

Guidance for Waste-fill Management During Site Development on the Former Emerson Street Landfill

Location:

Former Emerson Street Landfill Lexington Ave Rochester, New York

Prepared For: City of Rochester Division of Environmental Quality Rochester, New York 14614

LaBella Project No. 210173

October, 2013

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1.0 Introduction

This document provides guidance for property owners, contractors, developers or other parties who intend to disturb sub-surface materials at properties within the footprint of the Former Emerson Street Landfill (FESL). The FESL parcels consist of approximately 255-acres of land in the City of Rochester, Monroe County, New York (City) and are depicted on Figure 1. This guidance document was developed by LaBella Associates, P.C. (LaBella), on behalf of the City of Rochester's Division of Environmental Quality (DEQ), to update the document titled "Guidance for Waste-fill Management During Site Development" dated July 1995 by Haley and Aldrich (H&A) of New York and Revised July 1997 by the City. These updates reflect information obtained since 1997 on the FESL (historic and subsurface data) and changes in the Regulatory Guidance (most notably NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation).

As an institutional control (IC), the City has "flagged" each property located on the FESL on the City's computerized Building Information System (BIS) with a red flag that notifies City staff and the permit applicant that the flagged parcel requires additional environmental review by City DEQ. This requires that environmental conditions are evaluated and addressed prior to issuing new permits or site plan approvals for any work that has the potential to disturb FESL waste fill. This process ensures that the proposed permit activities do not result in disturbances to the existing monitoring wells or other environmental monitoring points, or disturb existing soil vapor mitigation systems. In addition, the flagging system allows the City to work with the permit applicant to develop plans to properly manage any regulated waste or waste-fill materials that may be generated as a result of the permit activities. This flagging process also allows the City to require:

- 1) Referral of the proposed permit or site plan to the NYSDEC Region 8 for review, comments and approvals;
- 2) Implementation of a site-specific health and safety plan and/or environmental management plan for the specific proposed scope of work;
- 3) Installation of new engineering controls such as soil vapor intrusion mitigation systems, and
- 4) Modifications to environmental monitoring points or existing soil vapor intrusion mitigation systems.

1.1 Background

1.1.1 History Overview

The FESL was operated by the City from about the early 1940's to 1971 as a landfill. The landfill was used to dispose of ash derived from the incineration of municipal waste at the City's incinerators. Although a majority of the material placed is ash fill, construction and demolition debris was also placed into the landfill in some areas. In addition, partially incinerated materials and direct burial were documented in the later years of operation as noted below. Landfilling began south of Emerson Street and gradually expanded northward and eastward to include areas between Emerson Street and Lexington Avenue and east of Colfax Street and south of Emerson Street and generally west of McCrackanville Street. Fires due to incomplete incineration and open burning of refuse reportedly occurred in the late 1960s and early 1970s due to operational problems with the incinerators. Fill during this time frame was reportedly being placed north of

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Emerson Street. In May of 1971 the City's incinerators were shut down; however un-incinerated municipal refuse continued to be placed north of Emerson Street until August of 1971. In August 1971, refuse disposal was ceased at FESL and disposal shifted to a different county landfill. In 1971 the landfill was officially closed and a contract for the closure of the eastern half of the landfill specified two feet of cover material (preferred to be a sandy loam) to be placed and compacted to 30% in one foot lifts. In September 1971, a contract was awarded for the closure of the western portion of the landfill. Since closure, portions of the Site have been developed by various private parties. As of the date of this report, the landfill consists of forty-five (45) individual parcels of land, which are shown on Figure 2. Figure 3 provides the approximate FESL fill limits associated with the time frames of deposition.

A portion of the FESL, (four parcels), are listed as a NYSDEC Class 3 Inactive Hazardous Waste Disposal Site (IHWDS), Site #828023, while the remaining parcels within the FESL have been de-listed. The four (4) parcels listed as IHWDS are identified on Figure 2. A "3" classification indicates a site "at which hazardous waste does not presently constitute a threat to the environment".

1.1.2 FESL Documented Fill Materials

The general types of wastes encountered during investigations, remediation and development projects over the past 35 years at the FESL site include the following:

- Municipal Incinerator Ash Generally consisting of ash, cinders, charred refuse, glass and metal slag. Most ash observed during site investigations appears to be fly ash and bottom ash (clinker) from the municipal solid waste incinerators.
- Construction and Demolition Debris Construction and demolition debris observed in past investigations generally fits the definition of construction demolition debris contained in NYSDEC's Part 360 and is considered regulated solid waste. Construction demolition debris fill is common in areas adjacent to current and former roadways onsite and particularly in the lobe of fill south of Emerson Street and east of Colfax Street.
- Soil and Municipal Refuse This regulated solid waste generally consists of silty sand cover material and Regulated Solid Waste (un-incinerated municipal refuse).

It should be noted that one discrete location of low-activity radioactive waste was identified on the FESL. This material generally consisted of a sludge-like waste material associated with glass lenses. The sludge was found to contain low levels of radioactive thorium. This material was encountered in a relatively small area in the southwest portion of the FESL and was not associated with incinerator ash and refuse fills. The material appears to have been associated with surficial dumping which occurred after the FESL closure. Figure 4 depicts a radiological survey performed by Recra Environmental, Inc in 1988, which identified the areas of radioactive waste. This material was removed by Sevenson Environmental Services on behalf of the City (see Figure 4). Radioactive waste has not been identified elsewhere on the FESL.

The majority of the existing landfill has a soil cover. Cover ranges in thickness from 0 ft. up to approximately 6 ft. Cover materials generally consist of topsoil with grass, gravel, asphalt, or glacial till-derived sandy silt.

1.1.3 Summary of Significant Previous Environmental Reports

Numerous subsurface geotechnical and environmental investigations have been conducted at the FESL since its closure in 1971 and as recently as 2013. A list of reports available currently is included as Appendix 1.

Reports include document reviews, groundwater evaluations and sub-surface investigations and have been performed to characterize the type, nature, extent, and impact resulting from waste contained in the FESL. Figure 5 depicts the cumulative subsurface investigation points within the FESL as well as a model interpretation of fill thickness. It should be noted that additional private testing has also been completed but this information is not included herein. The approximate limits of FESL fill materials based on the previous studies and aerial photograph interpretations are shown on Figure 3. Studies completed after 1990 were completed solely by the City. A summary of the information obtained during these studies is presented in Section 2 on a location basis; below is a brief summary of the significant reports:

- A Soil Vapor Intrusion Assessment Report (SVI Report) by LaBella on behalf of the City dated June 2011. This report includes a comprehensive review of previous testing completed at the FESL. Although the intent of this report was to evaluate SVI, a detailed review of landfill history was completed for a comprehensive analysis. The landfill review included a review of historic documents (maps, reports, letters, memos, etc.), investigation data, landfilling operations (filling locations, dates, material, etc.) and development projects. This SVI Report work also included advancing additional soil borings, installing monitoring wells and sampling soil and groundwater at the FESL.
- Former Emerson Street Landfill Remedial Investigation Report by LaBella/Geomatrix dated April 2001 on behalf of the City This report includes a remedial investigation study of three (3) specific parcels on the FESL with the purpose of characterizing environmental conditions, assessing the potential human health risks and evaluating remedial alternatives. Field investigations performed during this report included surface soil samples, a subsurface vapor assessment and a subsurface soil and water assessment. Analytical results confirmed and further delineated the presence of chlorinated volatile organic compounds (CVOCs) in the IHWDS portion of the landfill.

Specifically, the groundwater CVOC plume (P-1 Plume) was partially delineated during work conducted for this report. The P-1 Plume may be attributable to the FESL or potentially due to post landfilling operations. The plume is contained within the FESL and predominantly located at the 1655 Lexington Avenue parcel. The P-1 Plume area is generally defined and significantly influenced by the storm sewer system that runs through McCrackanville Street, west down Emerson Street and then south parallel to (but west of) 'W' Street and eventually to an outfall into the Barge Canal. Analytical results have indicated a significant reduction in CVOC concentrations beyond the location of the storm sewer on both the southerly and easterly directions.

 Former Emerson Street Landfill Modified Remedial Investigation by H&A of New York dated January 1994 – Work associated with this report included the provision of historic data to the NYSDEC, a request to delist specific properties from the NYSDEC IHWDS and an extensive field investigation. The field investigation work included the advancement of soil borings, monitoring wells, landfill gas sampling, gas emission monitoring in and around buildings/structures, sampling of stormwater, sampling groundwater and performing hydrogeological testing. In support of the field investigation activities; a photogrammetric survey, fill history evaluation, and an evaluation of existing utilities and cover material were also conducted.

The above reports provide the most information on subsurface conditions at the FESL; however, additional reports exist (refer to Appendix 1) and private investigations may also exist for individual parties. The inferred extent of the CVOC plume discussed above is shown on Figure 6.

1.2 Objective and NYSDEC Part 360

Due to the environmental history of the property, any waste-fill generated during site disturbances requires special consideration and management. The NYSDEC regulations regarding management of solid waste can be found in 6 NYCRR Part 360. Part 360 contains a provision that allows for non-hazardous solid waste to be properly managed and replaced within the confines of an inactive solid waste landfill with NYSDEC approval (see Part 360-1.7(b)(9)). Proper management requires that care be taken in planning, monitoring and testing excavated waste-fill material to confirm non-hazardous nature of the excavated materials and allow proper replacement and covering onsite (within the confines of the landfill).

The objective of this document is to provide guidance on any subsurface management of soil, fill materials, and water that will be disturbed during activities at the FESL.

2.0 Supporting Analytical Data/Site Characterization

This Plan utilizes existing analytical data for the FESL in order to develop management practices for fill and soil encountered during excavations within the FESL boundaries. As noted above, fill materials at the FESL have been studied through extensive subsurface evaluations which have included: soil borings, test pits and groundwater monitoring wells. Appendix 2 contains a summary table of all the sub-surface investigations conducted on the FESL as well as the investigation logs. Specific data relating to the Site is summarized below:

FESL Fill Materials and Soil Gas:

Previous investigations have characterized the landfill based on numerous soil borings, test pits and groundwater monitoring wells. The Soil Vapor Intrusion Assessment Report prepared by LaBella on behalf of the City, June 2011 included a comprehensive review of all the subsurface investigation work at the FESL. This review resulted in categorizing the FESL subsurface into four distinct quadrants, which are described below and are shown on Figure 3.

Quadrant A (North of Emerson Street, West of Colfax Street):

Quadrant A is characterized by the presence of both insufficiently incinerated highly putrescible waste, and illegally disposed chemical waste, resulting in the presence of anthropogenic methane gas due to the decomposition of putrescible materials, as well as CVOC contamination in soil vapor and groundwater. Methane flux was measured at levels ranging from 33 to 1,200 ug/ m^2 -min, and/ or soil gas methane concentrations were recorded above 5,000 parts per million (ppm). Modeled groundwater CVOC contamination contours are depicted on Figure 6. Soil vapor CVOC contours are depicted on Figure 7. The fill material in this area ranges in thickness from no fill material observed in the western portion of the quadrant to approximately 23-ft. thick in the central portion of the quadrant. Fill thickness contours are depicted on Figure 5. The cover thickness in this quadrant ranges from less than 1-ft. in the northeastern portion of the quadrant to greater than 3-ft. in the central portion of the quadrant. Underlying the cover material, the fill consists of putrescible waste (wood, paper, misc. refuse,), metal, plastic, rubber, brick, glass and some ash in the central and northern portions of the quadrant and predominantly ash in the southern portion of the quadrant in proximity to Emerson Street. These findings are consistent with the historic information reviewed. Some locations within this quadrant were noted to have fill material placed directly on top of bedrock, which would indicate portions of the quadrant were excavated prior to filling. Some testing

locations indicated apparent native material beneath the fill materials and overlying the bedrock. This native material included in some locations silt and peat deposits which would be consistent with a marsh/swamp area. Locations without fill materials are generally located in the western portion of the quadrant and consist of native silts and sands.

This quadrant was generally the last to be filled, Figure 3, and as such the fill material varies from fully combusted ash material in the southeastern corner to partially incinerated or direct burial of unincinerated or putrescible solid waste in the central portions. The western portion of this quadrant was generally not filled and the 500 Lee Road parcel underwent a fill relocation project during construction; as such, fill materials are not located beneath the main building or power house building. Additionally, the 1770 Emerson Street parcel underwent a fill relocation project during construction of a new building from 2010 to 2011; as such, fill material is not located beneath this new structure. The central portion of Quadrant A contains the CVOC plume depicted in Figure 6 and designated as the "P-1 plume". This plume is likely due to either 1) direct disposal of waste solvents sometime around the closing of the landfill (1971); 2) post-landfill dumping; or 3) fire training operations by GM, at which time the property was owned by the State of New York. Additionally, the presence of methane due to the FESL was recorded on field meter at concentrations within the explosive range; however, laboratory analysis has indicated that the field meters overestimated the methane concentrations (refer to Section 4.1 for more information of the limitations of methane gas meters). According to analytical laboratory results, the methane concentrations were just below the lower explosive limit (LEL). In addition to the methane gas, CVOCs have been documented in soil gas in the central portion of this quadrant.

Quadrant B (North of Emerson Street, East of Colfax Street):

Quadrant B was active as a landfill during the periods of high and low incinerator efficiency, resulting in areas consisting of well incinerated ash fill material, putrescible waste, and methane. Investigations in the northern portion of Quadrant B, within the Edison Tech parcel, revealed only sparse amounts of un-incinerated material. Methane flux readings in this quadrant ranged from 15 to 140 ug/ m^2 -min. An apparent discrete CVOC plume is also present in this quadrant (i.e., separate from the P-1 plume in Quadrant A); see Figure 6. This plume appears limited in extent, generally within the 535 Colfax Street parcel and is believed to be related to post-landfill operations. CVOCs in soil gas were not extensively studied within this quadrant.

The impacted CVOCs in groundwater within the southeastern portion of this quadrant may be due to post-landfill operations. The City was not accepting liquid waste, at least for direct burial, beginning at least as early as July 1969. Incineration of solvents, even when incomplete, would likely provide complete combustion. Furthermore, this area was developed in 1985 as a metal fabrication facility which could have used chlorinated solvents. Concentrations of CVOCs in this area have been found to increase over time.

The fill material thickness in this area ranges from no fill material in the northeast portion of the quadrant to 22.5-feet thick in the western-central portion of the quadrant (Figure 5). The cover thickness in this quadrant ranged from less than 6-inches to up to 2-feet thick. Underlying the cover material, the fill consists of ash, putrescible waste (wood, paper, and misc. refuse), metal, plastic, rubber, brick, glass, etc. in the central and northern portions of the quadrant and predominantly ash with some putrescible waste in the southern portion of the quadrant. Fill material in some locations was noted to be directly on top of bedrock, while other locations indicated apparent native material between the fill and bedrock. Native organic materials (peat) were noted in several borings overlying the bedrock. In locations without fill materials (generally the western portion of the quadrant), the native material consisted of silts and sands.

This quadrant began to be filled sometime around 1960 and until 1970 (Figure 3). Based on a review of contract documents and a 1971 aerial photograph, it appears that a majority of this quadrant was covered and seeded in 1970. Few soil gas points have been installed in this quadrant, and thus methane in soil gas is not well characterized; however, the available data shows significantly lower concentrations in soil gas than in the central portion of Quadrant A. The fill materials in this quadrant consist of ash material in the southern portion and some partially incinerated or direct burial/ putrescible waste in the central -northern portions. The thickness of fill material ranges from no fill to greater than 20 feet in the western central portion of the quadrant. The 655 Colfax Street building (Edison Tech) contains a basement constructed directly on top of bedrock and thus a complete removal of fill material was completed for the northern and southern portions of the main building (see Site Specific Investigation for more information regarding 655 Colfax Street). Partial removal of fill material has also occurred at the 655 Colfax Street parcel. During construction, most of the site was excavated to bedrock and filled with reworked material including a mixture of clean fill and historic landfill material. Additionally, the 1560 Emerson Street building has undergone two additions, both of which received partial fill removals at that time.

Quadrant C (South of Emerson Street, West of Colfax Street):

Quadrant C was landfilled during the years of maximum incinerator efficiency, resulting in the lowest methane detections of the FESL quadrants.

Based on aerial photography it appears this quadrant began to be filled in the 1940s in the southeastern corner and expanded north and west until about 1961 when landfilling likely ceased in this quadrant. The fill materials generally consist of ash materials; however, some paper and wood were noted in select testing locations. Portions of this quadrant were also noted to have fill material placed directly on top of bedrock and in other locations to contain marsh deposits between the fill material and bedrock. Soil gas testing in this quadrant is limited; however, the testing completed did not indicate significant landfill gas flux readings. Four fill material removal actions have occurred in this quadrant during redevelopment work; specifically, all fill material beneath the 55 Vanguard Parkway building was removed during site development. Partial removals of fill occurred at 1667 Emerson Street during a parking lot expansion project and at 1555 Emerson Street during a development project. Additionally, a small removal was conducted to address radiological contamination; the general location of the fill removed and the extent of a 1988 radiological survey are included on Figure 4. Fill thickness and areas of partial removal are included on Figure 5.

Methane flux readings in Quadrant C were nearly identical to the control sample, at 33 to 35 ug/ m^2 -min; however, only two soil gas sampling locations were located within this quadrant. In addition, the presence of organic, rich, marsh-derived soils at depths in this quadrant could also be a natural source of methane.

CVOCs are present in groundwater in the north-central portion of Quadrant C, immediately south of Emerson Street to a limited extent and east of Vanguard Parkway (Figure 6). It is possible that this plume is related to the P-1 plume in Quadrant A, from an entirely different source, or a combination of both. The groundwater contamination present along Emerson Street likely stems from the P-1 plume, while the shallow soil contamination further to the south may be derived from its own source.

The fill material in this area ranges from no fill material in the western portion of the quadrant to 11.2-feet thick in the central and north-central portion of the quadrant. The cover thickness in this quadrant ranged from no cover to up to 3-feet thick. Underlying the cover material, the fill consists predominantly of ash material with some slag and cinders. It should be noted that some borings

indicated lesser (trace) amounts of paper or wood; however, these were not the predominant material. Some locations within this quadrant were noted to contain fill material directly overlying bedrock, while others contained native materials between the fill and bedrock. The native materials included apparent marsh deposits (clayey silt with organics) in some locations up to 5-feet thick.

Quadrant D (South of Emerson Street, East of Colfax Street):

Quadrant D received material from the Smith Street incinerator prior to the 1954 construction of the on-site incinerator (Figure 3). Native marsh soils are present in this quadrant and likely account for methane flux readings of up to 190 ug/ m^2 -min in the central portion of the quadrant. A small plume of CVOCs was detected along Colfax Street (Figure 6), but this plume has been determined to have been caused by industrial site operations subsequent to the closure and re-development of the FESL.

The fill material in this area ranges from no fill material in the eastern and portions of the northern section of the quadrant to 11.5-feet thick in the central portion of the quadrant (Figure 5). The cover thickness in this quadrant ranged from approximately 6-inches to 3-feet thick. Underlying the cover material, the fill consists predominantly of ash with some cinders, slag and glass noted. In addition, some wood and charred paper was noted in select borings. Some locations within this quadrant were noted to have fill material overlying bedrock, while other locations noted apparent native material between the fill material and bedrock. The native material in some locations included apparent marsh deposits (clayey silt with organics) in some locations up to 6.8-feet thick.

Groundwater:

Groundwater has been investigated at the FESL site beginning in approximately 1988. Previous investigations have documented groundwater conditions across most of the site, on both a site-wide and parcel-specific scale. These investigations have resulted in the installation and sampling of a total of 53 wells at the Site. This includes 45 shallow bedrock (or overburden/ bedrock interface) and 8 deep bedrock wells. During the subsequent years, several of the historic monitoring wells were damaged, lost or otherwise rendered unusable, some due to development and new construction. As part of a 2010 investigation, an inventory and assessment of all existing wells on the site was performed. The resulting inventory indicates that a total of 47 monitoring wells were still present on the site and in a serviceable condition.

The 2010 investigation also included the sampling of 29 of these monitoring wells and analysis for VOCs, using USEPA Method 8260B. Appendix 3 provides a summary of the 2010 groundwater analytical results. Twenty of the twenty nine recently-sampled wells contained VOCs at levels at or above the method detection limit (MDL); nine wells showed no detectable VOC presence. Of the twenty wells with VOCs detected, eleven did not contain VOCs at concentrations in excess of the NYSDEC's Part 703 Drinking Water Standards. The remaining nine wells contained one or more VOCs at a concentration that exceeded the standards. Seven of these nine wells exhibiting exceedances were located on or in close proximity to the IHWD site, and are related to the previously-identified VOC plume. The remaining two wells (GW-7R and GW-9) are located on Colfax Street and appear to represent sources of VOCs separate from the IHWD site.

The following is a summary of significant findings from these previous investigations:

• The groundwater flow system at the Site is comprised of two hydro-stratigraphic units, an Upper Water Bearing Zone (UWBZ) and Intermediate Water Bearing Zone (IWBZ). Both

zones are located in bedrock.

- Water levels typically reside in the rock but occasionally exist in the lower portions of the overburden/ fill.
- Groundwater in the UWBZ is influenced by large diameter storm sewers running northsouth along the eastern edge of McCrackanville Street and east-west within Emerson Street. These storm sewers were reportedly installed in blasted bedrock. All storm sewer inverts appear to be below bedrock in McCrackanville and Emerson Streets. Invert elevations of these sewers correspond closely to groundwater elevations. The table below illustrates the approximate bedrock elevation, and groundwater elevation for select wells and the nearest invert elevation available from Monroe County mapping.

Well	Bedrock Elevation	Groundwater Elevation	Nearest Sewer Invert Elevation
GMX-MW-3	525.39'	519.86'	517.08' (90 feet Southeast)
GMX-MW-6S	524.26'	516.51'	515.93' (150 feet East)
LAB-106	531.16'	514.06'	514.33' (90 feet North/Northeast)

Note: All elevations are NGVD 29.

As shown in the table above, the bedrock elevations range between about 6 and 16 feet above the groundwater elevation and about 8 and 17 feet above the elevation of the sewer inverts. The groundwater levels range between about 2.8 feet above the sewer inverts to about 0.3 feet below the sewer invert. Although the invert elevations are 90-feet or more away from the wells, this indicates that the sewers in McCrackanville and Emerson Street are likely at least 6 feet below the top of bedrock and appear to extend deeper into rock down Emerson Street and the portions west of W Street. Additionally, the groundwater levels correlate closely with the invert elevations, which indicate that groundwater is influenced by the fracture network in the bedrock in close proximity to the storm sewers which provide a preferential pathway for groundwater and thus a flow zone.

- A CVOC plume in groundwater is located on the City-owned parcel at 1655 Lexington Avenue (Quadrant A), which comprises approximately 60% of the approximate 24 acre NYSDEC-listed IHWD Site. Given that total CVOCs in Monitoring Well P-1, located in the apparent source area of the plume, have historically been as high as approximately 54 ppm, dense non-aqueous phase liquid (DNAPL) may be present based upon the > 1% solubility for CVOCs per DER-10.
- The most recent sampling event (July 2010) showed a decrease in CVOC concentrations to 34,007 parts per billion (ppb), which is a decrease of 37 percent from the previous event. Relatively low levels (19.2 ppb) of petroleum-related VOCs (benzene, toluene, ethylbenzene and xylene, or BTEX) were also detected in the 2010 event.
- The CVOC plume extends generally toward the east and south from well P-1. Interference of the impacted groundwater by the storm sewers located along the east and south limits of the IHWDS appears to have limited the extent of the plume. Some extension of the plume has occurred to the south and east beyond the storm sewers in Emerson Street and McCrackanville Street; however, the extent is limited and CVOC concentrations were significantly lower in wells on the opposing side of these sewers (Figure 6).

• CVOCs at significantly lower concentrations than the IHWDS area described above have been identified in other areas of the FESL. These occurrences appear to be limited in lateral extent and may be the result of post-landfill site uses (Figure 6).

3.0 Development and Pre-Excavation Planning

Projects planned within the FESL boundaries should be evaluated to determine their location with respect to the location of fill material. If the proposed development is located outside of the footprint of the waste-fill area as shown on Figure 5, fill materials derived from FESL operations are unlikely to be encountered and; therefore, would not be subject to the guidance described in this document. However, proposed development locations located near the edge or within the footprint of the waste-fill area are subject to this guidance. In this case, a thorough review of previous investigations to evaluate information pertinent to the intended project location should be conducted. A list of previous investigations is presented in Appendix 1; additionally, all of the available boring logs from previous investigation are located in Appendix 2.

