalt	5.34	7.83	5.61	7.87	7.42	8.85	6.96	7.15	6.91	9.2	3.74	7.64	1.9	5.38	2.9	5.4	5.15	6.45	3.83	6.09	NA	13	11.8	--		
Copper	23.8	19.3	25.7	18.5	141	39.5	52.3	17.2	**52.3**	18	28.8	23.3	19.9	33.4	23.2	49.3	35	28	30.7	22.5	NA	19.4	22.7	**270**	**270**	**50**
Iron	11,100	14,600	8,830	14,600	14,500	19,700	15,200	13,000	15,700	15,200	8,850	17,200	6,390	9,990	7,620	14,500	17,300	19,700	11,700	13,000	NA	18,000	23,600	--	--	--
Lead	**302**	55.2	**182**	34.3	**3610**	**126**	**3270**	**167**	**8160**	36.3	**632**	**150**	**71.4**	**1420**	**176**	**503**	**602**	**344**	**328**	**97.6**	NA	14.7	**85.3**	**400**	**400**	**63**
Magnesium	7,170	16,600	9,630	21,100	12,000	22,900	9,830	20,100	12,000	24,500	15,800	17,900	18,200	9,160	13,600	9,960	23,500	16,000	28,500	21,600	NA	20,600	9,340	--	--	--
Manganese	274	510	231	451	540	463	413	388	394	498	655	455	376	291	375	365	533	474	1120	386	NA	648	904	**2,000**	**2,000**	**1,600**
Mercury	**0.31**	ND	**0.3**	ND	**1**	**0.3**	**0.94**	**0.19**	**1**	ND	ND	0.062	ND	ND	0.11	**0.92**	**0.35**	**0.25**	ND	ND	NA	0.0218	0.167	**0.81**	**0.81**	**0.18**
Nickel	11.1	16.7	11.6	17.6	17.8	20.3	16.2	15.2	15.5	18.3	14.8	19	9.55	10.6	9.59	20	15	17.2	14.9	15.1	NA	22	21.6	**310**	**140**	**30**
Potassium	1120	1570	1320	1250	1250	1770	1410	1360	1370	1690	881	1620	579	803	726	996	983	1350	1030	1310	NA	1820	1910	--	--	--
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	**180**	**36**	**3.9**
Silver	ND	ND	ND	ND	ND	ND	ND	ND	1.19	ND	**31.8**	1.41	**9.39**	ND	**6.91**	1.26	1.4	ND	**3.85**	ND	NA	ND	ND	**180**	**36**	**2**
Sodium	149	159	1080	258	299	172	255	155	224	218	379	210	233	339	315	306	208	170	446	228	NA	260	ND	--	--	--
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	--	--	--
Vanadium	14.9	19.9	20.7	17.7	19.9	26.2	20.1	17.2	19.1	19.5	12.2	22.6	10.2	12.2	8.37	17.1	11.9	18.8	10.3	15.3	NA	21.6	28.5	--	--	--
Zinc	**112**	78	60.9	63.9	**342**	102	**683**	75.8	**784**	66.7	**141**	103	80	**546**	**131**	**885**	**850**	**265**	**661**	**170**	NA	66.5	135	**10,000**	**2,200**	**109**

Notes:

BOLD	= Exceeds the Restricted Residential SCO
BOLD	= Exceeds the Residential SCO
BOLD	= Exceeds the Unrestricted SCO

By extension of the above, the concentrations that exceed restricted residential SCO also exceed the residential and unrestricted SCO, and likewise for residential vs. unrestricted SCO.

Definitions:

"--" = Not available
ND = Not detected
J = Result estimated below the quantitation limit
" * " = Elevated detection limit due to sample matrix interference.
NA = Not analyzed