A geophysical survey, using ground penetrating radar, may also be used prior to invasive work to help identify subsurface features; however, due to the nature of historic fill material and the results of previous surveys it appears that geophysical surveys do not contribute much value to subsurface evaluations.

4.0 **Pre-Construction Sampling**

A site specific pre-construction investigation following NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, May 2010 guidelines (DER-10) is recommended to characterize the type of material that is expected to be excavated during construction activities. This type of investigation can fill site specific data gaps. Waste-fill materials may vary considerably from one location to the next over relatively short distances; as such, site specific investigations can provide valuable information and allow proper preparation. The overall objective of such characterization is to obtain, observe, and analyze samples that are representative of the waste-fill that will be excavated during construction. This section contains guidance on sampling methods, sample frequency, and laboratory analysis that may be used to characterize waste-fill.

Prior to initiating a pre-characterization sampling event, a plan for such work should be developed. The plan should include at a minimum the following:

- Summary of Development Include details on areas of excavation, depths, volume of material to be excavated/ disturbed and anticipated volumes of spoils generated.
- Proposed Field Screening This should include meters and personnel qualifications.
- Proposed Sampling Include basis for locations and number of samples based on the above. Also include proposed laboratory.

4.1 Investigation and Sampling

Conventional subsurface exploration methods consisting of test pits, test borings, or other methods may be used for sampling waste-fill materials. Overall, the intent of such explorations is to view materials that may be excavated during construction for observable signs of contamination. Such signs typically include:

o Staining

- o Odors
- Gases, fumes or vapors detected by monitoring instruments
- o Observable Sheens

Field Meters

In addition to the observable signs indicated above the following instruments should be used for screening during the investigation:

- Photoionization detector instruments (PID) These instruments operate by drawing a sample of ambient air or gas into a chamber where the gas is ionized using a light source of a specific energy (either 10.2 or 11.7 eV). The intensity of ionization energy is then measured and converted to a signal and a scale reading in parts-per-million (ppm) of total volatile organics concentration. It should be noted the ionization potentials of measureable constituents varies and the PID lamp utilized may need to be evaluated to ensure accurate results.
- Radiation Meter These portable survey instruments can detect alpha, beta, and/or gamma radiation, and display the radiation level over a specified time period (e.g., counts per minute, milli-Roentgens per hour, etc.). A scintillation probe, radiation ion chamber, or GM probe is typically used to detect the radiation. Each meter detects different forms of ionizing radiation with different levels of efficiencies. Geiger Muellen (GM) meters are often used as survey meter to detect gamma radiation and would be an appropriate instrument to use at this site (i.e., Ludlum Meter).
- Landfill Gas Meter the gas meter utilized should be capable of detecting the following; carbon dioxide, carbon monoxide, methane, and hydrogen sulfide. The capabilities of the gas meter utilized should be identified prior to usage. Interference of the gas meter may occur from the detection of non-target gases. Such interferences can significantly impact the meter readings and may be biased high for methane concentrations and not representative of the actual vapor concentrations. If warranted, analytical testing may be necessary to determine actual concentrations.

These instruments are generally available in the Rochester, NY area and can be rented from several sources. They should; however, only be operated by individuals trained and experienced in their use, limitations, and capabilities for data generation. The observations and sample collection described above should be documented on test pit logs, test boring logs, or other field notes by a qualified environmental professional.

Laboratory Testing

The investigation explorations may be used to gather samples that can be used for laboratory analysis waste characterization. Sampling should obtain a sufficient number of samples to be representative of the total mass of material that is expected to be excavated during construction. Sample collection should incorporate the results of onsite monitoring equipment. If laboratory analysis demonstrates that the samples are non-hazardous, then the material excavated can be managed within the FESL boundaries.

All samples should be collected in accordance with DER-10 unless the fill has been previously sampled. Per DER-10 Section 3.11, a minimum of four (4) samples per acre should be collected to characterize historic fill materials and if different types of historic fill material are encountered (e.g. ash, construction debris, etc.) each type of material must be sampled.

Soil samples should be sent under standard chain-of-custody procedures to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory (or appropriate certification at the time of work).

In addition to the general sampling indicated above, targeted investigation and sampling should be considered in order to generate samples that are representative of the overall waste-fill mass to be excavated. Specifically, regular sampling along foundation elements and utility cuts is recommended. The developer and/or design engineer is cautioned that test pit or test trench type explorations should be limited only to the depth and extent of anticipated construction excavation. Such excavation should not be advanced to depths greater than anticipated construction excavation depths. The appropriate geotechnical investigations should be conducted to ensure the sub-surface material can provide adequate support.

The designer/ developer is cautioned that information derived from grab and composite samples may be limited as a result of the method of sampling. Grab samples are representative of a single location and conditions at that location may vary from similar-appearing material located nearby the sample location. Composite samples tend to average conditions from the locations that the composite represents and; therefore, may result in laboratory analytical results that dilute elevated contaminant concentrations or obscure non-detect results. These limitations should be considered in developing a sample plan. Per DER-10 composite samples may not be used for those samples analyzed for volatile organic compounds. Additionally, composite samples are generally not acceptable in determining the nature of material (DER-10 Section 3.2(d)).

Variations to sampling methods dictated in DER-10 may be acceptable and should be described in a Sampling Method Plan.

4.2 Material Characterization Sample Analysis

The intent of pre-construction sample laboratory analysis is to characterize the material to be excavated. Previously gathered data, as well as the history of operation of the site should be used in collaboration with analytical results during characterization. The developer/designer should consider past site information and these factors in planning lab analyses. The following analysis should be considered for characterization:

- CP-51 SVOCs
- TCL VOCs
- RCRA Metals

In the event that excessive spoils are anticipated and disposal offsite appears necessary, disposal facility requirements for analysis should also be considered when sampling, particularly the requirements for non-hazardous and hazardous waste classifications (see Section 5.5).

5.0 Excavation Management

5.1 Management Plan

Previous investigations and laboratory analyses of the waste-fill material in the FESL have shown the majority of it to be non-hazardous solid waste. However, hazardous waste has also been encountered at discrete locations and in very limited quantities. Any waste material that is excavated during construction or site development must be properly managed; therefore, the development process can be greatly simplified by

planning to minimize excavation needed for construction and anticipating the waste-fill that will be handled during excavation and construction in a Management Plan.

A Site Specific Management Plan should be developed for each project and depending on project size should include the following in some level of detail:

- 1. Historic Information and Pre-Characterization Testing Data This should include previous testing locations, depths, materials encountered and laboratory results.
- 2. Summary of Development Proposed This should include proposed project summary, mapping with excavation areas and depths and estimates on volumes of material to be generated.
- 3. Comparison of Pre-Characterization Work in Relation to Development Work This should identify methods of handling excavated materials which do not coincide with the site-specific pre-characterization. Materials which do not coincide with the pre-characterized material should be sampled and analyzed to determine the appropriate disposal or re-use measures.
- 4. Classification and Handling of Excavated Materials This should include a description of the anticipate material, volumes and management onsite or disposal offsite. This should include both soil/fill and water.
- 5. Environmental Monitoring This should define the monitoring to be completed, including specific meters, area to be monitored and anticipated frequency of monitoring.
- 6. Roles and Responsibilities This should define entities/companies involved and the key contact people, responsibilities and contact information. At a minimum this should include:
 - Property Owner
 - City DEQ
 - Engineer/Architect
 - Environmental Monitor
 - Contractor
- 7. Community Air Monitoring Plan (CAMP) This should include the NYSDOH Generic CAMP or a site specific CAMP.
- Health and Safety Plan Additional details on the components of such a plan are provided in Section 8.

5.2 Development Considerations

NYSDEC regulations under Part 360 (Part 360-1.7 (b) (9)) allow solid waste from non-hazardous inactive landfills, which is excavated as part of construction project, to be returned to the same excavation, or other excavations containing similar solid waste. Such materials may also be relocated within the landfill's existing footprint with the property owner's approval, provided there is an acceptable location and the handling, relocation, and disposal practices are deemed acceptable to NYSDEC in writing and in advance of the project.

Hazardous waste that is generated as part of the excavation cannot be replaced on the site and must be properly characterized, managed, and disposed off-site at a permitted facility. The party responsible for generating the excavated material (developer or property owner) would be responsible for such characterization, management, and proper disposal. Accordingly, construction planning and development design that allows minimal site excavation means less material needs to be handled on-site (solid waste) or disposed off-site (hazardous waste).

Developers and design engineers for planned development should also consider that the following elements of construction may be affected by waste characterization and management:

- Construction De-Watering: Groundwater in some areas of the landfill has been found to contain chemicals at concentrations that warrant proper handling, management and disposal. Construction design and planning should consider existing data regarding groundwater quality and depths to allow for proper management of groundwater flow into excavations during construction, if de-watering is necessary for construction purposes. See Section 6 for further information regarding excavation dewatering.
- Waste Variability: Construction schedules should allow contingency time and measures to address potential unanticipated conditions.
- Basements: If possible, new structures with basements should not be constructed within the waste fill area. If basements are necessary, waste materials must be removed from beneath and adjacent to the basement structure. Basement structures should have adequate drainage to prevent the accumulation of groundwater, and they should be adequately ventilated to prevent the accumulation of landfill gases and/or volatile organic compounds.
- Schedules: Scheduling of construction will need to allow for potential sampling, monitoring, and management of waste-fill material that is excavated during the course of construction. Sampling, in particular, may lead to laboratory analysis. Analytical results typically take from several days to several weeks to be generated. Therefore, design and construction schedules should allow for adequate sample analysis turn-around time.

Site development plans and designs should allow for placement of the waste-fill as backfill (if the material is deemed acceptable by a geotechnical engineer) and subsequent grading and covering of the material with soil and vegetation, or a structure (building, parking lot, etc.). The objective of placing cover over the solid waste material is to prevent routine contact with the waste. Therefore coverage should generally consist of approximately 18 inches (compacted) of clean soil cover and vegetation, or a substantial barriers consisting of concrete slab, the building slab, or asphalt cover. It also meets the minimum cover thickness criteria for ash monofills specified in NYSDEC's Part 360.

Material management planning should include a possible need to temporarily stockpile excavated solid or hazardous waste and measures to prevent its contamination of other materials. Stockpile locations should not be in the vicinity of storm sewers and drainage courses and downwind property boundaries. Stockpiles should be placed on impervious material (minimum 6-mil Poly sheeting) with perimeter berms. Stockpiles or exposed waste areas should be covered to prevent migration by wind-blown dust or storm water runoff until final placement and final cover is established. The cover must be maintained and monitored daily until the materials are placed back into the excavation or disposed of off-site.

If quantities of excavated material are too great to be incorporated in site grading, then placement off-site within the confines of the FESL footprint may be possible. Such placement, however, will require permission of the receiving property owner, NYSDEC, and possibly the City and Monroe County Department of Health. The proposed method of placement and cover material will need to be identified to the agencies. Therefore, wherever possible, site development should allow for replacement of excavated solid waste-fill back on the site to be developed.

5.3 Geotechnical Considerations

Typical structures constructed at the FESL site generally consist of slab-on-grade foundations or, for larger structural loads, spread footings, piers, or other foundation elements that provide greater bearing capacity and minimize waste fill disturbances. The extent and nature of fill at the site is a limiting factor on the types of structures which can be placed at the site and requires that careful consideration be given to foundation design of proposed structures so that adequate structural support is maintained. Therefore, developers and design engineers will need to carefully balance the extent and methods of subsurface excavation that will be necessary for foundation construction against the goal of minimizing the amount of waste-fill that needs to be excavated and properly managed during construction.

5.4 Screening and Sampling Procedures for Excavated Soil and Fill

Monitoring of waste-fill excavated during construction should be considered for the following reasons:

- To determine that the waste-fill actually excavated during construction is consistent with the characterization of fill developed prior to construction.
- To allow characterization of the non-hazardous or hazardous nature of solid waste excavated in the event that no pre-construction planning, sampling, or analysis was performed.
- To segregate materials based on impacts and avoid overpaying for disposal.
- Health and safety of onsite staff, and the community.

During excavation, soils should be screened intermittently and anytime the general conditions of the excavated materials change or as otherwise specified in the Management Plan. Screening will consist of visual and olfactory observations, supplemented by a photoionization detector, landfill gas meter (i.e. methane and hydrogen sulfide) and radiation meter. Any significant findings including staining, non-soil fill types, odors, elevated PID readings above background, gas meter or radiation readings two times above the background reading will be noted in the site log book, and the associated material will be segregated for management as described below. Additionally, a Community Air Monitoring Plan (CAMP) should be instituted during excavations. Details on screening and the responsibilities of the Environmental Monitor are provided in Section 7.1.

Sampling of excavated waste-fill materials during construction should be considered if either of the following conditions exists:

• No pre-construction planning or sampling was performed.

- If conditions during actual construction are significantly different than those observed during preconstruction investigations (pre-characterized material) or described in the approved management plan.
- Waste disposal characterization.

The recommended frequency of sampling during construction should follow the guidelines of DER-10, or as dictated in the NYSDEC approved Management Plan. Laboratory analysis of samples during the excavation phase can be used to determine whether the waste material excavated is hazardous or non-hazardous. By USEPA and NYSDEC regulation a generator of such waste is also allowed to make this determination using knowledge of the waste. Therefore, previously gathered data for an intended development site, as well as the history of operation of the site may be used to form knowledge of the waste.

5.5 Hazardous Waste Characterization

Generally the waste-fill material excavated at the FESL site will be considered to be non-hazardous solid waste provided laboratory analysis does not show it to be a "Characteristic Hazardous Waste". It is also possible that waste encountered in the fill such as a labeled drum may be a "Listed Hazardous Waste". The generator of the waste will need to use knowledge of the waste and how it was generated to determine if a listed waste is present. Please note that "Characteristically Hazardous" and "Listed Hazardous Waste" are both defined terms within USEPA and NYSDEC regulation.

Solid waste will be considered as hazardous if it exhibits a Hazardous Characteristic, namely, ignitability, corrosivity, reactivity, or toxicity. If Listed Waste is contained within the solid waste sample, the mixture may also be considered as hazardous waste. If it is determined that listed waste is present in the excavated soil, the NYSDEC's Technical Administration Guidance Memorandum No. 3028 of November 30, 1992, "Contained-In" Criteria for Environmental Media, provides guidance on how the listed waste may be managed.

Past analyses from the FESL site have generally identified waste as hazardous when they exhibit a hazardous waste characteristic by toxicity test (see below). In most cases, it should be possible to limit laboratory analyses for waste to be excavated during site development to the following parameters:

- Hazardous Waste Characteristics ignitability, corrosivity, reactivity and toxicity.
- Hazardous Waste Characteristic of Toxicity this analysis is performed by using the Toxicity Characteristic Leaching Procedure (TCLP)
- Volatile Organic Analysis

Disposal facility requirements for analysis should also be determined when sampling the excavated soil, particularly the requirements for non-hazardous waste landfills as these usually have the most stringent analytical requirements.

Because the majority of waste-fill within the FESL site consists of incinerator ash, waste analyses have not to date shown the characteristics of ignitability, corrosivity or reactivity to be present. Potential leachability of heavy metals has been the primary reason that a sample may be characterized as hazardous waste by the TCLP procedure. Therefore, it may be possible to limit TCLP analyses to metal constituents. If TCL VOC analysis indicated elevated levels then it would be appropriate to also include the VOC constituent portion of

the TCLP analyses. The developer/designer should consider past site information and these factors in planning lab analyses.

5.6 Non-FESL Related Areas of Concern

While the sub-surface material within the FESL footprint contains historic fill material, it should be noted that impacts from other non-landfill related sources may be present. Several industrial and manufacturing facilities operate or have operated within the FESL foot print. Many of these operations require the use and storage of solvents and petroleum products which are inherent with the potential for environmental impacts. Section 2 provides an overview of the extensive information available regarding the FESL site. Individual properties should be researched to determine the potential for post landfill issues

Consideration should be taken to identify impacts as non-FESL related when impacts are identified near potential onsite point sources or if the impacts are inconsistent with pre-characterization or previous site knowledge.

5.7 Classification and Handling of Excavated Soil and Fill

Excavated materials should be classified utilizing excavation monitoring, historic knowledge and preconstruction investigation data. Material classifications should be established considering the material reuse, disposal requirements and handling requirements. Materials classifications and the handling of each should be addressed in a site specific Management Plan.

Re-use options should be considered during the classification of fill materials anticipated for excavation. Solid waste excavated may be maintained and replaced on-site with similar materials (assuming non-hazardous), or otherwise within the footprint of the inactive landfill when covered appropriately. Specifically, excavated materials may be relocated to another parcel which lies within the FESL boundaries and properly covered.

The Table below provides an example of how site specific sub-surface materials may be pre-characterized. Management Plans should also include an expanded section on the management of each classified material.

Table 1 Example of Material Classifications and Management

Class of Material Physical Description Screening Parameter Management	Class of Material	Physical Description	Screening Parameter	Management
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Class of Material	Physical Description	Screening Parameter	Management
Class 1 Material	Clean soil, clean fill	No Discernable Odor	Staging on-site for
	materials, and visually	PID readings less than	subsequent reuse.
	identifiable non	50 ppm	-
	contaminated solid	No ash/cinders/slag or	
	waste (e.g. Brick,	other regulated waste	
	concrete, rock – i.e.,		
	construction and		
	demolition debris)		
Class 2 Material	FESL Ash/Fill and	Visibly identifiable as	Staging on-site for
	smaller pieces of metal,	ash/cinders/slag or other	subsequent reuse or
	plastic, wood, paper,	regulated solid waste	off-site disposal as a
	etc.	(grey color,	regulated solid waste
		characteristic	_
		appearance)	
Class 3 Material	Soil and Fills with	Moderate Petroleum	Material should be
	Moderate Petroleum/Cl-	Odor Madamata Staining	analyzed per DER-10. Material could be
	VOC Impacts that may Exceed CP-51 Soil	Moderate Staining	
		PID Readings Greater than 50 PPM and less	reused on site if lab results below Part 375-6
	Cleanup Objectives	than 1000 PPM	criteria or otherwise
			sent off-site for
			disposal.
Class 4 Material	Solid waste Physically	May or may not contain	Off-site Disposal to be
	unacceptable for re-use	evidence of Impairment	determined based on
	(e.g. larger pieces of	or regulated waste	waste stream
	refuse, metal scrap, rail	of regulated waste	characterization.
	road ties)		onaraotorizationi
Class 5 Material	Significantly impacted	Strong Petroleum or	Off-site Disposal to be
	soils either solid waste	other odor	determined based on
	impacted with	Significant Staining or	waste stream
	Petroleum or Possibly	presence of free phase	characterization.
	solid waste impacted by	liquids	
	other chemicals	PID Readings of 1000	
		PPM or greater	
		Laboratory analysis	
		required for	
		characterization	
Class 6 Material	Radiation Contaminated	Ludlum Radiation	Off-site Disposal at
	Soil/Fill	Meter readings 2x	regulated facility
		greater than background	

As indicated previously, it is possible that characteristic hazardous waste could be encountered during site development. If such waste is encountered and excavated, it will be the responsibility of the site developer or owner (as the generator of the hazardous waste) to properly handle this waste. Management of such hazardous waste will require characterization, management, and off-site disposal at an appropriate approved facility, consistent with NYSDEC and USEPA hazardous waste management regulations.

6.0 Management Plan for Excavation Derived Water

Groundwater and/or rainwater may enter excavations and require removal (dewatered) to facilitate construction activities will require proper handling, treatment, and disposal (i.e., small quantities of water that do not interfere with construction activities may not require removal). In the event that groundwater is encountered, the groundwater will be containerized, characterized and disposed of in accordance with applicable regulations. The following should be considered to manage excavation derived water:

- Adequate storage (frac tank) of excavation derived waters.
- The appropriate number and size of pumps to dewater the excavation.
- Best management practices to minimize sediments during pumping.
- Discharge, if applicable and under permit, to the Monroe County Pure Waters (MCPW) sanitary system. The excavation waters must be containerized, sampled and analyzed for parameters specified by MCPW.
- Onsite treatment (activated carbon, air stripping, etc.) if warranted to meet MCPW sewer use criteria.
- In the event that off-site transportation of impacted water is necessary, a valid 6 NYCRR Part 364 Waste Transporter Permit shall be required. All disposal documentation at an approved treatment storage and disposal facility should be provided to the City.

7.0 Environmental Monitoring

It is strongly recommended an Environmental Monitor, preferably one with previous experience with the FESL site, be assigned to projects disturbing the sub-surface material within the FESL boundaries on a full time basis during those activities which will result in subsurface disturbances. This will significantly reduce the potential for any improper management, transportation or disposal of materials.

7.1 Environmental Monitor Duties

The responsibilities of the Environmental Monitor should include the following:

- Working with the contractor to pre-determine offsite disposal locations.
- Preparation of waste stream profile(s) if offsite disposal of excavated material is anticipated.
- Work closely with the contractor to monitor excavations for evidence of environmental impairment, and/or the presence of regulated solid waste. Specifically, this monitoring will include use of a photo-ionization detector (PID), a radiation meter and a gas meter.
- Make all determinations with regard to the classification of materials as detailed in the site specific Management Plan.
- Direct the contractors as to the proper placement and covering materials at the site.
- Assist the contractors as to the proper staging, covering, characterizing, transporting and disposing of materials requiring off-site disposal.
- Sampling, analysis, and any additional waste stream profiling material sent off-site as required by the receiving part 360 landfill, or the NYSDEC.
- Implementation of a Health and Safety Plan (HASP) for personnel at the Site. All contractors are responsible for their own health and safety plans (Section 8).

• Implementation of the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP) and Fugitive Dust and Particulate Monitoring Plan during all fill relocation/grading work where there is exposed fill materials. See Appendix 4 for generic plans.

7.2 **Responsibilities of the Contractor**

It is recommended that all contactors involved with subsurface work at FESL be made aware of the history and provided all available information regarding a site. In addition contactors should be aware of these additional requirements for subsurface work:

- Dust/particulate and VOC suppression (i.e., wetting excavations, equipment, etc.) may be necessary, as directed by the Environmental Monitor.
- Maintain stockpiled regulated materials that are staged onsite (i.e., covering with polyethylene sheeting).
- Decontamination of the contractors' equipment prior to removing it from the site.

8.0 Health and Safety Plan

Past investigations of the FESL site have shown that materials encountered during subsurface exploration or construction activities may require special care and monitoring. These include constituents in materials associated with the known FESL filling and undocumented direct burial of materials and potentially naturally occurring from bedrock at the site, and include:

- Volatile organic compounds these include petroleum derived constituents as well as a limited number of chlorinated volatile organic compounds.
- Heavy metals from incinerator ash a variety of heavy metals are present in detectable concentrations in the incinerator ash. Past analyses of incinerator ash have only shown lead to be present at concentrations that exceed TCLP toxicity limits. Health and safety planning should generally consider measures to prevent exposure to heavy metals through engineering controls (dust suppression) or use of personnel protective equipment, or other measures.
- Radioactivity a radiation survey and subsequent sampling and laboratory analysis revealed the presence of a relatively small volume of low-activity radioactive waste material associated with glass lenses and refuse fills in the southwest portion of the FESL. Approximately 12 tons of the low-level radioactive waste material was excavated at 1645-1685 Emerson St. and disposed of off-site. Although unlikely, it is possible that other low-level radioactive materials could be encountered during construction. Health & safety planning should consider measures to monitor waste materials for radiation levels above background.
- Landfill derived gases these may include methane, hydrogen sulfide, or carbon monoxide. Landfill gas sampling and characterization performed during previous investigations has not shown significant levels of these gases to be generated from the waste fill at the locations sampled. A brief description of the landfill gases identified in each Quadrant are presented below:

Quadrant A (Northwest Portion of FESL):

Quadrants A is characterized by landfill gas flux measurements between 100 and $1200 \,\mu g/m^2$ -minute, and/or soil gas methane concentrations above 5,000 ppm. In addition, this quadrant has also been documented with chlorinated-VOC contamination in soil gas, soil, and groundwater.

Quadrant B (Northeast Portion of FESL):

Quadrants B is characterized by landfill gas flux measurements between 15 and 140 μ g/m²minute. An apparent discrete CVOC plume is also present in this quadrant (i.e., separate from the P-1 plume in Quadrant A); however, this plume appears limited in extent and generally is within the 535 Colfax Street parcel. CVOCs in soil gas were not extensively studied within this quadrant.

Quadrant C (Southwest Portion of FESL):

Quadrant C is characterized by landfill gas flux measurements between 33 and 35 μ g/m²-minute; however, only two soil gas sampling locations were located within this quadrant. In addition, the presence of organic rich marsh-derived soils at depth in this quadrant could also be a source of methane.

Quadrant D (South of Emerson Street, West of Colfax Street):

Quadrant D is characterized by landfill gas flux measurements between 57 and 190 μ g/m²-minute. In addition, there is one apparent small area of Chlorinated-VOC contamination in this quadrant, which appears to be the result of post-landfill industrial activity rather than landfill operations.

Sub-surface gases may be present in other locations and they may be generated in greater concentrations from bedrock at the site (see below).

Naturally occurring substances that may require health and safety planning include the following:

• Bedrock derived gases - this includes primarily methane and hydrogen sulfide. The bedrock underlying the site contains pockets of naturally occurring methane which has been encountered in past borings at concentrations that may approach or exceed explosive limits. In addition, methane and hydrogen sulfide have the potential to collect in deep excavations. Both of these gases are defined as "simple asphyxiants" and therefore consideration should be given to health and safety protection for these conditions.

It is recommended that a Health and Safety Plan (HASP) is developed for construction activities based on sample analytical results, information specific to the parcel being developed, specific construction tasks to be performed, and the potential for exposure for site workers. Previous investigations and construction activities have routinely been performed. These previous activities has shown that overall, the potential for worker exposure is relatively low. However, all contractors and developers should consider the need for health and safety planning relative to their specific development, and planned activities and tasks.

Health and safety planning should also give consideration to other construction related issues, such as but not limited to trenching safety (as is required under OSHA regulations 29 CAR 1910.1926), or other construction-related OSHA regulations.

9.0 Summary and Limitations

Significant development has been performed at the FESL site and future development is anticipated. Past investigations at the FESL site has shown the waste-fill to contain primarily non-hazardous solid waste. NYSDEC regulations allow such solid waste to be excavated and replaced during the course of construction and development. However, hazardous waste has occasionally been encountered in the past at the site and excavation for construction purposes creates the potential for additional generation of hazardous waste. Further, it is desirable to reduce the potential for individual exposure to even non-hazardous solid waste. Accordingly, this guidance document has been developed to assist developers and designers in planning for the management of those materials.

This document is intended for guidance purposes only. The information contained in the document is neither to be considered as specific direction or policy binding on any of the agencies or firms mentioned in the document. Significant investigation has been performed at the site in the past to develop a general understanding of subsurface conditions. However, such conditions can vary significantly between locations sampled. Further, conditions at a single location can change with time. Therefore, responsibility for properly characterizing excavated materials, planning construction, and appropriately managing any materials encountered, generated, or handled during site development is solely the responsibility of the site developer, owner, and designer.

10.0 Reporting Requirements

In accordance with 6NYCRR Part 613.8, contractors/owners are obligated to report any spill, leak, or discharge of petroleum products from bulk petroleum storage facilities to the New York State Department of Environmental Conservation. In addition, in accordance with 6NYCRR Part 595.2, contractors/owners are obligated to report any release of a reportable quantity or an unknown quantity of a hazardous substance from bulk chemical storage facilities as listed in 6NYCRR 597.2 when this contractual relationship is with the owner, agent of owner, or person in constructive possession or control of such a hazardous substance.

11.0 Contact Information

The individuals, agencies, and organizations listed below may be contacted for additional information:

Joseph Biondolillo City of Rochester, Department of Environmental Services Division of Environmental Quality 30 Church Street, Room 300B Rochester, NY 14614 (585) 428-6649

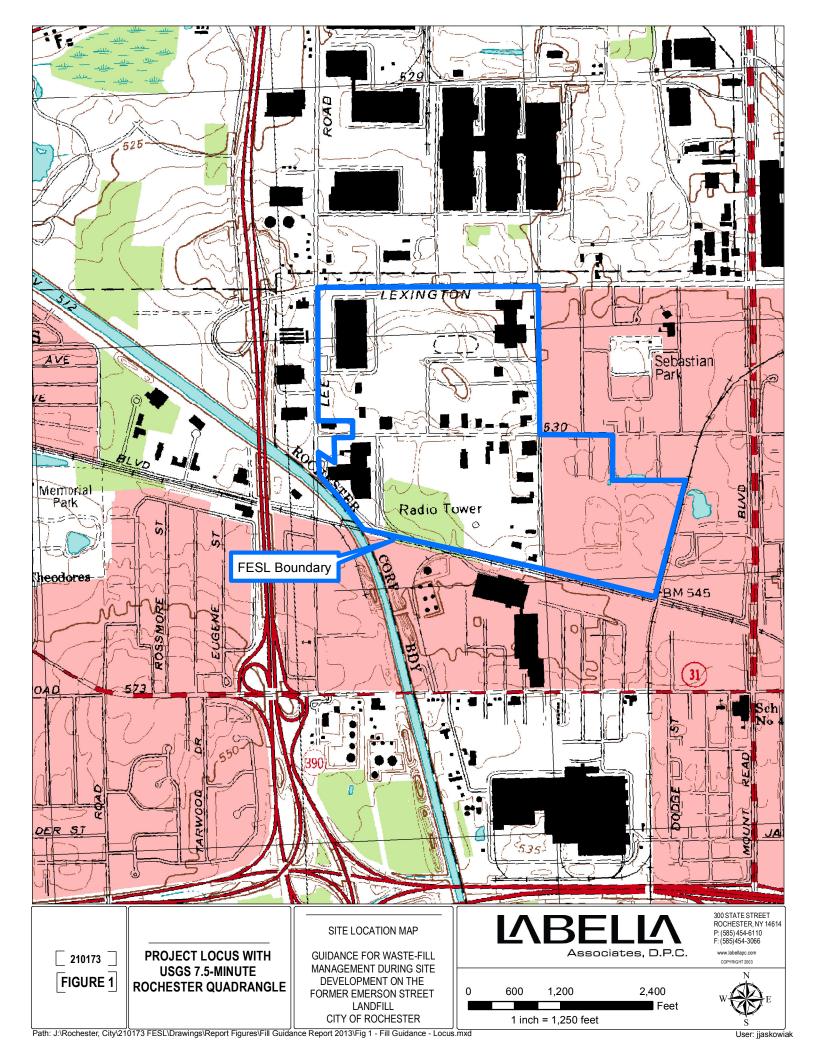
Todd Caffoe NYSDEC Region 8 Div. of Hazardous Waste Remediation 6274 E. Avon Lima Road Avon, NY 14414 (585) 226-2466 Mark Gregor City of Rochester, Department of Environmental Services Division of Environmental Quality 30 Church Street, Room 300B Rochester, NY 14614 (585) 428-5978

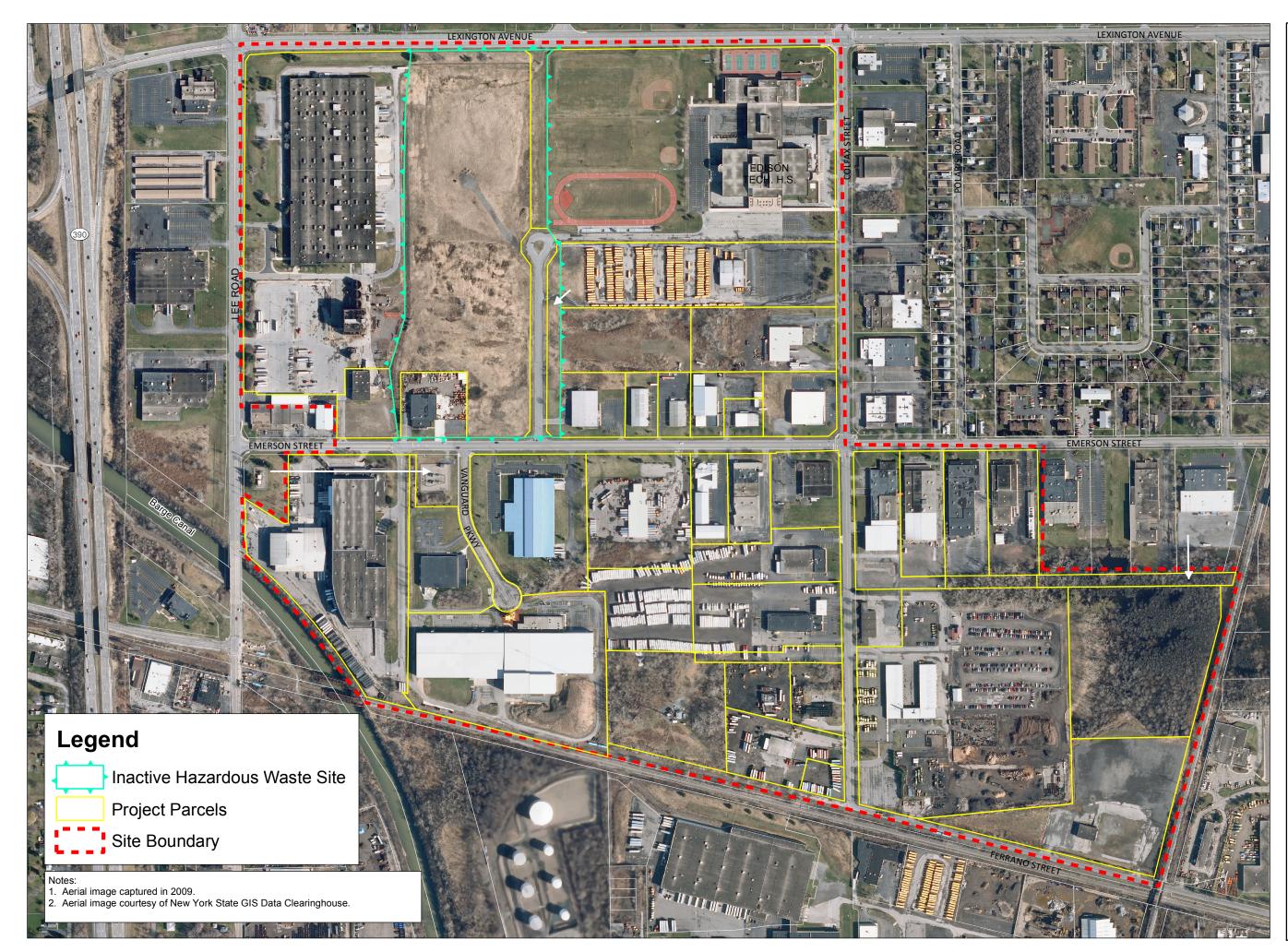
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Figures



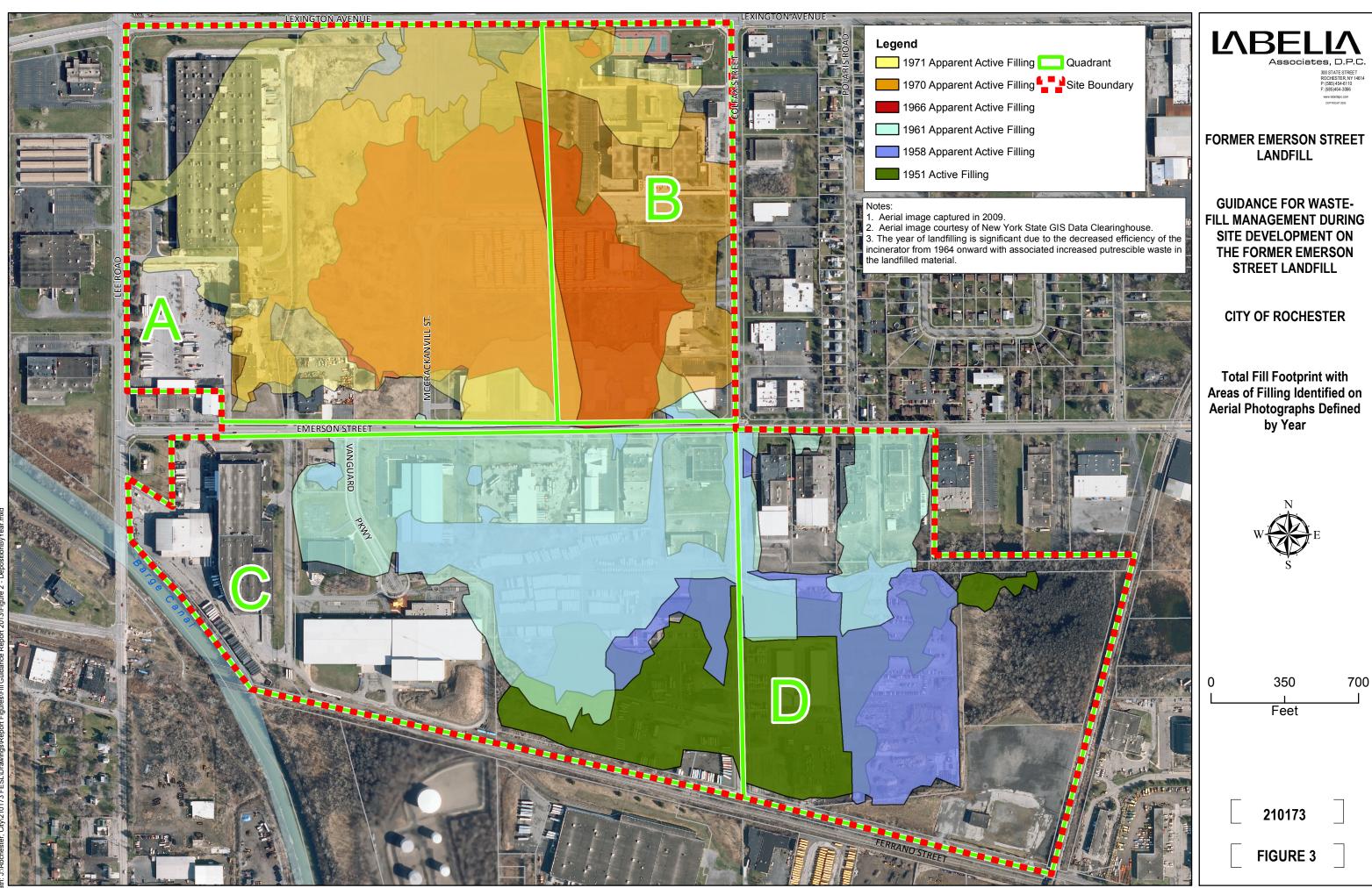


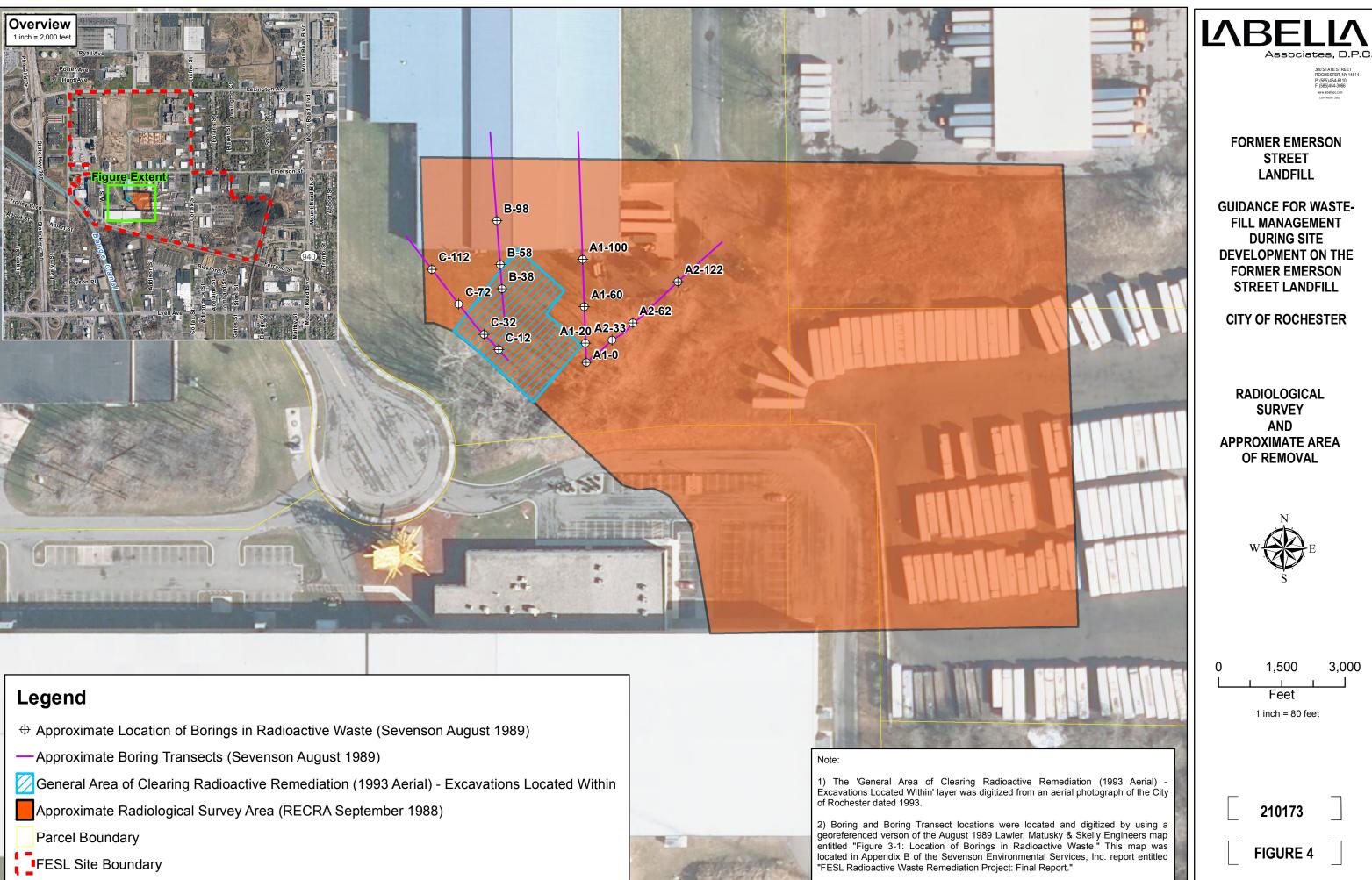




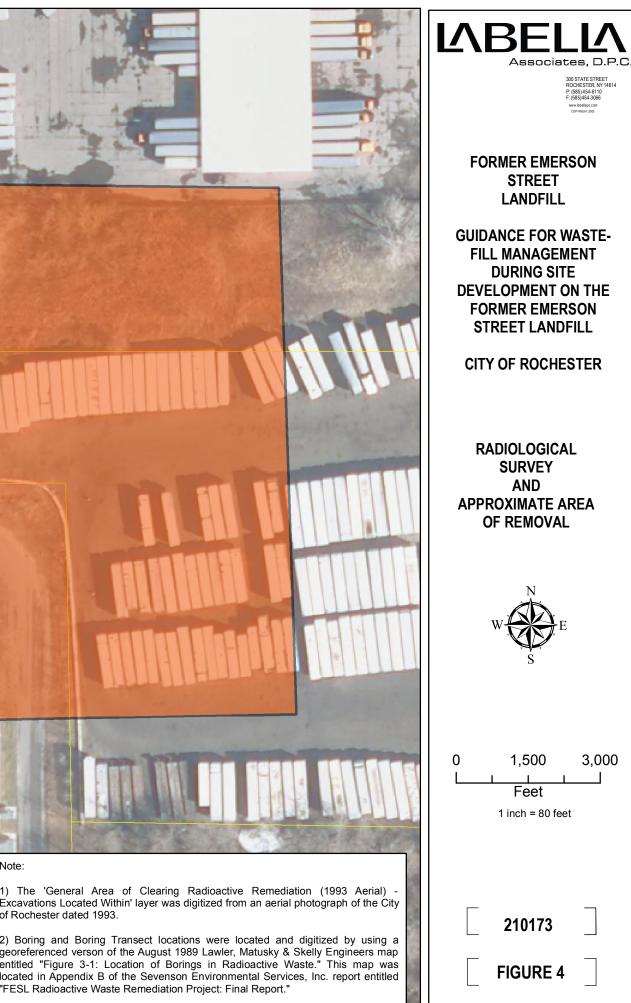
Information

0	350 I Feet	700
	210173 FIGURE 2	













Legend

- LaBella Monitoring Well
- Day Monitoring Well
- ▲ NYSDEC Monitoring Well
- ▲ Well Found September 17, 2010
- GeoMatrix Monitoring Wells
- PEKO Monitoring Wells
- Historic H&A Monitoring Well
- X Destroyed Historic H&A Monitoring Well
- Incative Hazardous Waste Site

Parcel Boundaries

- Site Boundary
- Combined Sewer
- Sanitary Sewer
- Trunk Sewer
- Storm Inlet Laterals

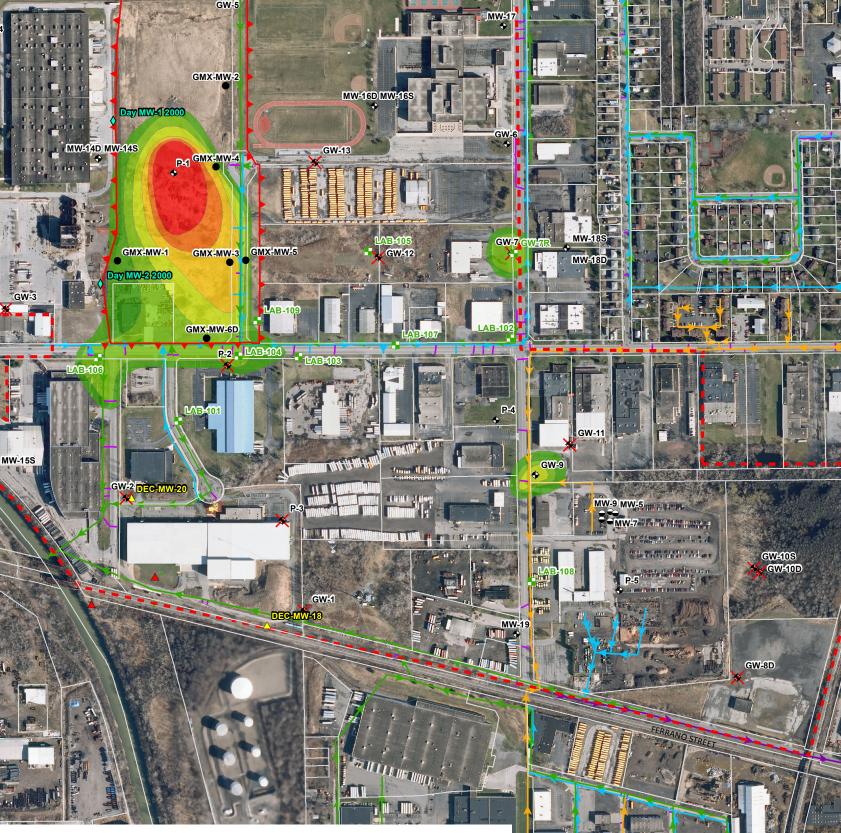
Landfill List CVOC Contours - Conceptual Site Model Concentration (ppb) 10,000-31,100

- 5,000-9,999
- 1,000-4,999
- 100-999
- 20-99.9

5-19.9 Notes:

1) Concentration contours were initially modeled using Golden Surfer version 8 using the Natural Neighbor function. This base model was used to develop the conceptual site model displayed in this figure. In addition to the contaminant concentration, the conceptual site model accounts for additional influential site factors such as: groundwater flow, preferential pathways (i.e., sewers), geology, etc. Based on the method of derivation, these contours are inferred and may not represent the actual extent of impacts/concentrations.

2) CVOCs used in modeling are those known to be attributed to the Former Emerson Street Landfill, and include: Tetrachloroethene, Trichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Vinyl Chloride, 1,1,1-Trichloroethane, 1,1-Dichloroethene, Chloroethane, and Chloromethane.