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

295 Maryland, LLC
295 Maryland Street Site
Buffalo, New York

Parameter[1]	Sample (Date)									Groundwater Standard[2]
	MW-1		MW-2		MW-3		MW-4		Blind Dup[3]	
	(9/23/10)	(3/1/11)	(9/23/10)	(3/1/11)[4]	(9/23/10)	(3/1/11)	(9/23/10)	(3/1/11)[4]	(3/1/11)	
Volatile Organics (µg/L)										
1,2,4-Trimethylbenzene	ND	ND	ND	**19**	ND	ND	ND	ND	ND	**5**
1,3,5-Trimethylbenzene	--	ND	--	1.2	--	ND	--	ND	ND	**5**
Acetone	5	ND	ND	ND	ND	ND	ND	ND	ND	**50**
Benzene	ND	ND	**38**	**20**	ND	ND	ND	ND	ND	**1**
Chloroform	2	ND	4.2	ND	5.4	ND	2.8	ND	ND	**7**
Ethylbenzene	ND	ND	**39**	**46**	ND	ND	ND	ND	ND	**5**
Isopropylbenzene	ND	ND	ND	4.6	ND	ND	ND	ND	ND	**5**
m/p-Xylenes	--	ND	ND	**43**	ND	ND	ND	ND	ND	**5**
Methyl-t-Butyl Ether (MTBE)	ND	ND	ND	2.3	ND	ND	ND	ND	ND	**10**
o-Xylenes	--	ND	--	**35**	ND	ND	ND	ND	ND	**5**
Toluene	ND	ND	**18**	**14**	ND	ND	ND	ND	ND	**5**
Xylenes(Total)	ND	ND	**97**	**78**	ND	ND	ND	ND	ND	**5**
Semi-Volatile Organics (ug/L)										
2-Methylphenol	ND	--	1.3	--	ND	--	ND	--	--	**5**
Acetophenone	ND	--	2.8	--	1.1	--	ND	--	--	**--**
Benzo (a) anthracene	ND	--	**0.35**	ND	ND	--	ND	--	--	**0.002**
Butyl benzyl phthalate	0.51	--	0.71	--	0.58	--	0.72	--	--	**50**
Di-n-butyl phthalate	0.51	--	0.65	--	0.55	--	1.1	--	--	**50**
Fluoranthene	ND	--	0.47	ND	ND	--	ND	--	--	**50**
Naphthalene	ND	--	**21**	**92**	ND	--	ND	--	--	**10**
Phenanthrene	ND	--	0.58	ND	0.46	--	ND	--	--	**50**
Pyrene	ND	--	0.42	ND	ND	--	ND	--	--	**50**
Pesticides & PCBs (ug/L)										
4,4'-DDD	ND	--	ND	--	0.23	0.04 J	0.25	0.036 J	0.022 J	**0.3**
4,4'-DDT	0.082	--	ND	--	ND	0.017 J	0.2	ND	ND	**0.2**
alpha-BHC	ND	--	ND	--	**0.18**	ND	ND	ND	ND	**0.01**
beta-BHC	ND	--	**0.06**	--	**0.13**	ND	**0.21**	ND	ND	**0.04**
Dieldrin	ND	--	ND	--	ND	ND	**0.14**	**0.027 J**	**0.031 J**	**0.004**
Endosulfan I	ND	--	ND	--	ND	ND	0.07	ND	ND	**--**
Endosulfan II	0.069	--	0.11	--	0.14	ND	0.14	0.016 J	ND	**--**
Endosulfan sulfate	ND	--	ND	--	ND	ND	0.092	ND	ND	**--**
Endrin aldehyde	ND	--	ND	--	ND	ND	ND	0.022 J	ND	**5**
gamma-Chlordane	0.036	--	0.041	--	**0.13**	**0.03 J**	**0.15**	ND	ND	**0.05**
Heptachlor	ND	--	ND	--	**0.11**	ND	**0.14**	ND	ND	**0.04**
Heptachlor epoxide	0.018	--	ND	--	ND	ND	ND	ND	ND	**0.03**
Methoxychlor	0.059	--	0.098	--	0.2	ND	0.16	0.024 J	ND	**35**
PCBs	ND	--	ND	--	ND	--	ND	--	--	**0.00009**
Inorganic Compounds (mg/L)										
Barium	0.0542	--	0.332	--	0.0985	--	0.0687	--	--	**1**
Calcium	75.6	--	119	--	123	--	150	--	--	**--**
Magnesium	45.3	--	107	--	98.3	--	151	--	--	**--**
Manganese	0.0739	--	0.204	--	0.195	--	**0.315**	--	--	**0.3**
Nickel	ND	--	ND	--	0.0159	--	ND	--	--	**0.1**
Potassium	4.5	--	6.41	--	10	--	12.2	--	--	**--**
Sodium	**25.1**	--	**59.2**	--	**88.8**	--	**34.4**	--	--	**20**
General Chemistry Parameters (mg/L)										
Total Cyanide	ND	--	ND	--	ND	--	ND	--	--	**0.2**

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. NYSDEC Class "GA" Groundwater Quality Standards/Guidance Values (GWQS/GV), 6 NYCRR Part 703.
3. Blind Duplicate collected at monitoring well MW-3.
4. MS/MSD collected at monitoring wells MW-2 and MW-4.

Bold = Exceeds the NYSDEC TOGS 1.1.1 Groundwater Standard or Guidance Value

Definitions:

N/A = Not available
ND = Not detected
J = Result estimated below the quantitation limit

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TABLE 3

SUMMARY OF GROUNDWATER ELEVATIONS

295 Maryland, LLC
295 Maryland Street Site
Buffalo, New York

			18-Sep-10		23-Sep-10	
Monitoring Location	**Grade**	**Top of PVC Riser Elev.**	**Water Level from Top of Riser**	**Groundwater Elevation**	**Water Level from Top of Riser**	**Groundwater Elevation**
MW-1	492.4	491.78	7.94	483.84	8.09	483.69
MW-2	493.4	495.85	14.78	481.07	15.00	480.85
MW-3	497.2	499.49	15.08	484.41	15.25	484.24
MW-4	497.5	499.83	14.07	485.76	14.46	485.37

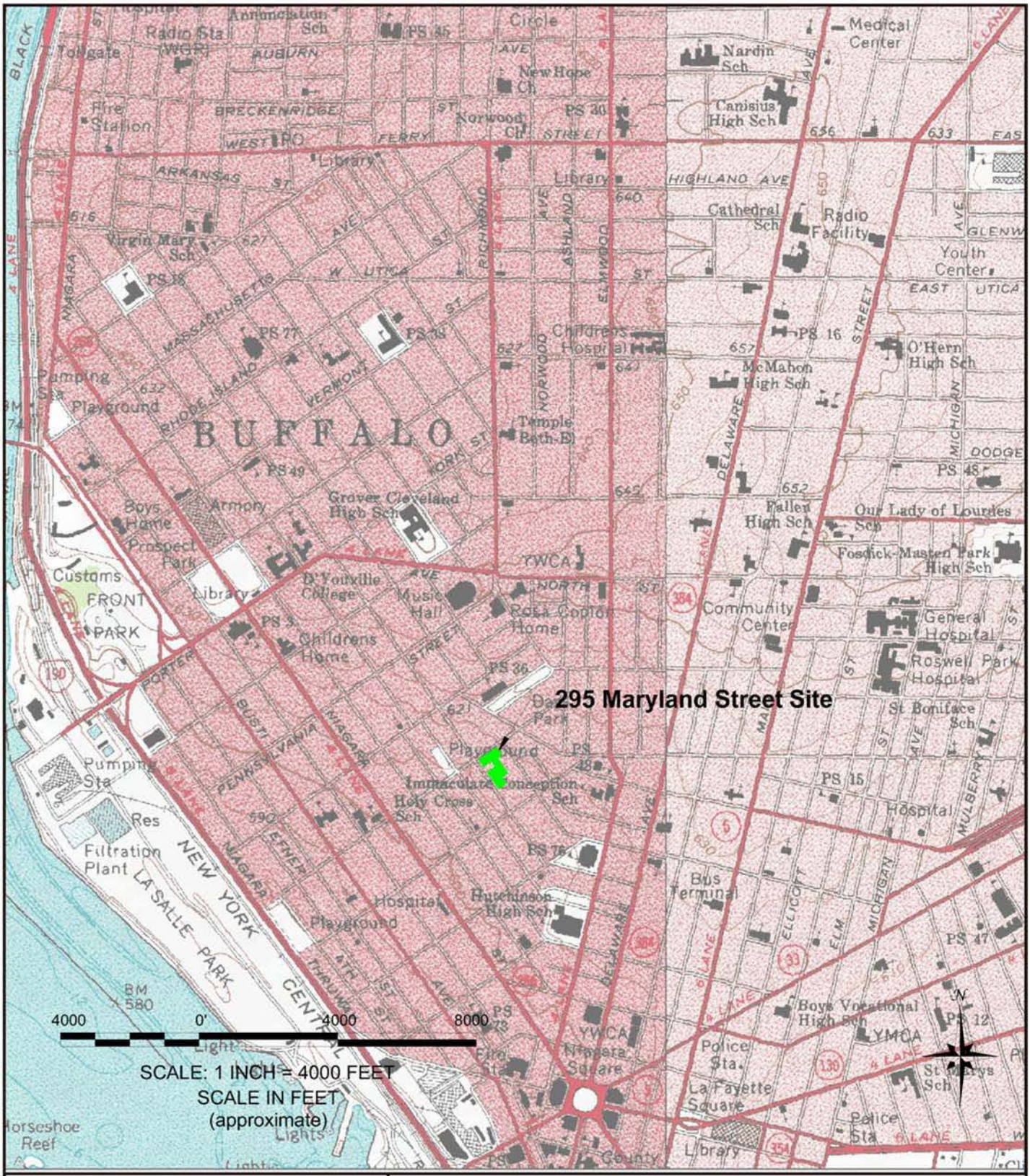
Notes:

1. All wells were surveyed on 10/12/10 with site specific datum of 500 feet.

FIGURES

F:\CAD\Benchmark\295 Maryland\Remedial Action Work Plan\Figure 1 - Site Location Map.dwg

FIGURE 1



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SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0222-001-100

DATE: DECEMBER 2010

DRAFTED BY: JCT

SITE LOCATION AND VICINITY MAP

IRM WORK PLAN

295 MARYLAND STREET SITE
295 MARYLAND STREET
BUFFALO, NEW YORK

PREPARED FOR

295 MARYLAND, LLC

F:\CAD\Benchmark\295 Maryland\Remedial Action Work Plan\Figure 2 - Aerial Map.dwg

FIGURE 2

100 0' 100 200

SCALE: 1 INCH = 100 FEET
SCALE IN FEET
(approximate)

N

LEGEND

PARCEL BOUNDARY

SITE BOUNDARY

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

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SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0222-001-100

DATE: MAY 2011

DRAFTED BY: JCT

SITE PLAN (AERIAL)

IRM WORK PLAN

295 MARYLAND STREET SITE
295 MARYLAND STREET
BUFFALO, NEW YORK

PREPARED FOR

295 MARYLAND, LLC

F:\CAD\Benchmark\295 Maryland\Remedial Action Work Plan\Figure 3 - Redevelopment Plan.DWG

DATE: MAY 2011
DRAFTED BY:

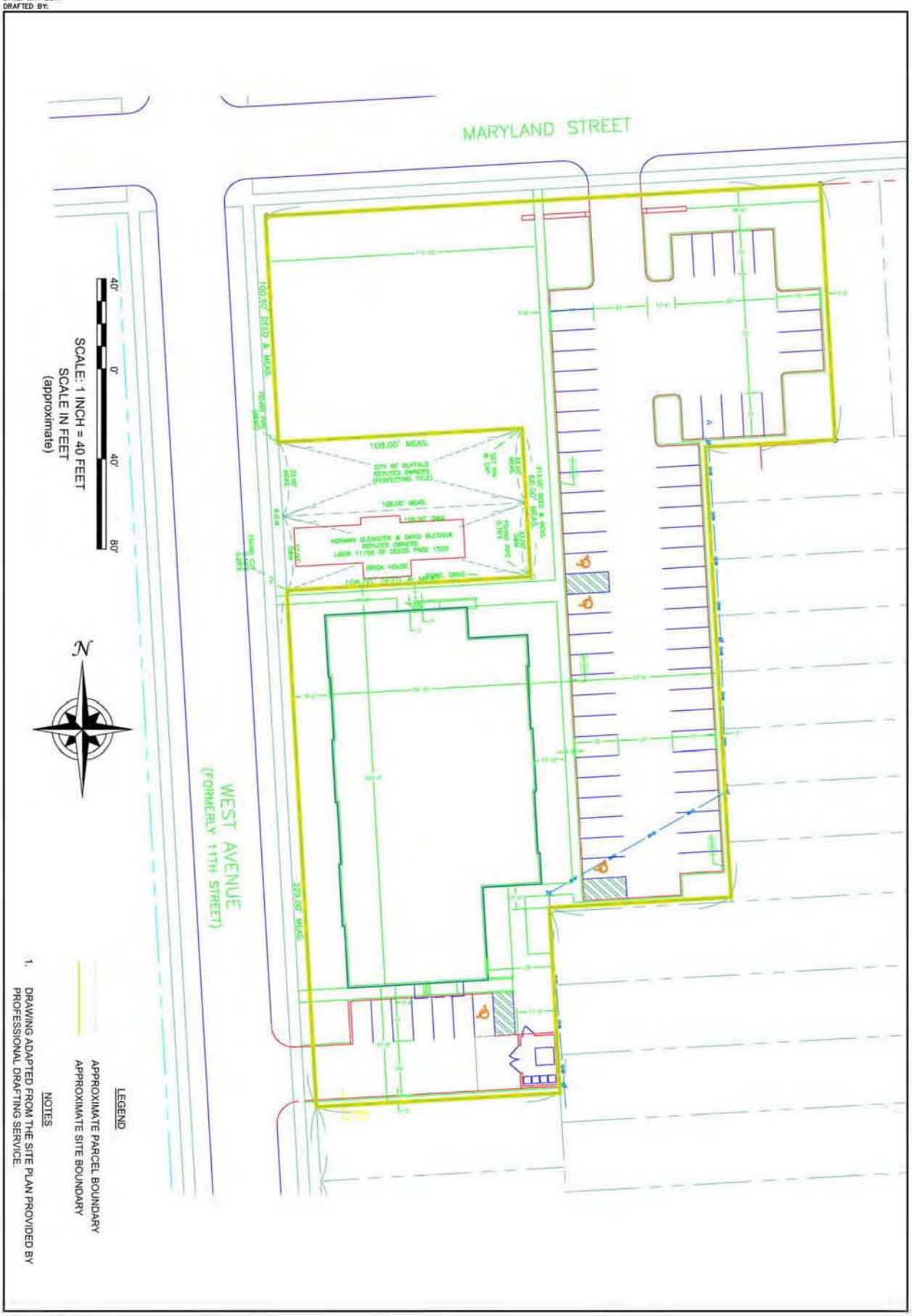

FIGURE 3

REDEVELOPMENT PLAN

IRM WORK PLAN

295 MARYLAND STREET SITE
295 MARYLAND STREET
BUFFALO, NEW YORK
PREPARED FOR
295 MARYLAND, LLC

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JOB NO.: 0222-001-100

DATE: MAY 2011
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F:\CAD\Benchmark\295 Maryland\Remedial Action Work Plan\Figure 4 - Exploration Location Plan.dwg

FIGURE 4

EXPLORATION LOCATION PLAN

IRM WORK PLAN

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F:\CAD\Benchmark\295 Maryland\Remedial Action Work Plan\Figure 5 - Surface Soil Samples.dwg