, City/210173 FESL/Urawings/rkepuri





GUIDANCE FOR WASTE-FILL MANAGEMENT DURING SITE DEVELOPMENT ON THE FORMER EMERSON STREET LANDFILL

CITY OF ROCHESTER

CHLORINATED VOC CONTAMINATION AREAS

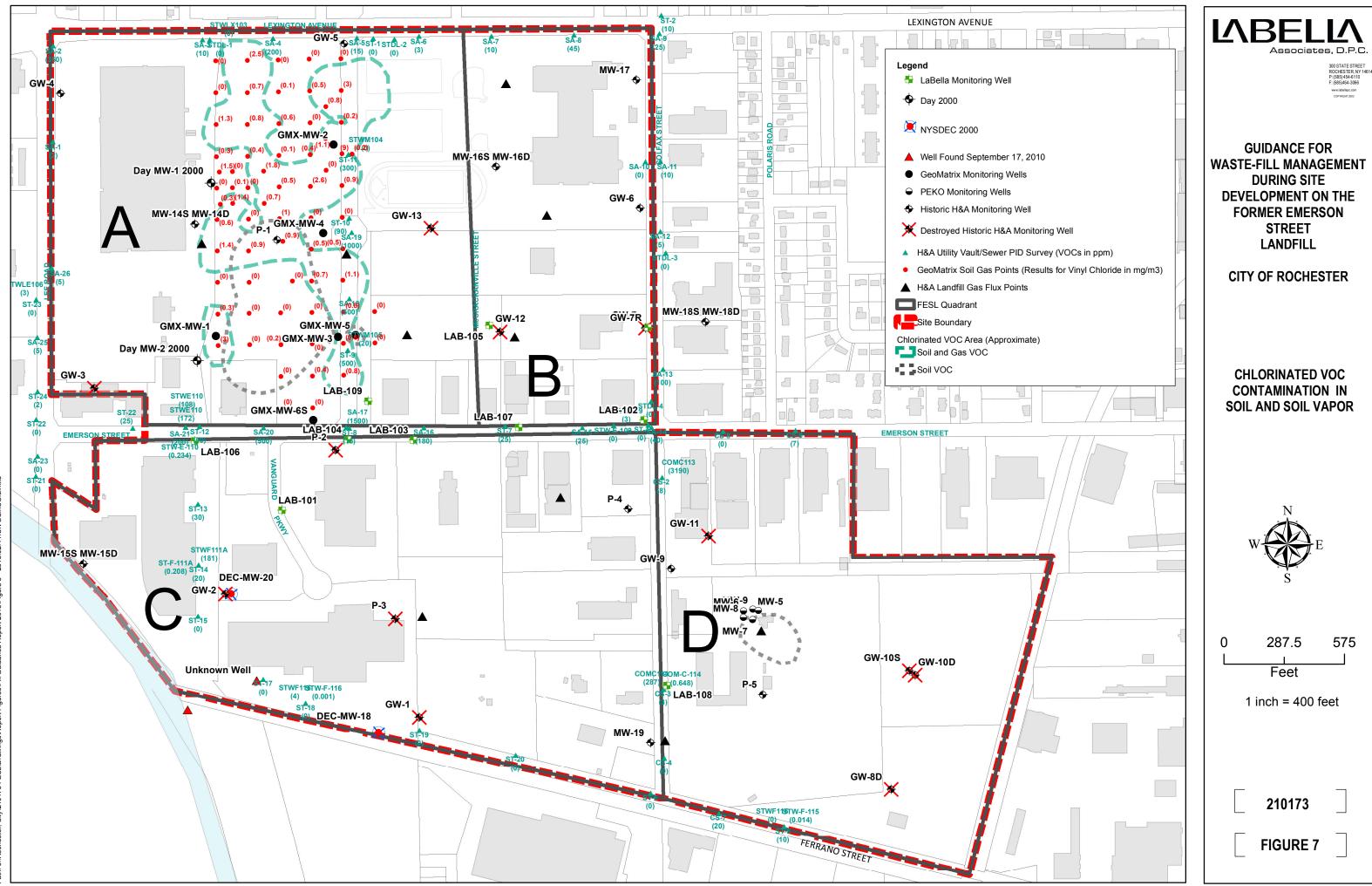


0	360	720
1	1	
	Feet	

1 inch = 500 feet

210173

FIGURE 6





Appendix 1

Table 1

Vapor Intrusion Assessment Work Plan: Data Review, Site Screening and Site Prioritization

Summary of Relevant Documents Relating to the Former Emerson Street Landfill

1	Engineering Investigations at Inactive Hazardous Waste sites, Phase II Investigation, Emerson St Landfill, Site No. 828023. Addendum. New York State Department of Environmental Conservation. February 1990.			
2	Review of the Emerson St Landfill City of Rochester Phase II Investigation Reports. Malcolm Pirnie. May 1990.			
2	Proposed Emerson St Landfill Action Plan. City of Rochester. November 1990.			
3	Health & Safety Plan Prepared for City of Rochester, NY, Emerson St Landfill. Sevenson Environmental Services. March			
4	1992.			
5	Delisting Petition for Properties Associated with the Former Emerson St Landfill Site. Haley & Aldrich of NY. April 1993			
6	Delisting Petition for the Former Emerson St Landfill Inactive Hazardous Waste Site. City of Rochester. August 1993.			
7	Former Emerson Street Landfill Modified Remedial Investigation (Vol 1 through 4). Haley & Aldrich of NY. January 199			
8	Test Pit and Soil Sampling Program Report, Former Emerson St Landfill. The Sear-Brown Group. May 1995.			
	Delisting Petition for Properties Associated with the Former Emerson Street Landfill Site. Haley & Aldrich of NY, July			
9	1995.			
10	Guidance for Waste-Fill Management During site Development, Former Emerson St Landfill. Haley & Aldrich of N 1995.			
11	Revision to the Guidance for Waste Fill Management During Site Development, Former Emerson St Landfill. Haley &			
11	Aldrich of NY. July 1997.			
12	Health & Safety Plan for Site Construction. 1667 Emerson St. Labella Associates. November 1997.			
13	Former Emerson Street Landfill, Sub-Slab Ventilation Guidance Document. Haley & Aldrich of New York. May 2000.			
14	Former Emerson St Landfill Remedial Investigation Report for City of Rochester Parcels 4, 10, and 11. Labella Associate & Geomatrix Consultants. April 2001.			
15	Former Emerson St Landfill Pre-Development Study – City of Rochester Parcels 4, 10. 11. Labella Associates & Geomatri Consultants. November 2001.			
16	Phase I Environmental Site Assessment. Undeveloped Land. 1695-1715 Emerson St. Day Environmental. June 2002.			
17	Phase I Environmental Site Assessment, Undeveloped Land, 1695-1715 Emerson St. Day Environmental. October 2002.			
18	Delisting Petition for Selected Parcels Associated with the Former Emerson St Landfill Site. Parcels 4 and 10. Labella Associates. December 2002.			
19	Environmental Management Plan, 1695-1715 Emerson St (Parcel #2), Former Emerson St Landfill. Day Environmental. January 2003.			
20	Fill Sorting Closure Report. Parcel 10A, Former Emerson St Landfill. Day Environmental. September 2004.			
21	Phase II ESA Report. Proposed Lechase Facility Expansion, Parcel 10C, Former Emerson St Landfill and Lechase Emerso St Building. Bergmann Associates. February 2007.			
22	Phase I Environmental Site Assessment Report. Parcel 10C, Former Emerson St Landfill, 1655 Lexington Ave. Bergman Associates. February 2007.			
23	Limited Phase II ESA Report. Parcel 10C Former Emerson St Landfill. Bergmann Associates. March 2007.			
24	Phase I ESA – Portion of 500 Lee Road, Rochester, NY. Day Environmental. November 2007.			
25	Former Emerson Street Landfill Sub-Slab Ventilation Guidance Document Update 2007. LaBella Associates. November 2007.			
26	City of Rochester Emerson St Landfill Radioactive Waste Remediation Project, Final Report. Sevenson Environmental Services. Date Not Listed.			
27	Record of Decision Chemical Sales Corporation Site Operable Unit #2, Off-Site Town of Gates, Monroe County Site Numl 8-28-086. Department of Environmental Conservation, Division of Environmental Remediation. March 2001.			



Appendix 2

	Consul	ting Ge	otechnical	ER, NEW YORK Engineers, TEST PIT REPORT		PIT NO. TP-9 NO. 70352-44		
PROJE LOCAT CLIEN	CT: ION: T:	FORMER ROCHES CITY O	EMERSON S TER, NEW Y F ROCHESTE	R	ELEVA	OCATION: E.G. Sackett Co., Inc., Emerson St. LEVATION:		
	ACTOR: MENT USE		GLE DRILLI DEERE 310			DRATION DATE: 11 Dec. 1 REP.: M. Beikirch		
SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE		DESCRIPTION OF MATERIALS		REMARKS		
				Dark brown coarse to fine SAND, common cobbles, fo damp.	ew boulders,			
			-			No OVA or radiation meter readings above background.		
-2	1			-FILL-				
-4				Same, more fine sand and silt, moist.				
			5.0	Gray-yellow-brown clayey SAND, some silt, common c		Water seeping into te pit from ~ 5.0 to 6.0		
-6 —			6.0	-FILL OR DISTURBED NATURAL MATERIALS		ft.*		
				Brown-tan clayey SILT, trace coarse to fine sand.				
				-GLACIAL TILL-				
-8			8.0	Bottom of Test Pit at 8.0 ft.				
- 10								
					•			
12 -						· · · · · · · · · · · · · · · · · · ·		
						* - See Note #3 on Subsurface Explorati Key.		
		R LEVEL	DEDTU	APPROXIMATE PIT DIMENSIONS AT SURFA	CE	SUMMARY		
DATI		IME*	DEPTH FT	LENGTH 9 feet WIDTH	3 feet	DEPTH: 8.0 ft. JAR SAMPLES:		
				BOULDERS		BAG SAMPLES: WATER LEVEL: * Not		
				8" to 18" DIAMETER: No. = Vol.	cu ft	Encounter		

DATE	DATE STARTED <u>8/5/88</u>				RECRA ENVIRONMENTAL, INC.	HOLE NO				
	FINISHED	8	<u>/8/8</u> 0F_		SUBSURFACE LOG	G.W. ELEV				
PR		NYSDE SITE #		ASE IL INVES	GATION LOCATION EMERSON STREET LANDFILL ROCHESTER, NEW YORK					
рертн , г т	RECOVERY	S AMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 12 18 18	DESCRIPTION	NOTES				
	1.5' 1.5' 1.4' 1.1' REC 100% RQD 70%	SB SB SB NX	1 2 3 4	2 4 5 7 6 11 20 25 12 12 44 71 13 32 50/.2' 	Brown SILT and SAND, trace clay, little root material, dry, loose. At 5.3 ft.: Grades to SILT, some sand, trace gravel, moist. At 5.5 ft.: 1-2 in. wet silt layer. At 10.3 ft.: Grades to fine to medium SAND, little clay, trace gravel, moist. [SILT and SAND] 13.2' Gray, fine textured dolomite, weathered horizontal fractures along bedding surfaces, some mottling, vuggy. White precipitate visible along fractures and in some vugs, slightly to highly reactive to HCI. Hardness ranged from soft to moderately hard depending on the extent of weather ing. [DOLOMITE BEDROCK] 18.5'	Micro R meter = 12 micro-rem/hr. Auger drilling refusal at 13.0 ft				
	SIFICATIO		VISU	AL		ASTM D1586-84, D2113-83				

DATE	STARTED	\$	3/9/	88	RECRA ENVIRONMENTAL, INC.	HOLE NO. <u> </u>			
FINISHED <u>8/10/88</u> SHEET <u>1</u> OF <u>1</u>				/88	SUBSURFACE LOG G.W. ELEV. 99.42				
PR		NYSDE SITE #		ASE IL INVES		TREET LANDFILL			
DEPTH-FT	RECOVERY	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 1 12 18 18 2	2 DESCRIPTION	NOTES			
_	1.5	SB	1	<u> 8 8</u> 16 12	Light brown SILT and CLAY fill, little to some sand, trace to little gravel,	Boring advanced with 4 1/4 in. I.D. HSA, truck			
	1.5'	SB	2	6 5 4 5	glass, plastic, wood, and paper, dry, loose to medium dense in situ.	mounted CME-55 drill rig. Driller - Rocky Baye			
5 <u> </u>	0.0.'	SB	6	$\frac{1}{3}$ 1	At 8.0 ft.: Wet	Assistant - Shawn Penrod			
				<u> </u>	[FILL] 8.5'	HNU = 0 ppm Geiger Counter = 0 mr/hr.			
10	1.2'	SB	7	<u>1 1</u> 34 44	Weathered bedrock zone. 10.0	Micro R meter = 6-12 micro-rem/hr.			
	REC 88% RQD 15% REC 98% RGD 43%	NX	2		Bedrock: Light gray, fine textured dolomite. Horizontal and vertical fractures, weathering apparent on fractured surfaces, white precipitate visible on fractures and in some vugs, slightly reactive to HCI. Soft to moderately hard depending on extent weathering. Drilling fluid return was lost during entire depth of coring. 20	Explosimeter = 100% LEL to a depth of about 2.0 ft. Seemed to be gas trapped below plastic liner. Auger drilling refusal at 10.0 ft. NX core run 1 and 2 drilled on 8/9/88. Rotary drilled with 3 7/8 in. tri-cone bit from 10.0 ft. to 20.0 ft. Coring was done with a long ear 5 ft. NQ core barrel and a long ear Series 2 drill bit. Split-barrel samples 3-5 were not included because a new location was needed due to the inability to penetrate the underlying material. Boring Completed at 20.0 ft. G.W. elevation taken on 12/16/88.			
CLA	CLASSIFICATION <u>VISUAL</u> METHOD OF INVESTIGATION <u>ASTM D1586-84. D2113-83</u> LOG DEVELOPED BY <u>ROBERT STEINER</u>								
PB.002	214.4								

	STARTED		8/11	<u>/88</u> /88	RECRA ENVIRONMENTAL, INC.	HOLE NOGW-5 SURFACE ELEV96.2
SHEET			0F _		SUBSURFACE LOG	G.W. ELEV. <u>87.02</u>
PR		NYSDE SITE #		ASE II INVEST		IREET LANDFILL
DEPTH-FT	RECOVERY	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 1 12 18 18 2	DESCRIPTION	NOTES
	1.8'	SB	1	6 6 12 18 7 3	 Light brown SILT, some sand, some gravel, little assorted trash and 	Boring advanced with 4 1/4 in. I.D. HSA, truck mounted CME-55 drill rig.
5	0.5'	SB	2	2 2	At 2.0 ft.: Loose in situ.	Driller - Rocky Baye Assistant - Shawn Penrod
	1.5'	SB	3	5 <u>3</u> 4 12 10 20	At 6.0 ft.: Little gravel, trash is absent, moist.	HNU = 1 ppm - SB 1-3 Explosimeter = 0% LEL Geiser Counter = 0 mr/hr.
 10	2.0'	SB	4	40 21	Ubserve, molse. [FILL] 9:0' Weathered bedrock zone 10.0'	Micro R Meter =
	REC 71% RQD 38%	RUN	1		Light gray fine textured dolomite, numerous horizontal fractures, large fracture at 13.2 ft. where drilling	8.73' on 11/9/88. Auger drilling refusal at 10.0 ft. NX core run 1 drilled from
15 20	REC 100% RQD 64%	RUN	2		fluid was lost. Highly weathered zones from 14.0 ft. to 15.25 ft., slight drilling fluid loss. No precipitate or vugs present. Rock was soft at weathered zones to moderately hard.	8.7 ft 13.7 ft. on 8/11/88. Rock fragments and cobbles were recovered from 8.7 ft. to 10.0 ft. NX Core run 2 drilled from 13.7 ft 18.7 ft. on
25					[DOLOMITE BEDROCK] 21.5'	8/11/88. Begin to encount- ter water entering hole at approximately 14.0. Rotary drilled with 3-7/8 in. tri-cone bit from 10.0 ft. to 21.5 ft.
 30						Coring was done with a long ear 5 ft. NQ core barrel. Run 1 was drilled with a long ear Series 2 drill bit. Run 2 was drilled with a long ear 58-60 carat drill
						bit. Boring completed at 21.5 ft. G.W. elevation taken on 12/16/88.
	SIFICATIO	ж	/ISU/	۱L	METHOD OF INVESTIGATION	ASTM D1586-84. D2113-83

PROJECT: F		ogeologists	3	IFIED REM	EDIAL INVESTIGATION	FILE NO. 70352-46
CLIENT: C CONTRACTOR: N	ITY OF ROCHES OTHNAGLE DRIL					SHEET NO. 1 OF 1 LOCATION: AC Roches
ITEM		CASING	DRIVE	CORE	DRILLING EQUIPMENT & PROC	(See Plan
TYPE INSIDE DIAMETE HAMMER WEIGHT HAMMER FALL	R (IN) (LB) (IN)	Auger 4-1/4 		 	RIG TYPE: CME-75, Truck-Mou BIT TYPE: 4-1/4 in. I.D. H. DRILL MUD: OTHER: Advanced augers to 1	Inted DATUM: NGVD S. Augers START: 28 May 19 FINISH: 1 June 19
DEPTH CASIN BLOWS (FT) PER F	BLOWS	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSI	FICATION AND REMARKS
 					Advanced augers to 12.0 ft.	without split spoon sampling.
_ _						
						usal at 12.0 ft. Competent Rock at 12.0 ft.
 					Apparent Top of C Notes:	
 					Apparent Top of C Notes: 1. No OVA readings above b	competent Rock at 12.0 ft. background in breathing zone. coactivity meter readings above
					Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in breathing 3. Set 6.0 in temporary ca	competent Rock at 12.0 ft. background in breathing zone. coactivity meter readings above g zone.
 - 15 					Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in breathing 3. Set 6.0 in temporary ca 4. Reamed with 3-7/8 in. t 20.0 ft. and set 2.0 in	competent Rock at 12.0 ft. background in breathing zone. coactivity meter readings above g zone. bsing to 12.0 ft. cri-cone rollerbit from 12.0 ft.
 					Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in breathing 3. Set 6.0 in temporary ca 4. Reamed with 3-7/8 in. t 20.0 ft. and set 2.0 in	competent Rock at 12.0 ft. packground in breathing zone. coactivity meter readings above g zone. using to 12.0 ft. cri-cone rollerbit from 12.0 ft. N. PVC monitoring well. ell in completed borehole, see
 					Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in breathing 3. Set 6.0 in temporary ca 4. Reamed with 3-7/8 in. t 20.0 ft. and set 2.0 in 5. Installed monitoring we	competent Rock at 12.0 ft. packground in breathing zone. coactivity meter readings above g zone. using to 12.0 ft. cri-cone rollerbit from 12.0 ft. N. PVC monitoring well. ell in completed borehole, see
 					Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in breathing 3. Set 6.0 in temporary ca 4. Reamed with 3-7/8 in. t 20.0 ft. and set 2.0 in 5. Installed monitoring we	competent Rock at 12.0 ft. packground in breathing zone. coactivity meter readings above g zone. using to 12.0 ft. cri-cone rollerbit from 12.0 ft. N. PVC monitoring well. ell in completed borehole, see
 					Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in breathing 3. Set 6.0 in temporary ca 4. Reamed with 3-7/8 in. t 20.0 ft. and set 2.0 in 5. Installed monitoring we Groundwater Monitoring	competent Rock at 12.0 ft. packground in breathing zone. coactivity meter readings above g zone. using to 12.0 ft. cri-cone rollerbit from 12.0 ft. N. PVC monitoring well. ell in completed borehole, see
 	WATER LEVEL		H (FT) TO:		Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in breathing 3. Set 6.0 in temporary ca 4. Reamed with 3-7/8 in. t 20.0 ft. and set 2.0 in 5. Installed monitoring we	competent Rock at 12.0 ft. background in breathing zone. boactivity meter readings above g zone. bsing to 12.0 ft. cri-cone rollerbit from 12.0 ft. rri-cone rollerbit from 12.0 ft. N. PVC monitoring well. ell in completed borehole, see Well Report.
	WATER LEVEL ELAPSED TIME (HR)		H (FT) TO: BOTTOM OF HOLE	WATER	Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in breathing 3. Set 6.0 in temporary ca 4. Reamed with 3-7/8 in. t 20.0 ft. and set 2.0 in 5. Installed monitoring we Groundwater Monitoring	competent Rock at 12.0 ft. background in breathing zone. foactivity meter readings above g zone. using to 12.0 ft. cri-cone rollerbit from 12.0 ft. n. PVC monitoring well. ell in completed borehole, see Well Report.

Cor	nsulting	YORK, ROCHES Geotechnica ts and Hydro	l Engineer	s,		TEST BORING REPORT	BORING NO. MW-14D	
PROJECT: CLIENT: CONTRACTO	CIT	MER EMERSON Y OF ROCHEST HNAGLE DRILL	ER	DFILL MODI	FIED REME	DIAL INVESTIGATION	FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: AC ROCHESTER	
I.	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDUR	ELEVATION: 534.81	
TYPE INSIDE D HAMMER W HAMMER F	EIGHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30	NX 2-1/8 	RIG TYPE: CME-75, Truck-Mounted BIT TYPE: DRILL MUD: OTHER: Advanced augers to 12	START: 27 May 1993 FINISH: 1 June 1993	
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFIC	ATION AND REMARKS	
-		5 7 8 8	\$1 20"/24"	0.0 2.0		Medium dense brown silty fine s sand, trace gravel, damp to dry -Fi		
		4 5 5	\$2 23"/24"	2.0 4.0		Medium dense brown silty fine s	SAND, damp.	
5		3 4 5 3 5 3 5 3 6 7 7 3 7 8	\$3 3"/24"	4.0 6.0		Loose brown silty fine SAND, l	ittle gravel, damp to moist.	
			\$4 20"/24"	6.0 8.0		Same, except moist to wet. -FILL-		
			\$5 23"/24"	8.0 10.0		Medium dense brown silty fine s Medium dense brown silty fine s	SAND, little coarse sand, damp.	
			\$6 15"/24"	10.0 12.0	11.5	-FI		
		50				moistROCHEST	ER FORMATION- L at 12.5 ft. etent Rock at 12.5 ft.	
15 20						2. No explosimeter or radioac	e)	
						 See Core Boring Report, pa Installed monitoring well 		
		WATER LEVEL	DATA			SAMPLE IDENTIFICATION	SUMMARY	
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO BOTTOM OF HOLE	WATER	OVERBURDEN (LIN FT): 12.5 O Open End Rod T Thin Wall Tube U Undisturbed Sample		
							MPLES: 6S RING NO. MW-14D	

H 4	& A OF NEW Y Consulting G Geologists	ORK, ROCHES eotechnical and Hydrog	Enginee	ers.			CORE BORING REPORT	BORING NO. MW-14D FILE NO. 70352-46 SHEET NO. 2 OF 2
DEPTH (FT)	DRILLING RATE (MIN./FT.)	CORE NO.	RECOVER	Y/RQD	WEATH- ERING	STRATA CHANGE (FT)	VISUAL CLASSIFICATIO	N AND REMARKS
								<u> </u>
	2					4	Began Coring at	
 	3	12.5					Light to dark gray, fine-grained very thinly color-banded. Track throughout. Closely to very clo	e pits and small vugs
15	2		87	102			-ROCHESTER FORM	
• -	2	R1	<u>87</u> 4	<u>102</u> 5*				
· -	3				MOD		* RQD based on rock core recover	red.
• •	3	19.6					Core block at 19.6 ft.	
-20	3	19.6 R2	<u>35</u> 6	<u>100</u> 17			Rough, vertical joints from 15.0) ft. to 15.7 ft. and fro
· -	3	κ2 22.5	0	17			17.9 ft. to 18.4 ft.	
· -	2	22.5			MOD		Gypsum nodule at 24.2 ft.	
- 25 -	2							
· -	2							
	2	R3	<u>118</u> 76	<u>98</u> 63		-		
· -	2							
-30	2				SL		Gypsum nodule, vug and parting a	at 27.8 ft.
• -	2	70 5						
-		32.5				-	Bottom of Boring	at 32.5 ft.
							Notes:	
35 —							1. Lost 320 gallons during cor	ing and reaming process.
-								
-								
40 —								
-	<u> </u>							
-		-						
-								
45								

Data by KPM	Sheet / of 2
SUBSURFACE EXPLORATION - TI	EST BORING LOG Boring No. 7-1 Project No
Project Name <u>EMERSON STREET</u>	$- Date \underbrace{\frac{8/1/89}{\text{start}}}_{\text{start}} \underbrace{\frac{8/1/89}{\text{finish}}}_{\text{finish}}$
Client <u>NYSTEC</u>	- Boring Location NE SECTOR - Reatester PROD.
Driller AMERICAN AUGER	Total Depth 33.5'
Monitoring Instrument(s) HNU.CGI. MSA361, DOS	Depth to Water25.88
SAMPLE HAMMER	Hole Diameter
Weight <u>+ ()</u> Ib	Ground Surface Elevation
Fallin.	