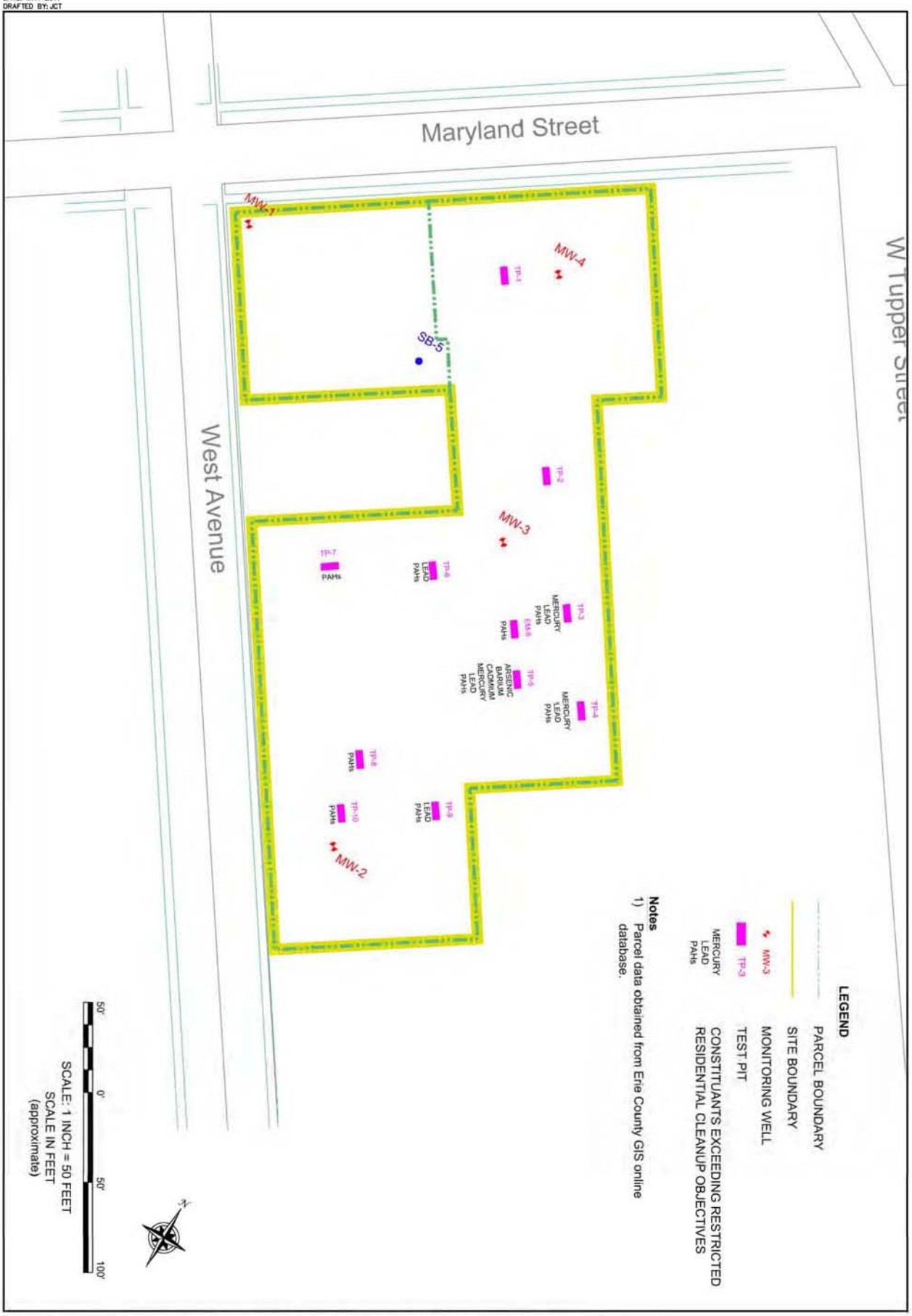

FIGURE 5

SURFICIAL SOIL SAMPLE RESULTS EXCEEDING RESTRICTED RESIDENTIAL SCOs

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F:\CAD\Benchmark\295 Maryland\Remedial Action Work Plan\Figure 6 - Subsurface Soil Samples.dwg