											.u	CLASSIFICATION OF MATERIAL		
	Depth	S/ 0"	6°	IS C	18"	Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20%	Remarks	
				r	-	Retair		Sam		Moist DRV WET 5m. N 3m. N 2.75m. 3m. N	0 -3' 3.5 10 10 * 18 21 24.5 25.5 26.5 27.5 28.5 28.5 28.5 29.5 30.5 31.5	C-COARSE little - 10-20% trace - 0-10% NO SAMPLING WAS ZED. BROWN SILTV SAND. MIVED GRAVED WOOD, GLASS. MIVED DEBRIS- (FILL) BLACK WOOD I DEBRIS DARE ASH. METAL DEBRIS DARE ASH. METAL DEBRIS INTRODUCED WATER IN BORING CUTTINGS BLACK WOOD, SILT WOOD DEBRIS BLALE COLOR WOOD DEBRIS BLALE COLOR SELERAL ON BEDRICK CLRE BARREL PLUGGED DOLOMITE GREY SELERAL SOLLITION VOIDS .75" GREY DOLOMITE (FINE GRAIN) FEW FRACTURES W/V.LOW WATER BEARING CAPACITY CARBONATE DEPOSITION-SOLUTION IN FRACTURES SMALL VOIDS - SOLUTION IN	SAMPLE RETANED 10076 LEL 1877M HAU INCREASEL DENGITU	2
										2.5 m. w	33,5	Zouc		
														ŀ
l										N				1

Boringt No. <u>P-1</u> Project No. <u>576-005</u>

Sheet 2 of 2

	ows	ed la	ery ()	elo	nent ling	ure ent	aphic nn	CLASSIFICATION OF MATERIAL f - fine and - 35-50%	Remarks
No. No. Sample	Instrument Reading	Moisture Content	Stratigraphic Column	m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%					
								SET 2" PUL MONITON WELL D 33.5' 10' ZO SLOT SLEEN #2 SANA FROM 33.5-21.5 SLHED. 40 PVC ZISER 3/8" BENTONITE PELLETS 21.5-79 70 FALS. BENTONITE SLUDEY 2 BALS HOLE PLUG ADDED PORTLAND CEMENT FROM 6' TO SULFALE PROTECTIVE STEEL CASING	5

SUBSURFACE EXPLORATION - TEST BORING LOG

Sheet _/_of_

Boring No. <u>GW-13</u> Project No. <u>376-005</u>

Project Name	ENERSON	STREET
--------------	---------	--------

KPM

Client NYS DEC

Data by -

Driller AMERICAN AUGER

Monitoring Instrument(s) HNUL CHI. IDES IMETER , MEA

SAMPLE HAMMER

Weight 140 Ib

Fall 30 in.

Date 1/28/89	A A A A A A A A A A A A A A A A A A A
start	finish
Boring Location Scotos cf	FIELD - NOLTH END
Total Depth29.	8
Depth to Water	22.14'00.
Hole Diameter	3
Ground Surface Elevation	536.5

ţħ			IS C		ned ple	very st)	iple o.	ment ding	ture tent	Stratigraphic Column	CLASSIFICATION OF MATERIAL f - fine and - 35-50% 꽃
Depth	0" to 6"	6" to 12"	12" to 18"	18° to 24°	Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraph Column	f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%
D-2	4	B	10	10	1	1.3	1		DEASE DRY	1.8	PLANT MATERIAL, BROWN DRY SILTY SANDY LOAM MIXED GRAVEL COHESIDE BLACK SILTY ASH. SLAG, CINDERS
5-7 10-12	4	B 24	10	11	1 1	.4	2		M. DENSE Moist DENSE Day		GLASS BLACK RASTIC. CINDERS, SILT. GLASS DARK FRIABLE FILL (CANS. GLASS, WOOD, PLASTIC. ASH & LINDER)
15-17	24	18	17	21		* 9	4		Dewse Dex	•	Some SILT, FINE SAND, LESS DEUSE (D) 12' DARK FRIABLE FILL (GLASS. PLASTC, FABRIC, ASH, CINDERS) Some PEBBLES - FINE SAND, SILT/1 COMPACT
30-22	24	14	12	7			5		M. Ormse Wer Min	A	PEBBLES - TIME SAND, SILT / COMPALT NO RECOVERY - THROUGH FALLEN DEBRIS AUGER REFLISAL = 21.2' COEING FROM 21.
									3.0 1.5 1.75 1.5 2.2 1.5 2.0	22 23 24 25 26 27 28 29	CORE BARREL PLUGEED GREY FRACTLIRED DOLONITE UNFORM 95% RECOVERY BOTTOM OF HOLE MEASURED © 29.8'

Boringt No. <u>GW-13</u> Project No. <u>576-005</u>

Sheet 2 of

Depth					Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL f - fine and - 35-50% m - medium some - 20-35%	Remarks
Õ	0" to 6"	to	12" to 18"	18" to 24"	Ret Sa	Rec (f	Sa	Inst Re	ΫŬ	Strat	c - coarse little - 10-20% trace - 0-10%	Веп
											SET 2" PVC MONITORING WELL @ 29.8' 10' SCHED 40 PUC SCREEN #2 SANDPACK TO 17.4' 3'B' BENTONITE PELLETS TO 16.3' BENTONITE SLURRY TO 1.4' PORTLAND CERENT TO SLEFACE PRUTECTIVE STEEL CASING	
									-			
												-
									-			

PROJE	CT:				on Street Landfill- SVI Investigation w York	Log of Well N	lo. LAB-109
BORIN	G LO				est of 1640 Emerson Street	TOP OF RISER ELEVATION: fmsl	DATUM:
DRILLI	NG C	ONT	RACT	OR: N	othangle Drilling	DATE STARTED: 12/13/10	DATE FINISHED: 12/14/10
DRILLI	NG M	ETH	OD: 4	4 1/4" [Diameter HSA	TOTAL DEPTH:	SCREEN INTERVAL:
DRILLI	NG EQ	QUIP	MEN	T: CME	E 850	27.0 fbgs DEPTH TO FIRST COMPL WATER:	12.0-27.0 fbgs . CASING: 2" PVC
SAMPL	ING I	METI	HOD:	Geop	robe (direct push) 4' acetate sleeves	LOGGED BY: RM	
намм	ER W	/EIGł	HT: 1	40	DROP: 30"	RESPONSIBLE PROFESSIONAL: RM	REG. NO.
DEPTH (feet)	Sample No.	Sample	Blows/ S	(mdd) MVO	DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast., structur cementation, react. w/HCl, geo. inter.		NSTRUCTION DETAILS R DRILLING REMARKS
	Sar	Sar	Blo		Surface Elevation: fmsl		flush-mount surface casing
1 - 2 - 3 - 4 - 5 -	- 1		NA	0	Topsoil Red-brown SILT with little fine sand and little fine medium angular gravel, moist throughout, no od ASH/FILL- Black sand with approximately 80% cin and 20% ash, trace glass, metal.	ors/ = 🗱 🕷	Cement/bentonite
6- 6- 7-	2	\mathbb{N}	NA	0			grout
8 - 9 - 10 -	-		NA	0			2" dia. schedule 40 PVC riser
10 11 - 12 -	-	Д	1971	U			
13 - 14 - 15 - 16 -	4	X	NA	0	As above with some wood pieces, saturated.		
17 - 18 - 19 -	- 5		NA	0	Brown fine to medium SAND, little silt, little fine a gravel, saturated.	ingular	
20 - 21 -					sampler refusal at 20.1 feet below ground surface Advance 4 1/4" HSA to 22' bgs (1.8' into bedrock).		• #00N Filter sand
22 - 23 - 24 - 25 -					Begin HQ rock core at 22.0' bgs. Run #1 Depth: 22.0-26.5 'bgs		15' 0.010" slot schedule 40 PVC well screen
26 27 28 29 30 31 32 33					Rec: 41" (76%) RQD: 4" (7%) Lithology: LOCKPORT FORMATION (Penfield Dolostone Member) Light to medium gray, fine-grained, medium-bed moderately hard to hard, siliceous Dolostone, wit occassional to frequent argillaceous partings and occassional shale interbeds. Zones of occassiona and vugs are present. Secondary crystallization (c gypsum) infilling of bedding planes, joints and vu common.	h – I pits – alcite or –	Bedrock corehole reamed with 3 7/8" dia. to 27' bgs.
34 - 35 - 36 - 37 - 38 - 39 -					Rock core details: *closely spaced bedding plane joints throughout *high angle joint at 24.9-25.1' bgs. *apparent void between 26 and 26.5' bgs. Appro 60 gallons water loss in this zone.		
40 -	t No				Geomatrix C		FESL WELL LOGS 9-2010.GPJ (4/11)
Projec	.ι ΙΝΟ.						Page 1 of 1

H& C	Consultir	YORK, ROCH ng Geotechni sts and Hyd	cal Enginee	ers,		TEST BORING REPORT	1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	BORING NO. B101			
PROJECT CLIENT: CONTRAC	CI	RMER EMERSO TY OF ROCHE THNAGLE DRI	STER	NDFILL MOD)IFIED REM	IEDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: AC Rochester			
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	DCEDURES	(See Plan) ELEVATION:			
HAMMER	SIDE DIAMETER (IN) 4-1/4 1-3/8 MMER WEIGHT (LB) 140 MMER FALL (IN) 30					BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers t					
DEPTH (FT)	CASING BLOWS PER FT	BLOWS	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	IFICATION AN	D REMARKS			
		7 5 8 10 4 4 4 3 2 5 9 43 100/.3	\$2 5"/24" \$3 19"/22"	3.0 5.0 8.0 10.0 13.0 14.8		Moderately hard, highly w dolomitic MUDSTONERO Bottom of Note: 1. Backfilled borehole to 2. OVA readings from samp S1 = 0 ppm S2 = 10 ppm (methane) S3 = 15 ppm (methane) No OVA readings above b 3. No explosimeter or radi	-FILL- rown clayey f ers and/or cr -FILL- ic, glass and own SILT with ACUSTRINE/FLL eathered, gra CHESTER FORM/ Boring at 14 ground surfa le screening packground in ioactivity me	SILT, and organic oal, ceramic fragments, d organic materialFILL- n black laminae, damp. JVIAL- ay, very fine-grained ATION- 4.8 ft. ace with soil cuttings. noted as follows: n the breathing zone.			
		WATER LEVEL	DATA	L		SAMPLE IDENTIFICATION	i i i i i i i i i i i i i i i i i i i				
			····	H (FT) TO:		SAMPLE IVENIITILALIUN		SUMMARY (LIN FT): 14.8			
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	ROCK CORED				
							BORING NO.	B101			

H&/ C	onsulting	YORK, ROCHE Geotechnic sts and Hydr	al Enginee	rs,		TEST BORING REPORT	BC	DRING NO. B102
PROJECT CLIENT: CONTRAC	CIT	RMER EMERSON	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION	SI	ILE NO. 70352-46 HEET NO. 1 OF 2 DCATION: AC Rochester (See Plan)
:	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	EL	LEVATION:
TYPE INSIDE DIAMETER (IN) HAMMER WEIGHT (LB) HAMMER FALL (IN)			Auger 4-1/4 	S 1-3/8 140 30	 	RIG TYPE: CME-75, Truck-I BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers while standard sampling.	.S. Augers SI Fl to 23.5 ft. DR	ATUM: FART: 13 May 1993 INISH: 13 May 1993 RILLER: S. Loranty & REP: J. Marschner
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AND F	REMARKS
 5 		7 13 18 7	\$1 24"/24"	3.0		Dense brown SILT little coa paper, plastic, carpet, dry		and, trace gravel with
 - 10 		2 3 23	· s2 12"/24"	8.0 10.0	9.5	Loose brown SILT, trace cla		dry.
 - 15		6 8 12 15	s3 9#/24#	13.0 15.0		Medium dense ASH, some brid newspaper, plaster board, d		
 - 20		4 6 9 9	\$4 2"/24"	18.0 20.0		Medium dense ASH with wood,	, damp.	
		100/.5	ר - ^{\$5} .	^{23.0} - Г	23.3	Loose ASH and dark brown cl cardboard and glass, dry. Moderately hard, highly we	-FILL- eathered, gray,	very fine-grained
			5"/6"	23.5			Boring at 23.5	
		ATER LEVEL	DATA			SAMPLE IDENTIFICATION	- I	SUMMARY
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	OVERBURDEN (L ROCK CORED (L SAMPLES:	
							BORING NO.	B102

	Consulting	g Geotechnic sts and Hydr	ESTER, NEW Cal Enginee Cogeologist	rs,		TEST BORING REPORT BORING NO. B102 FILE NO. 70352-46 SHEET NO. 2 OF 2				
)EPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSIFICATION AND REMARKS				
						Notes: 1. Backfilled borehole to ground surface with soil cuttings. 2. OVA readings from sample screening noted as follows: 31 = 3 ppm S2 = 10 ppm (methane) S4 = 100 ppm (methane) S5 = 0 ppm No OVA readings above background in the breathing zone. 3. No explosimeter or radioactivity meter readings above background from sample screening or in the breathing zone. 4. Sample S1 submitted for TCLP metals and hazardous charcteristics analyses. Sample S2 submitted for full TCLP analysis. 3. No explosimeter of the state of th				

	onsulting	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	rs,		TEST BORING REPORT	BORING NO. B1	03
PROJECT CLIENT: CONTRAC	CII	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION	FILE NO. 7035 SHEET NO. 1 OF LOCATION: AC R	2 ochest
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	CEDURES ELEVATION:	Plan) -
TYPE INSIDE HAMMER HAMMER		(IN) (LB) (IN)	Auger 4-1/4 	\$ 1-3/8 140 30	 	RIG TYPE: CME-75, Truck-Mo BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers t while standard sampling.	unted DATUM: .S. Augers START: 13 M FINISH: 13 M o 20.0 ft. DRILLER: S. L	- ay 199 ay 199 oranty arschr
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AND REMARKS	
	-							
E -								
– -		3 3 6	S1 8"/24"	3.0 5.0		Loose brown sandy SILT, so dry.	me gravel, trace organic ma -FILL-	terial
5	-	3		5.0	4.9	Loose dark brown and gray	ASH with plastic, wood, gla	 ss, me
	4					slag, dry.	-FILL-	
	4	3	\$2	8.0		Medium dense dark gray-bro	wn ASH, with metal, wood an	d silt
		6 12 13	4"/24"	10.0		damp.	-FILL-	
	4							
		7 8	\$3	13.0		Medium dense black ASH with and plastic, damp.	a wood and sandy SILT, trac	e glas
15	-	6 3	10"/24"	15.0			-FILL-	
		_						
┣ -		3 3 5	\$4 6"/24"	18.0 20.0		Loose dark brown WOOD, trad brown silt, damp.	ce metal slag and glass (asi -FILL-	h) and
20		6						
┣ -		100/.5	n \$5	22.0	22.3 22.5		n wood, pieces of metal sla	g and
			6"/6"	22.5		L	athered, gray, very fine-g	rained
<u> </u>							Boring at 22.5 ft.	
		WATER LEVEL	DATA			SAMPLE IDENTIFICATION	SUMMARY	
DATE	TIME	ELAPSED	DEPT	H (FT) TO:		0 Open End Rod	OVERBURDEN (LIN FT): 22	.5
		TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	T Thin Wall Tube U Undisturbed Sample	ROCK CORED (LIN FT):	
						S Split Spoon	SAMPLES: 55	

	H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists					TEST BORING REPORT BORING NO. B103 FILE NO. 70352-4 SHEET NO. 2 OF 2				
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION	AND REMARKS			
						Notes: 1. Backfilled borehole to ground sur S1 = 50 ppm (methane) S2 = 38 ppm (methane) S3 = 80 ppm (methane) S4 = 0 ppm No OVA readings above background 3. No explosimeter or radioactivity for background from sample screening of S5 = 0 ppm No OVA readings above background 3. No explosimeter or radioactivity for background from sample screening of S5 = 0 ppm No OVA readings above background 3. No explosimeter or radioactivity for background from sample screening of S5 = 0 ppm No OVA readings above background 3. No explosimeter or radioactivity for background from sample screening of No ppm No DVA readings above background 3. No explosimeter or radioactivity for background from sample screening for No ppm No DVA readings above background 3. No explosimeter or radioactivity for background from sample screening for No ppm No DVA readings above background 3. No explosimeter or radioactivity for background from sample screening for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No explosimeter or radioactivity for No ppm No DVA readings above background 3. No ppm No DVA readings above background 3. No ppm No DVA reading above background 3. No ppm No DVA	g noted as follows: in the breathing zone. meter readings above			

Ce	onsultin	YORK, ROCH g Geotechnic sts and Hydr	cal Enginee	rs,		TEST BORING REPORT		BORING NO. B104
PROJECT: CLIENT: CONTRACT	CI.	RMER EMERSON TY OF ROCHES THNAGLE DRIL	STER	NDFILL MOD	IFIED REM	IEDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: AC Roche (See Pla
1	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	DCEDURES	ELEVATION:
TYPE INSIDE DIAMETER (IN) HAMMER WEIGHT (LB) HAMMER FALL (IN)			Auger 4-1/4 	S 1-3/8 140 30		RIG TYPE: CME-75, Truck-Mo BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers t while standard sampling	I.S. Augers	DATUM: START: 13 May 19 FINISH: 13 May 19 DRILLER: S. Lorant H&A REP: J. Marsch
DEPTH (FT)	CASING BLOWS PER FT	BLOWS	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	SIFICATION AN	ID REMARKS
 		10 9 8 6	<u>\$1_</u> 	3.0	4.5	Medium dense brown REFUSE, dolostone fragments and ve	-FILL- with glass,	newspaper, plastic
 		22 24 14 100/.3	·S2 6"/22"	8.0 9.8	-	Dense brown ASH with glass to gravel size, paper, dry -		lolostone fragments,
 - 15 		4 6 3	\$3 6"/24"	13.0		Medium dense brown ASH with dry. -	h paper, pla FILL-	stic, cloth, glass,
			S 4	18.0		Black ASH with metal, wood	, plastic, d	ry.
20		100/.4 100/.3	6"/23" \$5 4"/4"	19.9 20.0 20.3	19.5		ly weathered PORT FORMATI	ON-
- – - – - 25 –								
		ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN ROCK CORED	(LIN FT):
					S Split Spoon SAMPLES:	5\$		

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	H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists				TEST BORING REPORT BORING NO. B104 FILE NO. 70352-4 SHEET NO. 2 OF 2						
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)						
						Notes: 1. Backfilled borehole to ground sur 2. OVA readings from sample screenin S1 = 12 ppm (methane) S2 = 48 ppm (methane) S3 = 55 ppm (methane) S5 = 4 ppm (methane) No OVA readings above background 3. No explosimeter or radioactivity i ground from sample screening or in S5 = 0 pm (methane) No OVA readings above background 3. No explosimeter or radioactivity i ground from sample screening or in S5 = 0 pm (methane) No OVA readings above background 3. No explosimeter or radioactivity i ground from sample screening or in S5 = 0 pm (methane) S5 = 0 pm (methane) No OVA readings above background 3. No explosimeter or radioactivity i ground from sample screening or in S5 = 0 pm (methane) S5 = 0 pm (methane) No OVA readings above background 3. No explosimeter or radioactivity i ground from sample screening or in S5 = 0 pm (methane) S5 = 0 pm (methane) S5 = 0 pm (methane) No OVA readings above background 3. No explosimeter or radioactivity i ground from sample screening or in S5 = 0 pm (methane) S5 = 0 pm (methane)	ng noted as follows: in the breathing zone. meter readings above bac				

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	nsulting Geot Geologists an					TEST BORING REPORT		BORING NO. B105
PROJECT: CLIENT: CONTRACTO		ROCHESTE	R	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-4 SHEET NO. 1 OF 1 LOCATION: AC Roche
1.	TEM		CASING	DRIVE SAMPLER	CORE	DRILLING EQUIPMENT & PRO	CEDURES	(See Pla ELEVATION:
TYPE	IAMETER (IN) EIGHT (LB)		Auger 2-1/4	SAPIFLER S 1-3/8 140 30	 	RIG TYPE:Diedrich D-50, Tr BIT TYPE: 2-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to while standard sampling	.S. Augers 18.2 ft.	DATUM: START: 13 May FINISH: 13 May DRILLER: R. Bauen H&A REP: M. Corr
DEPTH (FT)	BLOWS BL	ows N	SAMPLE UMBER & ECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	ID REMARKS
 	47 6		S1 4"/24"	3.0		Very dense REFUSE, with pla dry.	astic, cardb -FILL-	woard, wood metal, d
 _ 10	9 7		\$2 2"/24"	8.0		Medium dense brown fine sar	ndy SILT, wi -FILL-	th wood, moist.
 	1 3	8 1	\$3 5"/24"	13.0 15.0		Loose brown fine sandy SILT	T, trace wir -FILL-	e, moist to wet.
 - 20 -	100	DY.2	\$4 2"/3"	18.0 18.2	16.5		MARSH DEPOSI Boring at 1 o of Rock at ground surf (e screening S2 = 3 ethane) S4 background i loactivity m gening or in TCLP metal	T- 8.2 ft. 18.2 ft. ace with soil cutti noted as follows: 0-50 ppm (10 ppm me = 10 ppm (methane) n the breathing zone the breathing zone
	WATER	LEVEL DA	TA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME ELAP TIME	(HR) B	DEPT OTTOM CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN	(LIN FT):
					S Split Spoon SAMPLES:	4\$		

Co	nsulting	YORK, ROCHES Geotechnica ts and Hydro	al Engineer	rs,		TEST BORING REPORT		BORING NO. B106
PROJECT: CLIENT: CONTRACT	CIT	MER EMERSON Y OF ROCHEST HNAGLE DRILL	ER	DFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: AC Rochester (See Plan)
I	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	ELEVATION:	
TYPE INSIDE DIAMETER (IN) HAMMER WEIGHT (LB) HAMMER FALL (IN)		Auger S 2-1/4 1-3/8 140 30		 	RIG TYPE:Diedrich D-50, Tru BIT TYPE: 2-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to 2 while standard sampling.	.S. Augers	DATUM: START: 13 May 1993 FINISH: 13 May 1993 DRILLER: S. Loranty H&A REP: J. Marschner	
DEPTH (FT)	CASING BLOWS PER FT	OWS BLOWS NUMBER & DEPTH CHANGE VISUAL CLASSIFIC					IFICATION AN	D REMARKS
 		¹⁵ 16 9 12	S1 18"/24"	3.0		Medium dense, brown fine sa plastic and paper, damp.	andy SILT, s -FILL-	ome glass, with wood
 - 10		13 9 12 23	\$2 4"/24"	8.0		Medium dense WOOD, little m moist to wet.	fine sand and	d silt, with metal,
 - 15		6 9 15 10	\$3 4"/24"	13.0 15.0		Medium dense brown WOOD, wi	ith metal pic	eces, moist to wet.
		18 21 16 9	\$4 4"/24"	18.0 20.0	16.5 21.5	Dense black-brown ASH, with	n wood, paper -FILL-	r, metal, wet.
-25		8 100/.4	\$5 2 6"/10"	23.0 23.9	23.9	Bottom of	Boring at 23	3.9 ft.
		ATER LEVEL	DATA			Apparent Top SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED TIME (HR)		H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN ROCK CORED	(LIN FT): 23.9 (LIN FT):
						S Split Spoon	SAMPLES:	5\$

Con	nsulting	Geotechnic	STER, NEW Y al Engineer ogeologists	s,		BORING NO. B106 FILE NO. 70352-46 SHEET NO. 2 OF 2
8	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION AND REMARKS
(FT) P	PER FT	PER 6 IN	RECOVERY	(FT)	(FT)	Notes: 1. Backfilled borehole to ground surface with soil cuttings. 2. OVA readings from sample screening noted as follows: S1 = 10 ppm (methane) S2 = 150 ppm (methane) S3 = 300-500 ppm (methane) S4 = 1000+ ppm (methane) S5 = 85 ppm (methane) No OVA readings above background in the breathing zone. 3. No explosimeter or radioactivity meter readings above back ground from sample screening or in the breathing zone. 4. Sample S3 submitted for TCLP metals and hazardous characteristics analyses.

Co	onsultin	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	rs,		TEST BORING REPORT		BORING NO). B107
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		SHEET NO.	AC Rochest
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCED	URES	ELEVATION	(See Plan)
TYPE INSIDE L HAMMER L HAMMER L	DIAMETER VEIGHT	(IN) (LB) (IN)	Auger 2-1/4	SAMPLER S 1-3/8 140 30		RIG TYPE:Diedrich D-50, Truck BIT TYPE: 2-1/4 in. I.D. H.S. DRILL MUD: OTHER: Advanced augers to 23 while standard sampling.	Augers	DATUM: START: FINISH: DRILLER: H&A REP:	13 May 199 13 May 199 R. Bauer
DEPTH (FT)	CASING BLOWS PER FT	BLOWS	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSIFI	CATION AN	D REMARKS	*****
					ł				
		11	S1	3.0		Medium dense brown fine sandy	-	mp.	
5	.	3 8	2"/24"	5.0		-	FILL-		
	4				6.5				
	4				0.5				•
	1	9	· s2	8.0	1	Loose black ASH, with wood, p	lastic m	etal wet	
		5	5"/24"	10.0		non non area wood, p			
<u> </u>		4	 		1				
			-						
		9 5	S3	13.0		Loose black ASH with wood, or	ganic mate	erial, moi	st to wet.
		3	3"/24"	15.0		_	FILL-		
							, 166 °		
		_							
		3 4	\$4 (1) (2) (1)	18.0		Loose red-brown coarse to fin moist to wet.	-	ome glass,	with wood,
-20		5 12	6"/24"	20.0		-	FILL-		
					21.5				
					21.3		·		
		72	s5	23.0		Moderately hard, highly weath dolomitic MUDSTONE, dry.	ered, gray	/, very fin	ne-grained
		100/.2	^{6"/8} "	23.7		-ROCHESTEI	R FORMATIC	- A	
						Bottom of Bo	ring at 23	5.7 ft.	
		WATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY	
DATE	TIME	ELAPSED		H (FT) TO:		0 Open End Rod	VERBURDEN	(LIN FT):	23.7
		TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	T Thin Wall Tube R(U Undisturbed Sample		(LIN FT):	
						S Split Spoon S/	AMPLES:		55
						B	DRING NO.		в107

Ha (Consulting	g Geotechnie	ESTER, NEW cal Enginee rogeologist	rs,		TEST BORING REPORT	BORING NO. FILE NO. SHEET NO.	B107 70352-46 2 OF 2
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION	AND REMARKS	
						 Notes: 1. Backfilled borehole to ground sur 2. OVA readings from sample screenir S1 = 450 ppm (methane) S2 = 1000 ppm (methane) S3 = Submitted for analysis S4 = 20 ppm (5 ppm methane) S5 = 70 ppm (methane) No OVA readings above background 3. No explosimeter or radioactivity background from sample screening zone. 4. Sample S3 and duplicate submitted Sample S4 submitted for TCLP meta characteristics and TCL volatile 	ng noted as for in the breath meter reading or in the brook of for full TCL als, hazardous	ollows: ning zone. gs above eathing _P analysis. s

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	onsulting	YORK, ROCHE Geotechnic Sts and Hydr	al Enginee	rs,		TEST BORING REPORT	BORING NO.	B108
PROJECT: CLIENT: CONTRACT	CII	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION	SHEET NO. 1 LOCATION: A	
1	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	ELEVATION:	
TYPE INSIDE E HAMMER & HAMMER F		(IN) (LB) (IN)	Auger 2-1/4 	S 1-3/8 140 30		 RIG TYPE:Diedrich D-50, Transmission BIT TYPE: 2-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers transmission while standard sampling. 	.S. Augers START: 1 FINISH: 1	4 May 1993 4 May 1993 . Bauer . Corrigan
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	IFICATION AND REMARKS	
						Observed red-brown SILT, se a depth of 2.7 feet in oper -GLACI/	ome sand, little gravel, n borehole. AL TILL DERIVED FILL-	with clay
		18 24 14	\$1 18"/24"	3.0	4.8	Dense red-brown fine SAND, black ash layer at 4.8 ft.	little gravel, little s - 5.0 ft.	ilt, with
5		11					-FILL-	
 - 10		10 16 13 11	·S2 2"/24"	8.0		Medium dense black ASH, wit (slight petroleum odor) -	h wood, wire, moist. FILL-	
		2 3 4 5	\$3 15"/24"	13.0		Loose black ASH, with glass moist to wet. (petroleum oc	and ceramics, trace win lor) FILL-	re,
· -					16.5	Hard brown clayey fine SAND -DISTURBED NA	, with glass, moist to u TIVE MATERIALS/FILL-	vet.
-		18 100/.3	S4 7 6"/9"	18.0 18.8 r	18.5	Very dense brown silty fi moist to wet.	ne SAND, some gravel, li -LACUSTRINE/FLUVIAL-	ittle clay,
-20						Notes: 1. Backfilled borehole to 2. OVA readings from sampl S1 = 500 ppm (200 metha S2 = 1000+ (30 ppm meth S3 = 300-400 ppm (210 p No OVA readings above b 3. No explosimeter or radi ground from sample scre 4. Sample S2 and duplicate	e screening noted as fol ne) - (ash layer = 8-9 p ane) pm methane) S4 = 10 pp ackground in the breathi oactivity meter readings ening or in the breathir submitted for TCLP meta cs analyses. Sample 3 s	llows: opm methane ing zone. s above bac ng zone. als and
	۱	ATER LEVEL	DATA			SAMPLE IDENTIFICATION	SUMMARY	
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	OVERBURDEN (LIN FT): ROCK CORED (LIN FT): SAMPLES:	18.8 4s

	onsultin	YORK, ROCHE g Geótechnic sts and Hydr	al Enginee	rs,		TEST BORING REPORT		BORING NO. B109
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSON IY OF ROCHES INNAGLE DRIL	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: AC Rochester
1	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	DCEDURES	(See Plan)
TYPE INSIDE D HAMMER M HAMMER F	IE I GHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30		 RIG TYPE: CME-75, Truck-Mo BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to while standard sampling 	I.S. Augers	DATUM: START: 14 May 1993 FINISH: 14 May 1993 DRILLER: S. Loranty H&A REP: J. Marschner
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	SIFICATION AND	D REMARKS
		5 5 6 9	S1 18"/24"	3.0		Medium dense brown to blac	k ASH, with s -FILL-	glass, wood, dry.
 		5 8 100/.3	\$2 24"/24" 3"/24"	8.0 10.0 10.3	8.4	Hard, highly to completely DOLOSTONE with trace plas -LOCKI	-FILL- ittle gravel, USTRINE/FLUVI y weathered, tic and metal PORT FORMATIC Boring at 10 ground surfa le screening ash silt background in ioactivity me eening or in d for TCLP me	damp to moist. AL- gray-brown fine-grained slag. N- 0.3 ft. noted as follows: the breathing zone. ter readings above back the breathing zone.
-25								
	1	ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED TIME (HR)	DEPTI BOTTOM DF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN ROCK CORED	
					·····	S Split Spoon	SAMPLES:	3\$
							BORING NO.	B109

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	Geologis	g Geotechnic sts and Hydr	ogeologist	s		TEST BORING REPORT		BORING NO. B110
PROJECT: CLIENT: CONTRACT	CII	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	NDFILL MODI	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-4 SHEET NO. 1 OF 1 LOCATION: Edison
1	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO		Technical & Occup Education Center ELEVATION:
TYPE INSIDE E HAMMER I HAMMER I		(IN) (LB) (IN)	Auger 4-1/4 	\$ 1-3/8 140 30	 	RIG TYPE: CME-75, Truck-I BIT TYPE: 4-1/4 in. I.D. DRILL MUD: OTHER: Advanced augers to while standard sampling.	H.S. Augers o 15.0 ft.	DATUM: START: 11 June FINISH: 11 June DRILLER: S. Lora H&A REP: M. Corr
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	D REMARKS
						6" of topsoil.		
 	-	6 9 0	S1	3.0	-	Medium dense brown silty co with paper, and plastic, do		e SAND, trace grav
5 		9 15	4"/24"	5.0			-FILL-	
10		7 13 7 10	<u>5</u> 2 5#/24#	8.0 10.0		Medium dense METAL and WOOD), with plas	tic, damp.
	-						-FILL-	
	1	2	\$3	13.0	13.0	Hard, highly weathered, gra	ay, fine-gra	ined DOLOSTONE.
	1	12 12	15"/24"	15.0		-LOCKPO	ORT FORMATIO	N-
15	1	13				Bottom of	Boring at 1	5.0 ft.
						Notes:		
						1. Backfilled borehole to	ground surf	ace with soil cutt
						 OVA readings from samples of the submitted for analysis of the submitted for an an analysis of the submitted for an an	lysis. background i	n the breathing zo
						3. No explosimeter or radi ground from sample scre	eening or in	the breathing zor
						4. Sample S1 submitted for	n tull TCLP a	analyses.
25								
		WATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	FLADSED	DEPT	H (FT) TO:			OVERBURDEN	(LIN FT): 15.0
		WATER	U Undisturbed Sample					
						- S Split Spoon	SAMPLES:	35

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PROJECT: CLIENT: CONTRACT			ogeologists	rs, 5		TEST BORING REPORT		BORING NO. B111
CONTINACT	CII	MER EMERSON Y OF ROCHEST	TER	IDFILL MODI	FIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: Edison
]	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROD	,	Technical & Occupationa Education Center ELEVATION:
TYPE INSIDE D HAMMER M HAMMER F		(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30	 	RIG TYPE: CME-75, Truck-M BIT TYPE: 2-1/4 in. I.D. H. DRILL MUD: OTHER: Advanced augers to while standard samp	.S. Augers 24.3 ft.	DATUM: START: 17 May 1993 FINISH: 17 May 1993 DRILLER: S. Loranty H&A REP: J. Marschner
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	ID REMARKS
						6" of topsoil.		•
 		2 4 9	S1 15"/24"	3.0 5.0		Medium dense black ASH, wit	th wood and -FILL-	glass, moist to wet.
 - 10		3 6 7 9	\$2 8"/24"	8.0 10.0		Medium dense black ASH, and	d WOOD, with	glass and brick, moist.
 - 15		2 6 11 4	\$3 12"/24"	13.0 15.0		Medium dense black ASH, wit moist.	th wood, gla -FILL-	ss and brick, damp to
		2 3 5 3	\$4 15"/15"	23.0 24.3				
					21.5	Loose brown-black SILT wi Loose gray-brown fine sa -RESID		
· _		5 88 100/.3	\$5 15"/15"	23.0 24.3	23.4 23.7 24.3		gray, fine-g DRT FORMATIO	N-
-25		WATER LEVEL	DATA			SAMPLE IDENTIFICATION	1	SUMMARY
DATE	TIME	ELAPSED TIME (HR)		H (FT) TO: BOTTOM OF HOLE	WATER	O Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon		(LIN FT): 24.3 (LIN FT): 5S

	Consulting (Geotechnic	STER, NEW) al Engineer ogeologists	rs,		BORING NO.B111TEST BORING REPORTFILE NO.70352-46SHEET NO.2 OF 2
DEPTH (FT)	CASING BLOWS PER FT F	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSIFICATION AND REMARKS
						Notes: 1. Backfilled borehole to ground surface with soil cuttings. 2. OVA readings from sample screening noted as follows: S1 = 10 ppm (methane) S2 = 280 ppm (methane) S3 = 10 ppm (methane) S4 = 40 ppm (methane) S5 = 15 ppm (methane) No OVA readings above background in the breathing zone. 3. No explosimeter or radioactivity meter readings above background from sample screening or in the breathing zone 4. Sample S4 was submitted for TCLP metals and hazardous characteristics analyses. 3. No explosing the screening of the breathing zone 4. Sample S4 was submitted for TCLP metals and hazardous characteristics analyses. 3. No explosing the screening of the breathing zone 4. Sample S4 was submitted for TCLP metals and hazardous characteristics analyses. 3. No explosing the screening of the breathing zone 4. Sample S4 was submitted for TCLP metals and hazardous 5. Sample S4 was submitted for TCLP metals and hazar

PROJECT: FORMER PLANEADL STREET LANDFILL MODIFIED REMEDIAL INVESTIGATION ITEM CONTRACTOR: NOTIFIED REMEDIAL TRUE TO PROJECT AND TRUE TO	H&/ Co	onsultin	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	ers,		TEST BORING REPORT		BORING NO. B112
ITEM CASING OBNUE CORE OBJULING CUPRENT & PROCEDURES Education Center ELEMITION:	CLIENT:	CI	TY OF ROCHES	TER	NDFILL MOD	IFIED REM	MEDIAL INVESTIGATION		SHEET NO. 1 OF 1 LOCATION: Edison
TYPE DIAMPER Auger S	J	TEM		CASING			DRILLING EQUIPMENT & PRO	OCEDURES	Education Center
BLOKE BLOKE DUNSER & PER FT PER FT	INSIDE D HAMMER W	EIGHT	(LB)	4-1/4	S 1-3/8 140		BIT TYPE: 4-1/4 in. I.D. DRILL MUD: OTHER: Advanced augers to	H.S. Auger o 22.5 ft.	DATUM: START: 8 June 1993 FINISH: 8 June 1993 DRILLER: S. Loranty
		BLOWS	BLOWS	NUMBER &	DEPTH	CHANGE	VISUAL CLASS	SIFICATION AN	D REMARKS
-10 -10 -7 5 6"/24" 10.0 -FILL- -10 -15 -<	 		4 6	8º/24º			Medium dense black ASH, so and brick, moist.		ith glass, metal, cinder
-15 -<	 - 10		7 5			- -	Same.	-FILL-	
-20 -20 -7 4"/24" 20.0 -FILL- -20 -20 -7 -7 -20 -7 -20 -20 -20 -7 -7 -20 -20 -20 -7 -7 -20 -20 -20 -7 -7 -20 -20 -20 -20 -7 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -20 -25 -20 -20 -20 -20 -25 -20 -20 -20 -20 -25 -20 -20 -20 -20 -25 -20 -20 -20 -20 -25 -20 -20 -20 -20 -25 -20 -20 -20 -20 -25 -20 -20 -20 -20 <td< td=""><td> - 15</td><td></td><td>4 6</td><td>1</td><td></td><td></td><td>Same, except moist to wet.</td><td></td><td></td></td<>	 - 15		4 6	1			Same, except moist to wet.		
Bottom of Boring at 22.5 ft. -25 WATER LEVEL DATA WATER LEVEL DATA SAMPLE IDENTIFICATION SUMMARY DATE TIME ELAPSED DEPTH (FT) TO: 0 Open End Rod TIME ELAPSED BOTTOM BOTTOM BOTTOM OF CASING OF HOLE U Undisturbed Sample ROCK CORED (LIN FT): SAMPLES: 4S	-20		6 4						
DATE TIME ELAPSED TIME (HR) DEPTH (FT) TO: BOTTOM OF CASING DEPTH (FT) TO: WATER O Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon OVERBURDEN (LIN FT): ROCK CORED (LIN FT): 22.5 SAM LE IDENTITION TOTOM BOTTOM OF CASING BOTTOM OF HOLE WATER 0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon OVERBURDEN (LIN FT): 22.5	-25								
DATE TIME ELAPSED TIME BOTTOM BOTTOM OF CASING OF HOLE OF CASING Solution (LIN FT):			ATER LEVEL	DATA			SAMPLE IDENTIFICATION	T	SUMMARY
	DATE	TIME	TIME (HR)	BOTTOM	BOTTOM		T Thin Wall Tube U Undisturbed Sample	ROCK CORED	(LIN FT):
						··· _·	S Split Spoon	SAMPLES: BORING NO.	4S

(Consulting	YORK, ROCHE g Geotechnic sts and Hydu	STER, NEW cal Engineer rogeologist:	rs.		TEST BORING REPORT	BORING NO. B112 FILE NO. 7035 SHEET NO. 2 OF	2-46
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION	AND REMARKS	
						Notes: 1. Backfilled borehole to ground sur 2. OVA readings from sample screenin S1 = 20 ppm (methane) S2 = 1000+ ppm (Methane) S3 = 10 ppm (methane) No OVA readings above background 3. No explosimeter or radioactivity background from sample screening 4. Sample S2 was submitted for TCL v	g noted as follows: in the breathing zo meter readings abov or in the breathing	ne. e zone

H&. C	onsulting	YORK, ROCHE g Geotechnic sts and Hydro	al Enginee	rs,		TEST BORING REPORT		BORING NO. B113
PROJECT CLIENT: CONTRAC	CIT	RMER EMERSON TY OF ROCHES THNAGLE DRILI	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: U.D.C. (See Plan)
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO		ELEVATION:
TYPE INSIDE I HAMMER I HAMMER I		(IN) (LB) (IN)	Auger 2-1/4 	S 1-3/8 140 30	 	RIG TYPE:Diedrich D-50, Tr BIT TYPE: 2-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers t while standard sampling	I.S. Augers to 20.9 ft.	DATUM: START: 14 May 1993 FINISH: 14 May 1993 DRILLER: R. Bauer H&A REP: M. Corrigan
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	SIFICATION AN	D REMARKS
 		³² 25 10 10	S1 6"/24"	3.0	4.8	Dense brown clayey SILT, t ASH layer containing glass	race gravel fragments a -FILL- 	and organic material wi t 4.8 ft., moist to wet
 - 10 		9 6 3 5	\$2 5"/24"	8.0 10.0		Loose black ASH, with meta	l and plasti	c, wet.
 - 15		1 2 2 1	s3 5"/24"	13.0 15.0	16.5	Loose black ASH, with meta	l and plastic	c, wet.
-20		14 11 24 23	\$4 13"/24 "	18.0 20.0	20.9	Medium dense mottled brown moist.	DISTURBED LAG	little sand, trace grav CUSTRINE/FLUVIAL- SIDUAL SOIL-
-25					20.7	Bottom of	Boring at 20	D.9 ft.
	l	ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM DF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN ROCK CORED	(LIN FT):
						S Split Spoon	SAMPLES: BORING NO.	4S

	Consulting	Geotechnic	STER, NEW N al Engineer ogeologists	Ś,		TEST BORING REPORT BORING NO. B113 FILE NO. 70352-4 SHEET NO. 2 OF 2
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION AND REMARKS
						Notes: 1. Backfilled borehole to ground surface with soil cutting: S1 = 1000+ ppm methane S2 = 1000+ ppm (200 ppm methane) S3 = 950 ppm methane S4 = 0.8 ppm methane N0 0VA readings above background in the breathing zone. 3. No explosimeter or radioactivity meter readings above background from sample screening or in the breathing zon 4. Sample S2 was submitted for TCL volatile organic analysis Sample S3 was submitted for TCLP metals and hazardous characteristics analyses. 5. No explosing the screening of the scree

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists						TEST BORING REPORT		BORING NO. B114	
PROJECT: CLIENT: CONTRACT	CIT	RMER EMERSON TY OF ROCHEST THNAGLE DRILL	FER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: Laird Plastics (See Plan)	
ITEM		CASING	DRIVE CASING SAMPLER		DRILLING EQUIPMENT & PROCEDURES		ELEVATION: DATUM: START: 17 May 1993 FINISH: 17 May 1993 DRILLER: R. Bauer H&A REP: M. Corrigan		
TYPE INSIDE DIAMETER (IN) HAMMER WEIGHT (LB) HAMMER FALL (IN)			Auger S 2-1/4 1-3/8 140 30		 	RIG TYPE:Diedrich D-50, Tru BIT TYPE: 2-1/4 in. I.D. H. DRILL MUD: OTHER: Advanced augers to while standard sampling			
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	ASSIFICATION AND REMARKS		
 - 5 -		4 15 7	S1 2#/24#	3.0	4.0	Loose brown silty fine SAND Medium dense black iron-sta -F		-FILL	
		4 5 4 3	·s2 4#/24#	8.0 10.0		Loose black ASH, with glass moist to wet. -F	s, cinders, u TLL-	wire, ceramic fragments,	
 		WOH 1 1 2	\$3 4"/24"	13.0 15.0		Very loose black ASH, with -F	glass, metal ILL-	l, wet.	
 - 20		3 3 4 7	S4 8"/24"	18.0 20.0		Loose black ASH, with ceram gravel, wet. -	nic fragments FILL-	s, glass, wire, trace	
 		50/.2	\$5 2"/2"	^{23.0} 23.2	21.5		with clay s RINE/FLUVIAL Boring at 23		
WATER LEVEL DATA						SAMPLE IDENTIFICATION		SUMMARY	
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	OVERBURDEN ROCK CORED SAMPLES:		
							BORING NO.	B114	

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists					TEST BORING REPORT FILE SHEET			B114 70352-46 2 OF 2		
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION	IFICATION AND REMARKS			
						Notes: 1. Backfilled borehole to ground sur 2. OVA readings from sample screenin S1 = 8 ppm methane S2 = 5 ppm methane S3 = 2 ppm methane S5 = 0.3 ppm (H.S.) methane No OVA readings above background 3. No explosimeter or radioactivity background from sample screening	ng noted as fo in the breath meter reading	llows: ing zone. s above		

BORING NUMBER: TEST BORING B-1



	PROJEC	CT:	LeCha	se Expansion	at Emerson S	t.	_Project 1	No:	7279.01	Page No.	1 of 1	
	Start Dat	te:	01/	25/07 Fin	ish Date 1/2	25/2007	Top of V	Vell:	N/A	Boring No:	B-1	
	Driller:		Jeff Sc	hweitzer, No	thnagle Drillir	g	Boring I	location:	Former Eme	rson St. Landfi	ll Parcel # 10	_
	Inspector	r:	Edward	d Jones, Berg	mann Associa	tes	_Water L	evel (Dur	ing Drilling):	Not encounter	red	_
	Drilling	Method:	Geopro	be 6610DT	Direct Push		Water L	evel (Post	t Drilling):	Not encounter	red	_
	Remarks	:	No gro	undwater mo	nitoring point	installed.	Boring l	backfilled	with cuttings.	Bentonite bac	kfill at surface.	
	Screened	l Interva	1:	none	Slot Size:	none	v	Well Type	e:	none	Sandpack: no	ne
	Seal:	none			_		V	Weather C	Conditions:	cold, 14 degre	ees, 1 foot of si	now on ground
_								Field Scre	ening: VOCs	via TVA 1000:		
I				AMPLER*	SOIL	DESCRI	IPTION			Ionizing	Field Screenin	
	DEPTH			IUMBER	4					Radiation		alues at surface
\mathbf{F}	0	Depth 0' - 3'		Recovery	107					Readings	PID = 0.6 ppr	r FID = 5 ppm
ļ		$0^{\circ} - 5^{\circ}$	1	78%	1" Topsoil w				and fine sand	$2' = 0 y P/U_{T}$	2' = 0.6 ppm	2' = 14 ppm
					Landfill wast					3' = 19 uR/Hr		3' = 26 ppm
I		3' - 6'	2	53%	at 3': waste =							4' = 11 ppm
ľ	5		_	00,0		Brat er) e		5		5'=12 uR/Hr	5' = 0.59 ppm	
					Rock fragme	nt at botto	om of sam	ple barrel				· · · · · ·
ſ											SOIL GAS V.	ALUES
ł					Boring termin					uR/Hr =	Background a	
ľ					backfilled wit	-	s			micro Rems	PID = 0.6 ppn	FID = 4.2 ppm
	10				filled surface	with				per Hour		
					bentonite.							ple collected 5 ft
ł											PID=0.48 ppn	
											ppm = parts points po	00, 10.6 ev lamp
I	15										FID=TVA 100 FID=TVA 100	
\mathbf{F}	15										% = 10,000 pr	
-											70 10,000 pi	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
												1
				e								
I	20											
I												
	25											
Ľ	23											
		ľ										
L	30											

*Blow counts not obtained. Macro core sampling barrel used via direct push to collect the soil samples.

BORING NUMBER: TEST BORING B-2



• ?ROJEC	CT:	LeCha	se Expansion	at Emerson St	•	Project	No:	7279.01	Page No.	1. of 1	
Start Dat	te:	01/2	25/07Fin	ish Date 1/2	5/2007	_Top of	Well:	N/A	Boring No:	B-2	_
Driller:		Jeff Sc	hweitzer, No	thnagle Drillin	g	Boring	Location:	Former Emer	rson St. Landfi	ll Parcel # 10	
Inspector	r:	Edward	d Jones, Berg	mann Associat	tes	Water 1	Level (Dur	ing Drilling):	Not encounte	red	_
Orilling	Method:	Geopro	be 6610DT	Direct Push		Water I	Level (Post	t Drilling):	Not encounte	red	-
Remarks	:	No gro	undwater mo	nitoring point	installed.	. Boring	backfilled	with cuttings.	Bentonite bac	kfill at surface.	-
Screened	l Interva	1:	none	Slot Size:	none		Well Type	e:	none	Sandpack: nor	ne
Seal:	none			-			Weather C	Conditions:	cold, 14 degre	ees, 1 foot of sr	low on ground
				-			Field Scre	ening: VOCs	via TVA 1000:	Radiation by	Ludlum 2241
			AMPLER*	SOIL	DESCRI	IPTION			Ionizing	Field Screenir	ng for VOCs
DEPTH			UMBER	4					Radiation		alues at surface
0	<u>^</u>		Recovery						Readings	PID = 0.6 ppn	r FID = 10 ppm
	0' - 3'	1	67%	2" Topsoil w				1.~ 1			
				8" of apparen Landfill waste						2' = 0.6 ppm	2' = 12 ppm
1	3' - 6'	2	78%	Same to 3.5 f		- DIO		c Glavel	3'-6': 9 to 13	4' = 1.5 ppm	4' = 15 ppm
5	5-0	2	7070	Below 3.5 ft:		sh. glass.	plastic mit	xed in sand	uR/Hr	4 1.5 ppm	15 ppm
' <u> </u>				Same waste to						6' = 0.6-1.5 pp	6' = 19 ppm
										SOIL GAS V	
				Boring termin	ated 6.0	ft			uR/Hr =	Background a	t surface:
1				backfilled wit	h cutting	s			micro Rems	PID = 0.4 ppn	FID = 8 ppm
10				filled surface	with				per Hour		
				bentonite.							ole collected 5 ft
											FID = 4.12 %
								1		ppm = parts po	0, 10.6 ev lamp
15										FID=TVA 100 FID=TVA 100	· •
1.5										% = 10,000 pr	1
,										, o ro, ooo pr	
20											
25											
,											
30					<u> </u>						

*Blow counts not obtained. Macro core sampling barrel used via direct push to collect the soil samples.