DATE: MAY 2011
DRAFTED BY: JCT

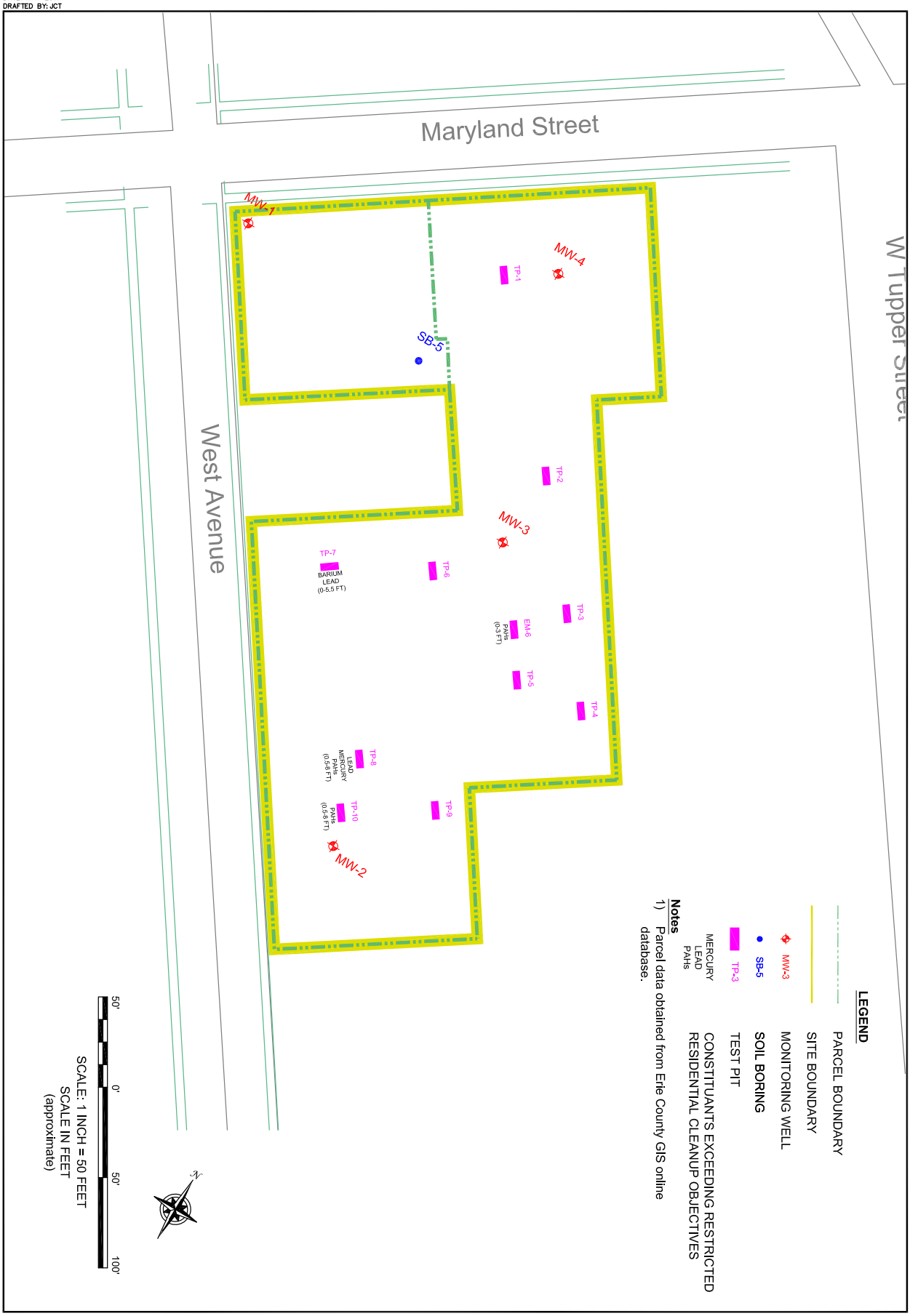

FIGURE 6

SUBSURFACE SOIL SAMPLE RESULTS EXCEEDING RESTRICTED RESIDENTIAL SCOs

IRM WORK PLAN

295 MARYLAND STREET SITE
295 MARYLAND STREET
BUFFALO, NEW YORK

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295 MARYLAND, LLC

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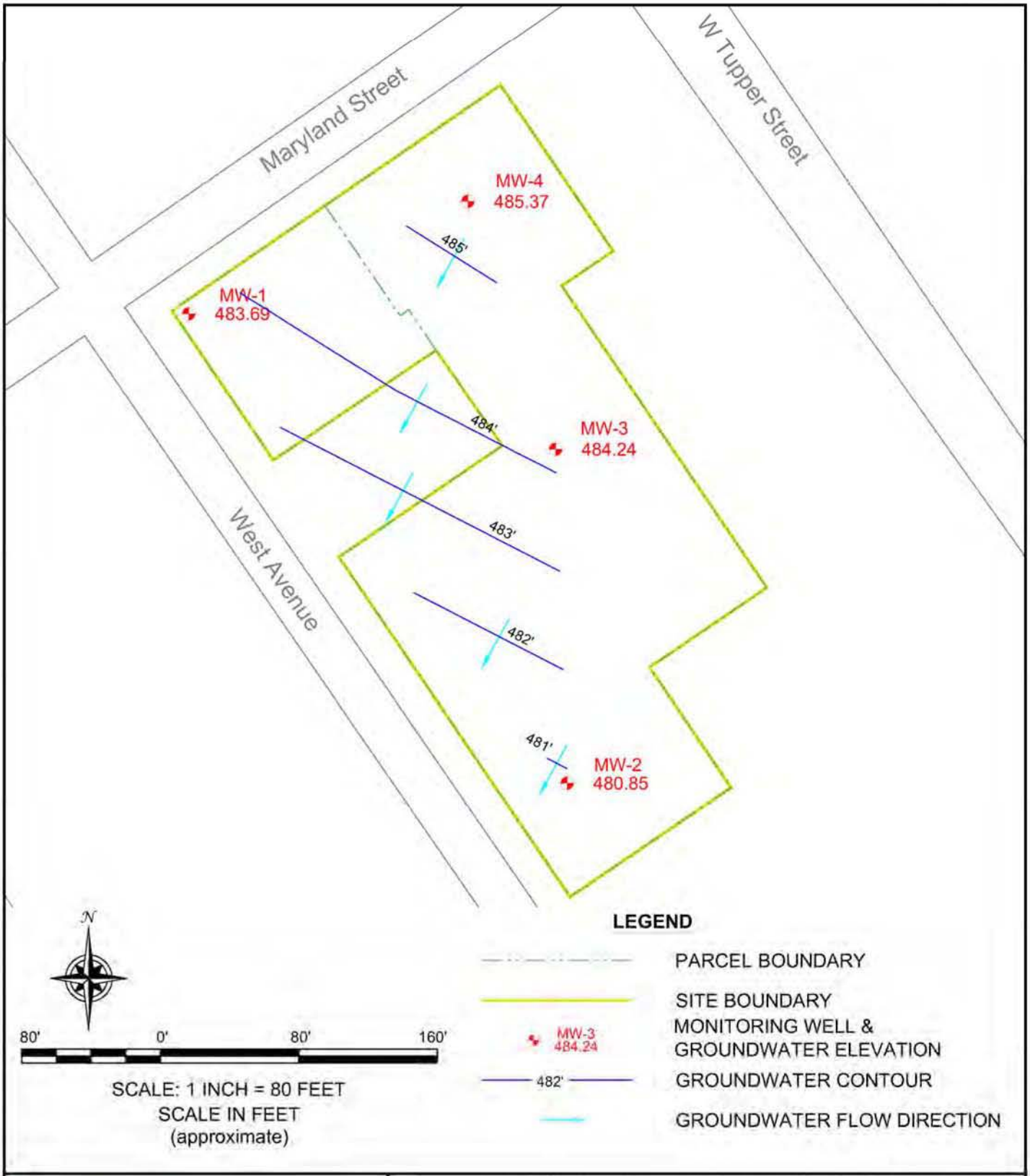
F:\CAD\Benchmark\295 Maryland\Remedial Action Work Plan\Figure 5 - Groundwater Elevation (Sept 2010).dwg