BORING NUMBER: TEST BORING B-3



PROJEC	CT:	LeCha	se Expansion	at Emerson S	t.	_Project	No:	7279.01	Page No.	1 of 1	
Start Dat	te:	01/2	25/07 Fin	ish Date 1/2	5/2007	Top of	Well:	N/A	Boring No:	B-3	_
Driller:		Jeff Sc	hweitzer, No	thnagle Drillin	g	Boring	Location:	Former Emer	rson St. Landfi	11 Parcel # 10	
Inspecto	r:	Edward	d Jones, Berg	mann Associa	tes	Water I	Level (Dur	ing Drilling):	Not encounte	red	_
Drilling	Method:	Geopro	be 6610DT	Direct Push		Water I	Level (Post	t Drilling):	Not encounte	red	_
Remarks	3:	No gro	undwater mo	nitoring point	installed.	. Boring	backfilled	with cuttings.	Bentonite bac	kfill at surface.	
Screeneo	i Interva	1:	none	Slot Size:	none		Well Type	e:	none	Sandpack: no	ne
Seal:	none			_			Weather C	Conditions:	cold, 14 degre	ees, 1 foot of si	now on ground
							Field Scre	ening: VOCs		Radiation by	
1			AMPLER*	SOIL	DESCRI	IPTION			Ionizing	Field Screenin	•
DEPTH			IUMBER	-					Radiation		alues at surface
	0' - 3'	Sample 1	Recovery 97%	2.5"' Topsoil	with root	to ot ourfo			Readings	PID = 0.6 ppr	r FID = 10 ppm
I	0-5	1	2770	11" of appare				t & fine sand			
								& Gravel, Silt	0'-3': 15 - 16		
	3' - 6'	2	92%	Saturated zon				,	uR/Hr	4-6' =0.7 ppm	4-6' = 70 ppm
5				Same sand, g	ravel and	silt to 4.	0 feet		5': 20 uR/Hr		
				4.0 feet: Blac	k ash, pla	stic, glas	s to termir	nation at 6 ft			
1						_				SOIL GAS V.	
				Boring termin					uR/Hr =	Background a	
				backfilled wit	-	S			micro Rems	PID = 0.29 pp	FID = 8.5 ppm
10				filled surface bentonite.	with				per Hour	Soil Cos Some	ole collected 5 ft
				bentonne.						PID=0.5 ppm	
1										ppm = parts p	
											00, 10.6 ev lamp
15										FID=TVA 10	
										% = 10,000 pj	om
20											
1											
25											
1											
20											
30			L	L					L	L]

*Blow counts not obtained. Macro core sampling barrel used via direct push to collect the soil samples.

BORING NUMBER: TEST BORING B-4



PROJEC	CT:	LeCha	se Expansion	at Emerson S	lt.	Project	No:	7279.01	Page No.	1 of 1	
Start Da	te:	01/	25/07 Fin	ish Date 1/2	25/2007	Top of	Well:	N/A	Boring No:	B-4	
Driller:		Jeff Sc	hweitzer, No	thnagle Drillir	ng	Boring	Location:	Former Eme	rson St. Landfi	ll Parcel # 10	
Inspecto	r:	Edwar	d Jones, Berg	mann Associa	ates	Water L	level (Dur	ing Drilling):	Not encounter	red	
Drilling	Method:	Geopre	be 6610DT	Direct Push		- Water L	Level (Post	t Drilling):	Not encounter	red	
Remarks	3:	No gro	undwater mo	onitoring point	installed.	Boring	backfilled	with cuttings.	Bentonite bac	kfill at surface	
Screened	l Interva	1:	none	Slot Size:	none		Well Type	<u>-</u>	none	Sandpack: no	ne
Seal:	none			-			Weather C	Conditions:	cold, 14 degre	es, 1 foot of s	now on ground
				-			Field Scre	ening: VOCs	via TVA 1000:		· · · · · · · · · · · · · · · · · · ·
Γ	BLOW	S ON S	AMPLER*	SOIL	DESCRI		· · · ·	0	Ionizing	Field Screeni	
DEPTH			NUMBER						Radiation	Background v	values at surface
<u>⊢ 0</u>			Recovery						Readings	PID = 0.64 pp	o FID = 1.4 ppm
	0' - 3'	1	89%	2"' Topsoil w					0'=15 uR/Hr		
				10" of appare						2' = 0.65 ppm	2' = 0.41 ppm
	21 (1		020/				wn Sand	& Gravel, Silt			
5	3' - 6'	2	83%	Same sand ar At 4 feet: ash			in the way	oto	3'-6': 6 to 10 uR/Hr	4.6' = 0.7 nm	4-6' = 70 ppm
I				Continued to		-		sie	uivni	4-0 – 0.7 ppn	14-0 – 70 ppm
					terminatio	011 at 0.0	1001			SOIL GAS V	ALUES
1				Boring termin	nated 6.0 f	ft			uR/Hr =	Background a	
				backfilled wi					micro Rems		r FID = 1.47 ppm
10				filled surface	-				per Hour		11
1				bentonite.						Soil Gas Sam	ple collected 5 ft
										PID=0.56 ppr	
										ppm = parts p	
											00, 10.6 ev lamp
15				4						FID=TVA 10	1
1										% = 10,000 p	pm
										-	
1											
20											
20				•							
,											
1											
25											
ł											
1 20											
30											

*Blow counts not obtained. Macro core sampling barrel used via direct push to collect the soil samples.

BORING NUMBER: TEST BORING B-13



	ROJEC	CT:	LeCha	se Expansion	at Emerson S	t	Project No:	7279.01	Page No.	1 of 1	
	Start Dat	te:	01/	<u>25/07</u> Fin	ish Date1/2	25/2007	Top of Well:	N/A	Boring No:	B-13	_
	Driller:		Jeff Sc	hweitzer, No	thnagle Drillin	ıg	Boring Location:	Former Eme	rson St. Landfi	ll Parcel # 10	
(nspecto	r:	Edwar	d Jones, Berg	mann Associa	tes	Water Level (Dur	ing Drilling):	Not encounte	red	
l	Drilling	Method:	: Geopre	be 6610DT	Direct Push		Water Level (Pos	t Drilling):	Not encounte	red	
1	Remarks	:	No gro	undwater mo	nitoring point	installed.	Boring backfilled	with cuttings.	Bentonite bac	kfill at surface.	-
ŧ	Screened	l Interva	1:	none	Slot Size:	none	Well Type	e:	none	Sandpack: no	ne
1	seal:	none			_		Weather (Conditions:	cold, 14 degre	ees, 1 foot of si	now on ground
					-		Field Scre	ening: VOCs	via TVA 1000:	Radiation by	Ludlum 2241
ſ				AMPLER*	SOIL	DESCRI	PTION		Ionizing	Field Screening	ng for VOCs
)EPTH			IUMBER]			: '	Radiation		alues at surface
ŀ	0		·	Recovery					Readings	PID = 0.1 ppr	r FID = 5.5 ppm
	- 11. 	0' - 3'.	1	92%	1"' Topsoil w						
							cap material = Silt			2' = 0.3 ppm	
Į.		3' - 6'		0.007			=coarse sand and		3' = 9 - 15		3' = 7.3 ppm
	5	5 - 0	2	89%	same waste to	5.5°. In	en black silt and as	sn, wet zone	uR/Hr 6' = 11 - 15	4' = 0.2 ppm	4' = 9.5 ppm
<u>ا</u>	J		[uR/Hr	6' = 0.33 ppm	6' = 8.0 nnm
		6' - 9'	3	42%	6' - 9' · verv	soft black	& brown mottled	silt			7-9'=12.5 ppm
ì		Ů Ĵ		1270		ne sand		Girt		/ > 0.21 ppi	7.9 12.5 ppm
ļ									9'=6-9 uR/Hr		
	10				Boring termin	nated 9.0 f	ft		uR/Hr =	SOIL GAS V	ALUES
4					backfilled wit	h cuttings	5		micro Rems	Background a	
					filled surface	with			per Hour	PID = 0.5 ppn	FID = 2.8 ppm
ſ					bentonite.						
an anna 11											ole collected 5 ft
Ì	15										FID=2,000 ppm
ļ										ppm = parts p	
											00, 10.6 ev lamp
Ì										FID=TVA 100 % = 10,000 pr	
	20									% = 10,000 pr	m
ſ	20								:		
ł											
i.	25										
ì											
			1. 1. A. A. A.							· ·	
į											
L	30										

*Blow counts not obtained. Macro core sampling barrel used via direct push to collect the soil samples.



Test Pit Log

Deere 310E S. Allen Dominic TP07-1 Test Pit No. Operator Equipment
 3189.0
 Page
 1
 Test Pit No.

 500 Lee Road Addition, Rochester, New York 14606
 Test Pit No.

 Day Engineering, P.C., 40 Commercial Street, Rochester, New York 14614
 Technician

 101.1
 Weather
 Sunny, 85°
 Technician

 9/7/07
 Completed
 9/7/07
 Operator

 Elevation
 101.1
 Weather

 Date Started
 9/7/07
 Completed

 Backhoe Subcontractor
 F. Monte Enterprises
 Project No. Project Name Client

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
			TOPSOIL, ROOTMAT 0'5" Firm brown dry SAND, SILT and GRAVEL, trace brick, trace plastic, trace wood, trace metal
7	S-1	2'0"	1'9" TOPSOIL
す			^{2'9"} Firm tan brown moist SILT, little sand, trace clay, trace gravel, trace cobbles
٥			
oc			24" boulder noted at 6'0"
,			9'0" Test pit terminated at 9'0"
17 F			Notes: 1. Sides vertical. 2. Dry on completion. 3. Staked locations/elevations provided by Foundation Design, P.C.

Site Pictures

TP07-1





Test Pit Log

Depth Below	Sample	Depth of	Soil and Rock Classifications
Surface	Number	Sample	Remarks
			ROOTMAT 0'4" Firm tan-brown moist SAND, SILT and GRAVEL, trace brick, trace
			organic, few cobbles
2			
4			
			4'6" Firm tan-brown moist SILT, little sand, trace clay
Q			
			e 5 of terminated at 6'5"
00			
10			Notes: 1. Sides vertical.
			 Dry on completion. Staked locations/elevations provided by Foundation Design, P.C. Location moved to southeast corner of building due to utility
12			conflict. 5. Existing building on caisson/grade beam.

Site Pictures

TP07-2





Dominic Deere 310E S. Allen TP07-3 Test Pit No. Project No.3189.0Page1of1Test Pit No.Project Name500 Lee Road Addition, Rochester, New York 14606New York 14606Test Pit No.ClientDay Engineering, P.C., 40 Commercial Street, Rochester, New York 14614Elevation101.5WeatherSunny, 85°TechnicianDate Started9/7/07Completed9/7/07OperatorDestructorEquipment Test Pit Log

Soil and Rock Classifications	Remarks	ROOTMAT 0'4" FILL: Firm tan-brown dry SAND, SILT and GRAVEL, trace concrete, trace brick, trace metal		TOPSOIL 2'6" Firm tan-brown moist SILT, little sand			"0,6	Test pit terminated at 9'0"	Notes: 1. Sides vertical. 2. Dry on completion. 3. Staked locations/elevations provided by Foundation Design, P.C.
Depth	Sample			3'6"					
Samula	Number			S-1					
Depth Bolow	Surface		2	4	٥	œ		0	

12

Site Pictures

NO PHOTO

	Site Pictures TP07-4						
	Test Pit Log 3189.0 Page 1 500 Lee Road Addition, Rochester, New York 14606 Day Engineering, P.C., 40 Commercial Street, Rochester, New York 14614 Test Pit No. TP07-4 101.9 Weather Sunny, 85° Technician S. Allen 9/7/07 Completed 9/7/07 Operator Dominic ractor F. Monte Enterprises Equipment Deere 310E	Soil and Rock Classifications Remarks	TOPSOIL, ROOTMAT 014" Firm to compact SAND, SILT and GRAVEL, numerous cobbles, trace metal 30" houlder noted at 2'6"	TOPSOIL with wood 2'6" 3'7" Firm to compact brown moist SILT, little sand, trace clay, trace gravel	58" Stift to brown moid CI AV trace cand	Suit tair-Drown most Stri and CLAT, date same	Notes: 1. Sides Vertical. 2. Dry on completion. 3. Staked locations/elevations provided by Foundation Design, P.C.
) Pr e Road Additi ngineering, P. (W F. Monte I	Depth of Sample		3,0,,			
Foundation Design, P.C.		Sample Number		S-1			
Peu Des	Project No. Project Name Client Elevation Date Started Backhoe Subc	Depth Below Surface	м	4	۵	œ	10



Test Pit Log

Project No.	3189.0	Page 1	of	Test Pit No.	TP07-6
Project Name	500 Lee I	Road Addition, Rochest	er, New York 14606		
Client	Day Engi	Jay Engineering, P.C., 40 Comn	nercial Street, Rochester,	New York 14614	
Elevation	101.2	Weather	Sunny, 85°	Technicían	S. Allen
Date Started	20/2/6	Completed	20/2/6	Operator	Dominic
Backhoe Subcontractor	ntractor	F. Monte Enterprises		Equipment	Deere 310E

Depth 5		Depth	Soil and Rock Classifications
Below Surface	sample Number	or Sample	Remarks
			TOPSOIL/ROOTMAT 0'4" FILL: Firm brown dry SAND, SILT and GRAVEL, numerous cobbles and boulders, trace metal
2			
			2'3" TOPSOIL
4	S-1	4'0"	Firm tan-brown moist SILT, little sand, little gravel
			4'6" Firm tan-brown moist SILT, some sand, little gravel, few cobbles
ග			
			7'0" Refusal on apparent bedrock at 7'0"
80			
10			
2			Notes: 1. Sides vertical. 2. Dry on completion. 3. Staked locations/elevations provided by Foundation Design, P.C.

Site Pictures

NO PHOTO



Test Pit Log

Dominic Deere 310E S. Allen Test Pit No. TP07-7 Project No.3189.0Page1Test Pit No.Project Name500 Lee Road Addition, Rochester, New York 14606Test Pit No.ClientDay Engineering, P.C., 40 Commercial Street, Rochester, New York 14614Client100.5WeatherSunny, 85°Date Started9/7/07Completed9/7/07Date Started9/7/07PoteratorEackhoe SubcontractorF. Monte EnterprisesEquipment

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
			ROOTMAT 0'4" 0'4" 0'4" 0'4" 0'4"
2			
			2'6" TOPSOIL, trace wood
4	S-1	4'0"	3'6" Firm tan-brown moist SILT, little sand, little gravel
			4'6" Firm tan-brown moist SILT, little to some sand, trace gravel
Q			
			"J'6"
8			Refusal on apparent bedrock at 7'6"
0			
ç			Notes: 1. Sides vertical. 2. Dry on completion. 3. Staked locations/elevations provided by Foundation Design, P.C.

Site Pictures

NO PHOTO



Test Pit Log
 3189.0
 Page
 1
 of
 1

 500 Lee Road Addition, Rochester, New York 14606

TP07-8

Test Pit No.

Deere 310E S. Allen Dominic
 Client
 Day Engineering, P.C., 40 Commercial Street, Rochester, New York 14614

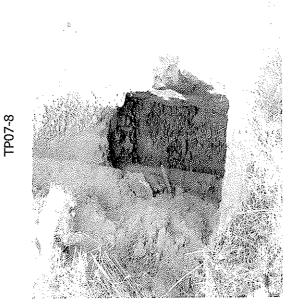
 Elevation
 100.5
 Weather
 Sunny, 85°
 Technician

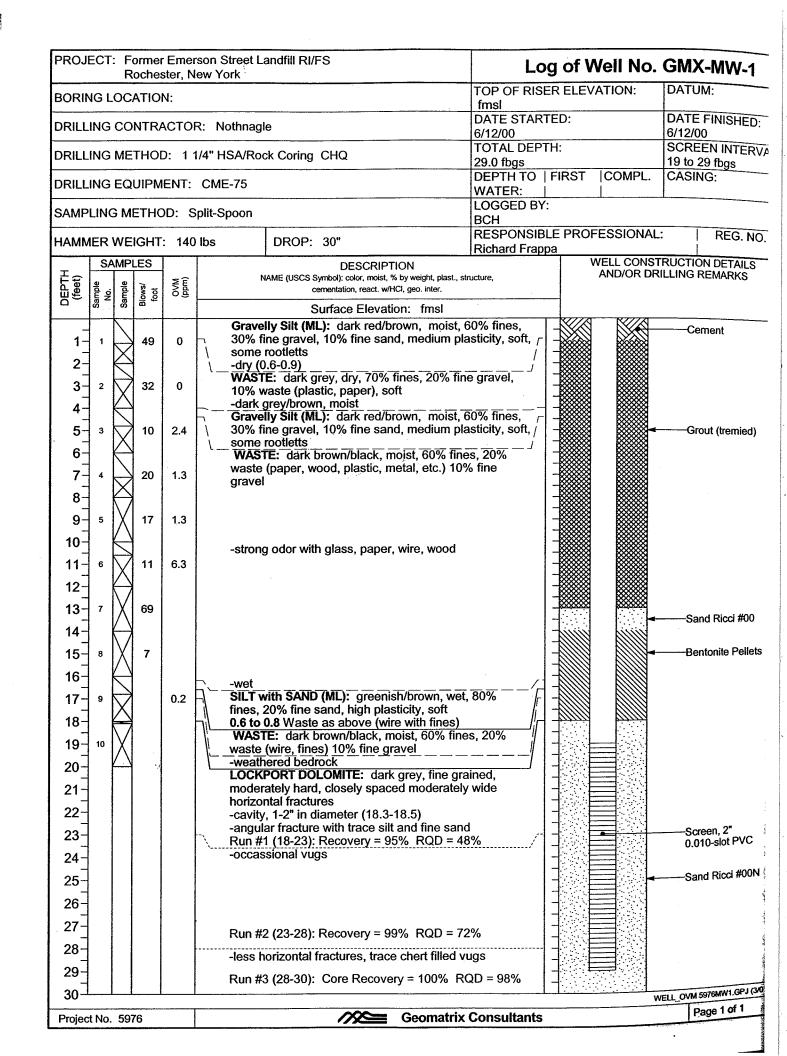
 Date Started
 9/7/07
 Completed
 9/7/07
 Operator

 Backhoe Subcontractor
 F. Monte Enterprises
 Equipment
 Project No. Project Name Client Elevation Date Started

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
2			ROOTMAT 0'4" Compact SAND, SILT and GRAVEL, trace concrete, trace brick, numerous cobbles
4			4'0"
¢	S-1	5'0"	Firm black moist SILT, some sand, trace organics (buried topsoil)
			6'0" Firm to compact SILT, little to some sand, trace gravel, trace clay 7'7"
۵ (۵			Refusal on apparent bedrock at 7'7"
13			Notes: 1. Sides Vertical. 2. Dry on completion. 3. Staked locations/elevations provided by Foundation Design, P.C.

Site Pictures





POJECT: Former Emer	son Street Landfill RI/FS	Log of	Well No.	GMX-MW-2	2
ROJECT: Formar English	ew York	TOP OF RISER ELI		DATUM:	
ORING LOCATION:		fmsl		DATE FINISHE	D:
	2. Nothnagle	DATE STARTED: 6/13/00		6/14/00	
RILLING CONTRACTO		TOTAL DEPTH:		SCREEN INTE	RVAL:
RILLING METHOD: 1	/4" HSA/Rock Coring CHQ	36.0 fbgs	T COMPL.	25 to 35 fbgs CASING:	
		DEPTH TO FIRS WATER:			
RILLING EQUIPMENT:		LOGGED BY:			
SAMPLING METHOD: S	split-Spoon	BCH RESPONSIBLE PF	ROFESSIONAL	: REG.	NO.
AMMER WEIGHT: 140	DROP: 30"	Richard Frappa	WELL CONS	RUCTION DETAIL	LS
SAMPLES	DESCRIPTION NAME (USCS Symbol): color, moist, % by we	iobt plast., structure,	AND/OR DF	ILLING REMARKS	3
DEPTH (feet) Sample No. Sample Blows/ foot (ppm)	Cementation, react. w/HCl, geo), inter.	-		
Cfeet; (feet; Sample No. No. Sample foot OVN (ppm	Surface Elevation:				
	ORGANIC SILT (OL): dark brown,	70% fines, 20%		Cement	
1-1 42 0	fine gravel, 10% rootletts, medium				
- X	firm, TOPSOIL SAND with GRAVEL (SW): dark g	rey/brown, moist,			
2-	70% fine sand, 20% fine gravel, 10	0% low plasticity			
3-2 6 1.5	fines, loose, iron stained WELL GRADED GRAVEL with SIL	.T (GW-GM):			
4-	Hight grov/white drv 70% coalse y	1 avei, 20 /0 mile 200			
5-3 6 2.5	gravel, 10% low plasticity lines, loc	and 30% medium			
6-	plasticity fines, 20% fine graver with	th waste (glass,			
-1 $ $ $ $ $ $ $ $ $ $					
7 4 8 2.9	WASTE: black, moist, 70% coarse gravel with waste (glass, plastic, p	paper, ceramic), 10%			
8- (-)	his malastic fines 10088	/ 1 80			
9 5 9 2.7	I a subbarrance diage still	ing, wire, metal, etc. /		· ·	
	sand, 5% fine gravel, 5% waste (a	as above), medium			
10-	plasticity, firm	-8	**** *****		
11 6 8 0.	-wood, glass		***		
12-	WASTE: black, wet, 60% fine sar	nd, 20% fine gravel,	***		
13-7 4 1.	100/ cooree gravel 10% Waste (D	aper, wood), loose			
	-wet, purple foundary sand, wood	naner plastic			
		, paper, places -8		Grout	
15-8 9 0.	2				
16-	· ·	·			
17- 9 49					
		por plastic glass)			
	WASTE as above, wet (wood, pa	per, plastic, glass)			
	0				
20	-black, wet, more organics (peat-	-like), wood, foundary			
	.0 sand, plastic, paper			8	
			**************************************	q	
22	WASTE: dark grey, wet, 60% fin 5% rootletts (at waste native con	nes, 35% line sand,		Bentonite	Pellets
23-12	V I \ are doe from soft to IIII	n		3	
24					
25-	fines, 50% fine sand, low plastic				
	-weathered bedrock ROCHESTER SHALE: dark grey	y, moderately hard,			
26-		, , , , ,			
27-	LOCKPORT DOLOMITE: dark g vugs, several horizontal fractures	res, occassional angular		Sand Ric	rci #00
28-	functione fine grained			Sanu Nic	
	Run #1 (24-29) Recovery = 90°	% RQD = 34%			
29-	-fewer horizontal fractures			WELL_OVM 5976M	W2.GPJ (3
	1	Geomatrix Consultants		Page 1	
	//	Competitiv Concultants		1, 290	

				ter, New	YOR	Log of We		lo. GMX-MW	<i>I-2</i> (cont'd)
Ð		MPL			DESCRIPTION	1			RUCTION DETAILS
(feet)	Sample No.	Sample	Blows/ foot	(mqq)	NAME (USCS Symbol): color, moist, % structure, cementation, react. w/H	6 by weight, plast.,		AND/OR DRI	LING REMARKS
31-									
32-									
33-]]		Screen, 2"
34-				-\	-angular fracture Run #2 (29-34) Recovery = 94% I	ROD - 54%	-		0.010-slot PVC
35-					-occassional vugs				
36-					Run #3 (34-36) Recovery = 95%, I	RQD = 76%	+		
37									
88-									
9-									
10-							F		
1-]		
2-]		
3-						in de la companya de La companya de la comp]		
4-									
5-					· · ·]]		
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0									
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2-									
3-							17		
4									
5-									
6									
L				1					LL_OVM 5976MW2.GPJ (3