FIGURE 7



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DATE: MAY 2011

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GROUNDWATER CONTOUR MAP (SEPTEMBER 2010)

IRM WORK PLAN

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295 MARYLAND STREET
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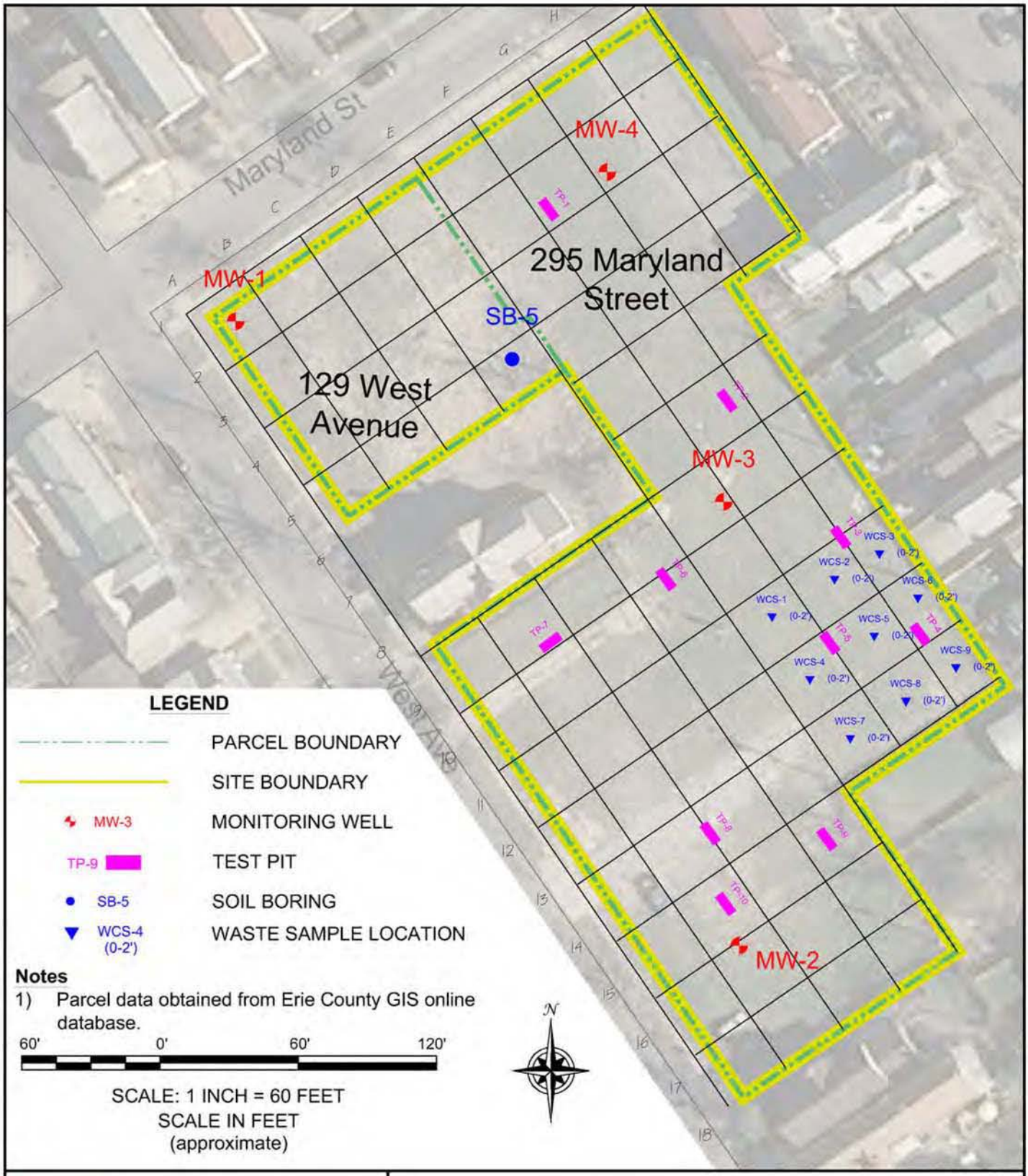
295 MARYLAND, LLC

F:\CAD\Benchmark\295 Maryland\Remedial Action Work Plan\Figure 8 - Waste Characterization Sampling.dwg

FIGURE 8



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WASTE CHARACTERIZATION SAMPLING

IRM WORK PLAN

295 MARYLAND STREET SITE
295 MARYLAND STREET
BUFFALO, NEW YORK

PREPARED FOR

295 MARYLAND LLC