Rochester, N	erson Street Landfill RI/FS New York	Log	of Well No.	GMX-MW-3
BORING LOCATION:	· · · · · · · · · · · · · · · · · · ·	TOP OF RISER fmsl	ELEVATION:	DATUM:
DRILLING CONTRACTO	R: Nothnagle	DATE STARTE	D:	DATE FINISHED:
DRILLING METHOD: 1	1/4" HSA/Rock Coring CHQ	6/14/00 TOTAL DEPTH:		6/15/00
		30.5 fbgs		SCREEN INTERVA
DRILLING EQUIPMENT:	CME-75	DEPTH TO FI WATER:	RST COMPL.	CASING:
SAMPLING METHOD: S	plit-Spoon	LOGGED BY:		l
HAMMER WEIGHT: 140	lbs DROP: 30"	BCH RESPONSIBLE	PROFESSIONAL:	REG. NO.
SAMPLES	DESCRIPTION	Richard Frappa		RUCTION DETAILS
DEPTH (feet) Sample No. Sample Blows/ foot (ppm)	NAME (USCS Symbol): color, moist, % by weight, cementation, react. w/HCl, geo. inte	plast., structure, r.	AND/OR DRI	LLING REMARKS
	Surface Elevation: fms	sl		
1-1 29 0.0	GRAVELLY SILT (ML): dark brown, mo 30% fine gravel, 5% coarse gravel, 5%	pist, 60% fines,		Cement
2		· · · M		Coment
3-2 19 0.0	WELL GRADED GRAVEL with SAND a light. grey/white, dry, 70% coarse grave	Ind SILT:		
4-	WASTE: dark brown grading to black	moiot 700/		
5-3 22 0.2	The sand, 10% fine gravel 10% popple	notio finon 100/		
6-	waste (wood, glass, rope, paper), loose -brown, wood with coarse gravel			
7-4 2 0.9	-black, foundary sand (glass, wood, pai	nt chip)		
8			× · · ·	Grout
9-5717.7	-brick, foundary brick, paper, foundary s	and, glass		
10-				
	-coarse gravel in shoe			
11 - 6 X 9 0.2 12				
	WASTE: black, moist, 60% medium sar	nd, 30%		
	waste (glass, paper, ash), 10% fine grav	/el, loose		
15 8 5 5.5 16 6 6 6 6 7 10 10 10 10 10 10 10 10 10 10 10 10 10	SILTY SAND (SM): dark greenish/grey, fine sand, 30% low plasticity fines, soft	wet, 70%		
17-9 0.0	-grades to brownish grey, wet, 50% fine	sand, 30% low)) -	Bentonite Pellets
	plasticity fines, 10% fine gravel, 10% coa soft-firm, 5% reworked waste	arse gravel,		
9- -	-weathered bedrock			
	LOCKPORT DOLOMITE: dark grey, fine moderately hard, closely spaced horizont	ol fractures 102		
	occassional angular to vertical fractures, sand and fines in fractures	trace fine -		-Sand Ricci #00
2-				
3-				
3 4	Run #1 (18.5-23.5) Recovery = 96% RQ			
4-7 - 5-4	-occassional vugs, cavities, horizontal fra angular fracture	ctures, and		
	Core Recovery = 99% RQD = 27% (poor)			-Screen, 2"
				0.010-slot PVC
	_			
8-1	Run #2 (23.5-28.5) Recovery = 93% RQ	D = 30%		
	······			
ect No. 5976	Geomatri	x Consultants	WELL_C	VM 5976MW3.GPJ (3/01)

	ochester, Nev		Log of Well	No. GMX-MW-3 (cont'd
Sample Sample Sample Sample	Blows/ foot (ppm) (ppm)	DESCRIPTIC NAME (USCS Symbol): color, moist structure, cementation, react. w	% by weight place	WELL CONSTRUCTION DETAIL AND/OR DRILLING REMARKS
		Run #3 (28.5-30.5) Recovery = 9	93% RQD = 30%	

NO. 5976

.

PROJ	ECT				erson Street Landfill RI/FS New York	Log of Well No.	GMX-MW-4
BORII	NG L	.0C	ATIO	N:		TOP OF RISER ELEVATION: fmsl	DATUM:
DRILL	ING	со	NTR	АСТО	R: Nothnagle	DATE STARTED: 6/15/00	DATE FINISHED: 6/16/00
DRILL	ING	ME	тно	D: 1	1/4" HSA/Rock Coring CHQ	TOTAL DEPTH: 35.0 fbgs	SCREEN INTERVAL: 26 to 35 fbgs
DRILL	ING	EQ	UIPN	IENT:	CME-75	DEPTH TO FIRST COMPL. WATER:	CASING:
SAMP	LIN	G M	ETHO	DD: S	Split-Spoon	LOGGED BY: BCH	•
HAMM	IER	WE	IGHT	: 140	0 lbs DROP: 30"	RESPONSIBLE PROFESSIONAL: Richard Frappa	REG. NO.
DEPTH (feet)	Sample No.	Sample	Blows/ SH	(mdd)	DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast., s cementation, react. w/HCl, geo. inter. Surface Elevation: fmsl	WELL CONST	RUCTION DETAILS LLING REMARKS
1- 2-	1		22	0.0	SANDY ORGANIC SOIL (OL/OH): dark red moist, 60% fines, 20% fine sand, 10% fine rootletts, soft, medium plasticity, TOPSOIL gravel in shoe)	gravel, 10%	Cement
2	2		18	0.0	-black WASTE: moist, plastic, paper, wood, glass, GRAVELLY SILT (ML): dark grey, moist, 60		
5-	3	$\overline{\mathbf{X}}$	14	0.0	30% fine gravel, 5% fine sand, firm WASTE foundary sand, glass, moist		
6- 7-	4	\square	12	0.0	-black, moist, wood, plastic, glass		
8-		Ŕ			WASTE: dark red/brown, moist, 80% fine s	and, 20%	
9- 10-	5	Ŕ	48	0.7	fine gravel, firm, with waste (black, moist, p paper, metal, etc.)	lastic, glass, – Konstruction – Kons	Grout
11- 12-	6	X	5	0.3			
13- 14-	7	\square	2	0.0			· · · · ·
15- 16-	8	\square	30	0.0			
17- 17- 18-	9	\mathbb{R}	7	0.0	-black foundary sand in waste		
19-	10		7	0.0	-moist to wet, loose		
20- 21- 22-	11		11	0.0	-wet		
23- 24-	12	\ge		0.0	Organic Soil (OL/OH): black, moist, 90% fi rootletts, soft, low plasticity, PEAT	nes, 10%	Bentonite Pellets
25- 25- 26- 27-					0.9 to 1.1 DK grey, moist, 80% fines, 20% fi firm, low plasticity SILT WITH SAND (ML): dark grey, moist, 80 20% fine sand, low plasticity, firm SANDY SILT (ML): dark grey, wet, 65% fine	0% fines,	
28- 29- 30-					35% low plasticity fines, firm LOCKPORT DOLOMITE: dark grey, fine gra numerous horizontal fractures, few angular a fractures	and vertical	——Sand Ricci #00
Projec	t No.	597	6		Geomatrix		ELL_OVM 5976MW4.GPJ (3/01) Page 1 of 2
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PRO.	IECT	: F R	orme oche	r Emer ster, N	son Street Landfill RI/FS ew York	Log of Well	No. GMX-MW	-4 (cont'd)
DEPTH (feet)	Sample No.	Sample M	Blows/	(mqq)	DESCRIPTION NAME (USCS Symbol): color, moist, % f structure, cementation, react. w/HC	by weight, plast., I, geo. inter.	WELL CONSTR AND/OR DRILL	UCTION DETAILS LING REMARKS
HLd=0 31- 32- 33- 34- 35- 36- 37- 38- 40- 41- 42- 43- 44- 45- 51- 52- 53- 55- 56- 57- 58- 59- 60- 60-	Sample	Sample		OVM (ppm)	NAME (USCS Symbol): color, moist, % I	RQD = 16%	WELL CONSTR AND/OR DRILL	UCTION DETAILS LING REMARKS
61 62 63 64 64 65 66								

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WELL_OVM 5976MW4.GPJ (3/01) Page 2 of 2

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PROJECT: Former Emerson S Rochester, New Yo		Log	of Well No.	GMX-MW-5
BORING LOCATION:		TOP OF RISER fmsl	ELEVATION:	DATUM:
DRILLING CONTRACTOR: N	othnagle	DATE STARTE 10/16/00	D:	DATE FINISHED: 10/16/00
DRILLING METHOD: HSA/HC) core	TOTAL DEPTH 31.0 fbgs	•	SCREEN INTERV 21 to 31 fbgs
DRILLING EQUIPMENT: CME	-75	DEPTH TO F WATER:	IRST COMPL. 10 ft	CASING:
SAMPLING METHOD: Split-S	poon	LOGGED BY: JSV	k	
HAMMER WEIGHT: 140 lbs	DROP: 30"		PROFESSIONAL	: REG. NO
DEPTH (feet) No. No. No. foot (ppm) (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by we cementation, react. w/HCl, get	eight, plast., structure, o. inter.		RUCTION DETAILS ILLING REMARKS
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Surface Elevation: ORGANIC SILT (OL/OH): reddish moist, 60% fines, 30% fine sand, 1 mattermedium plasticity SILT and FINE SAND (SM-ML) dar 5YR 3/4, dry, 45% fine sand, 45%	brown 5YR 3/1, 10% organic		Cement
4 5- 5- 6- 10	fines, 10% gravel, fill -dry to moist, concrete pieces		-	8" diameter borehole (HSA) (0-16.5)
7-554 8- 9-555 72 10- 72	SAND and WASTE (SW): reddish 2.5/1/1, dry to moist, 50% sand, 50 (grass, metal pieces, etc), fill -moist, glass pieces, gravel WELL GRADED GRAVEL with SIL)% waste material 	-	Cement/Bentoni Grout (0-16) 2" diameter PVC
11 SS-6 7 12 13 SS-7 39 14 15 SS-8 >100 16	(GW-GM): reddish black 2.5YR 2.5 50% gravel, 20% sand, 10% low p waste material (glass, metal piece SILT (ML): dark grey 5YR 3/1, wel 90-100% fines, 0-10% fine sand, 0 (plastic pieces), high plasticity, fill SILT and CLAY with GRAVEL (CL- grey 5Y 6/2, dry, 80% fines, 20% g	5/1/1, moist to wet, lasticity fines, 20% s, etc), fill t to saturated, -5% waste material -ML): light olive		riser (+2-21)
17 ss.9 >100 18 19 20 20 21 22 21 22 23	hard, native, [TILL] BEDROCK: LOCKPORT DOLOMIT grained, moderately hard, numerou fractures, few angular and vertical occassional calcite filled vugs and	E: dark grey, fine us horizontal fractures,		Bentonite (16-19
23 - 24 - 25 - 26 - 26 - 26 - 26 - 26 - 27 - 27 - 27			-	4: diameter core (16.5-31.0) Screen, 2"
27- 28- 29- 30-				0.010-slot PVC Sand #00N (19-:
31- 32- 33-				
		-		

	Emerson Street Landfill RI/FS er, New York	Log of Well No	. GMX-MW-6
BORING LOCATION	:	TOP OF RISER ELEVATION:	DATUM:
DRILLING CONTRAC	CTOR: Nothnagle	fmsl DATE STARTED: 10/17/00	DATE FINISHED:
DRILLING METHOD:	HSA/NX core/rollerbit	TOTAL DEPTH: 42.0 fbgs	10/18/00 SCREEN INTERVAL: fbgs
DRILLING EQUIPME	NT: CME-75	DEPTH TO FIRST COMPL. WATER: 10 ft	
SAMPLING METHOD	D: Split-Spoon	LOGGED BY:	
HAMMER WEIGHT:	140 lbs DROP: 30"	RESPONSIBLE PROFESSIONA Richard Frappa	L: REG. NO.
DEPTH (feet) Sample No. foot	DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, p cementation, react. w/HCl, geo. inter.	Vast., structure, AND/OR D	TRUCTION DETAILS RILLING REMARKS
	Surface Elevation: fms		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	 ORGANIC SILT (OL/OH): dark grey 10 moist, 70% fines, 20% fine sand, 10% finedium plasticity, soft SILT and FINE SAND (SM-ML): dark ye brown 10YR 4/4, dry, 40-45% fine sand medium plasticity fines, 10-20% gravel, red brick pieces, firm, fill SILT (ML): dark bluish grey 2 FOR GLI 75% fines, 10% fine sand, 15% wood p wood, glass pieces, etc, medium plastici SILT (ML): very dark greyish brown 2.5 80% fines, 10-15% gravel, 5-10% fine sand, splasticity, fill -grades to olive brown 2.5Y 4/3, moist, v present SILT with CLAY (ML-CL): greyish brow moist, 90-95% fines, 5-10% gravel, trac plasticity, fill SANDY SILT (ML): brown and black, we saturated, 60% fines, 25% fine sand, 15 wood pieces, high plasticity, soft SILT and CLAY with GRAVEL (CL-ML): 2.5Y 5/2, dry, 90-95% fines, 5-10% gravel, rotlets, high plasticity, hard, native, [TII BEDROCK: LOCKPORT DOLOMITE: da grained, moderately hard, horizontal bec numerous horizontal fractures, few angu fractures, occassional calcite filled vugs -horizontal fractures with secondary mineralization/staining (12.3, 12.4, 12.6, -calcite vug, 0.5" diameter -lose all water return briefly 	organic matter, ellowish 1, 40-45% , occassional EY 4/1, moist, bieces, decayed bity, fill Y 3/2, moist, sand, medium wood pieces in 2.5Y 582, be rootlets, high et to 5% gravel, trace light grey y(el, trace L] and viens	 Cement 8" diameter borehole (HSA) (0-12) Cement/Bentonite Grout (0-12) Cement/Bentonite Grout (0-12) Sand 00N (16-23) Sand 00N (16-23) Sand 00N (16-23) 2" diameter PVC riser (+2-37) 2" diameter PVC riser (+2-37) 2" diameter PVC riser (+2-37) 6" diameter borehole (wet rotary rollerbit) (12-42) Bentonite (24-35)
30 1			
Project No. 5976		W	ELL_OVM 5976MW6.GPJ (3/01)
	Geomati	rix Consultants	Page 1 of 2

PROJI	CT	: Fo	ormei oche:	r Emers ster, Ne	on Street Landfill RI/FS w York	Log of Well	No. GMX-MW	-6 (cont'd)
DEPTH (feet)	Sample No.		Blows/	(mqq) MVO	DESCRIPTION NAME (USCS Symbol): color, moist, % structure, cementation, react. w/HC		WELL CONSTRU AND/OR DRILL	JCTION DETAILS ING REMARKS
31- 32- 33-	-				-calcite filled vug 1" diameter -calcite vug, 0.5" diameter, lose all -calcite vein along horizontal fractu	water return re		
34 - 35 - 36 - 37 -								—Bentonite (24-35)
38- 39- 40-					-calcite filled vug/horizontal vein			Sand 00N (35-42)
41- 42- 43-								2" diameter 10-slot PCV screen (37-42)
44- 45- 46-								
47- 48-								
49- 50- 51-							- - - -	
52- 53- 54-						x		
55- 56- 57-								
58- 59- 60-								
61 62- 63-								
64- 65- 66-					·			
Projec	t No.	. 59	76		Ge	omatrix Consultants	WEI	L_OVM 5976MW6.GPJ (3/01) Page 2 of 2

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DATE	STARTED		R/16	/88	RECRA ENVIRONMENTAL, INC.	HOLE NO. <u>GW-6</u> SURFACE ELEV. <u>99.3</u>
	FINISHED	8		/88	SUBSURFACE LOG	SURFACE ELEV. <u>99.3</u> G.W. ELEV. <u>84.19</u>
PR		NYSDE SITE ≠		ASE IL INVES		STREET LANDFILL
рертн , г т	RECOVERY	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 12 18 18	2 DESCRIPTION	NOTES
5 10	1.8' 1.2' 0.4'	SB SB SB	1 2 3	5 30 27 27 50/.2 50/.2 50/.2	very dense, moist at approximately 5.5 ft. [SILT and SAND] 9.0' Upper 0.5' highly fractured,	Boring advanced with 4 1/4 in. I.D. HSA, truck mounted CME-55 drill rig. Driller - Rocky Baye Assistant - Shawn Penrod HNU = 0 ppm Explosimeter = 0% LEL Geiger Counter = 0 mr/hr. Micro R Meter = 6-8 micro-rem/hr.
15 15 20	REC 90% RQD 0% REC 96% RQD 8% RQD 8%	NX NX	1		 penetrated by split barrel sampler. Light gray fine textured dolomite, many horizontal and vertical fractures. Some show intense weathering and rock is quite crumbly. Drilling is much easier than in wells towards the South and West, rock is considerably softer and more weathered. Few vugs are present. Water table located at approximately 14.5' 	
25 25 30 35	878 RQD 878	NX	3		Drilling fluid return was lost during the entire length of Coring. [DOLOMITE BEDROCK] 23.7	3-7/8 in. tri-cone bit from 9.0 ft 23.7 ft. Boring completed at 23.7 ft. G.W. elevation taken on 12/16/88.
CLAS	SIFICATIC	N	(ISU)	<u>AL</u>	METHOD OF INVESTIGATION	ASTM D1586-84. D2113-83 STEINER

DATE	STARTED	ې	3/15	/88	RECRA ENVIRONMENTAL, INC.	HOLE NO. <u>GW-7</u> SURFACE ELEV. <u>100.6</u>
SHEET	FINISHED	8	/16)F_		SUBSURFACE LOG	SURFACE ELEV. <u>100.6</u> G.W. ELEV. <u>88.02</u>
PF				IASE IL INVES		STREET LANDFILL
DEPTH-FT	RECOVERY	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 1 12 18 18 2	2 2 4	NOTES
	1.5	SB	1	6 17 11 4	Light brown SAND and GRAVEL fill, little glass, metal and ash, dry, medium dense. [FILL] 4.0' Brown SILT, some sand, little red	Boring advanced with 4 1/4 in. I.D. HSA, truck mounted CME-55 drill rig.
5	2.0*	SB	2	10 14 16 23		Driller - Rocky Baye Assistant - Shawn Penrod
 10	1.7' 0.4'	SB SB	3 4	8 18 50 50	At 5.5. ft.: Moist [SILT] 9.0' Weathered bedrock zone 10.0'	Transition approximatedat 4.0 ft. by auger drilling resistance and inspection of
	REC 93% RQD 15%	NX	1		 Gray dolomite, many horizontal fractures, two short vertical fractures perpendicular to bedding surfaces, Rock is soft at weathered surfaces to 	cuttings. HNU = Only reading was 2ppm in Augers at 9.5 ft. Explosimeter = 0% LEL
15	REC 89% RQD 24%	NX	2		 Rock is solit at weather ed sur faces to moderately hard. Numerous vugs, some containing white precipitate highly reactive to HCL. Slight drilling fluid loss during run 2. Water Table encountered at approximately 13.5 ft. 	Geiger Counter = 0 mr/hr. Micro R meter = 4-6 micro-rem/hr. Auger drilling refusal at
20 					[DOLOMITE BEDROCK] 19.5	
25 <u>-</u> 30						Coring was done with a long ear 5 ft. NQ core barrel and a 58-60 caret bit. Rotary drilled with a 3-7/8 in. tri-cone bit from 10.0 ft. to 19.5 ft.
						Boring completed at 19.5 ft. G.W. elevation taken on 12/16/88.
	SSIFICATIO	XN	VISU	AL	METHOD OF INVESTIGATION	ASTM D1586-84, D2113-83
PB.002	214.7				LOG DEVELOPED BY <u>ROBER</u>	TSTEINER

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ITEM DRIVE CORE DRILLING EQUIPMENT & PROCEDURES & Occupational Education to center (See Plenter) ITEM CASING SAMPLER BARREL DRILLING EQUIPMENT & PROCEDURES tion Center (See Plenter) TYPE Auger S BIT TYPE: CME-75, Truck-Mounted DATUM: NGVD INSIDE DIAMETER (IN) 4-1/4 1-3/8 DRILL MUD: FINISH: 17 May 199 HAMMER WEIGHT (LB) 140 OTHER: Advanced augers to 24.0 ft. DRILLER: S. Loranty	Co	nsulting	YORK, ROCHE Geotechnic sts and Hydr	al Engineer	rs,		TEST BORING REPORT		BORING NO. MW-165		
ITEM DRIVE DRIVE <thd< td=""><td>CLIENT:</td><td>CIT</td><td>Y OF ROCHES</td><td>TER</td><td>IDFILL MODI</td><td>IFIED REMI</td><td>EDIAL INVESTIGATION</td><td></td><td colspan="3">SHEET NO. 1 OF 1 LOCATION: Edison Tech.</td></thd<>	CLIENT:	CIT	Y OF ROCHES	TER	IDFILL MODI	IFIED REMI	EDIAL INVESTIGATION		SHEET NO. 1 OF 1 LOCATION: Edison Tech.		
TYPE Auger S	1	TEM		CASING					tion Center (See Plan)		
BLOKS BLOKS DECKS DECKS DECKS DECKS DECKS DECKS - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -<	INSIDE D	EIGHT	(LB)	4-1/4	1-3/8 140		BIT TYPE: 4-1/4 in. I.D. H. DRILL MUD:	.S. Augers	START: 17 May 1993		
-10 -10 -10 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 -16 -16 -17 -17 -17 -17 -17 -17 -17 -17 -18 -18 -19 -11 -10 -11 -11 -11 -11 -11 -11 -11 -11 -11 -11 -11 -11 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11 -12 -11		BLOWS	BLOWS	NUMBER &	DEPTH	CHANGE	. VISUAL CLASS	D REMARKS			
Notes: No OVA readings above background in the breathing zone. No explosimeter radioactivity meter readings above back ground in breathing zone. No explosimeter radioactivity meter readings above back ground in breathing zone. No explosimeter radioactivity meter readings above back ground in breathing zone. Set 6.0 in. temporary casing to 24.0 ft. Keamed with 3-7/8 in tri-cone rollerbit to 35.0 ft. and set 2.0 in. PVC well. Image: Refusal at 24.0 ft. Auger Refusal at 24.0 ft. Monitoring Well Report. Matter Level DATA DATE TIME ELAPSED DEPTH (FT) TO: O Open End Rod OVERBURDEN (LIN FT): 24.0 ROCK CORED (LIN FT): U Undisturbed Sample ROCK CORED (LIN FT):							Advanced augers to 24.0 ft.	. wîthout sp	lit spoon sampling.		
 2. No explosimeter radioactivity meter readings above back ground in breathing zone. 2. No explosimeter radioactivity meter readings above back ground in breathing zone. 3. Set 6.0 in. temporary casing to 24.0 ft. 4. Reamed with 3-7/8 in tri-cone rollerbit to 35.0 ft. and set 2.0 in. PVC well. 5. Installed monitoring well in borehole, see Groundwater Monitoring Well Report. Auger Refusal at 24.0 ft. DATE TIME ELAPSED TIME (HR) DEPTH (FT) TO: DEPTH (FT) TO: O Open End Rod T Thin Wall Tube U Undisturbed Sample ROCK CORED (LIN FT): 								packground i	n the breathing zone.		
-20 - 4. Reamed with 3-7/8 in tri-cone rollerbit to 35.0 ft. and set 2.0 in. PVC well. - - - 5. Installed monitoring well in borehole, see Groundwater Monitoring Well Report. - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - DATE WATER LEVEL DATA - - O Open End Rod -							2. No explosimeter radioad ground in breathing zor	ctivity mete ne.	r readings above back-		
Monitoring Well Report. -25 -25 -25 -25 WATER LEVEL DATA SAMPLE IDENTIFICATION WATER LEVEL DATA SAMPLE IDENTIFICATION Summary Summary DATE TIME ELAPSED DEPTH (FT) TO: O Open End Rod TIME (HR) BOTTOM BOTTOM OF HOLE U Undisturbed Sample	_20						4. Reamed with 3-7/8 in tr				
DATE TIME ELAPSED TIME (HR) DEPTH (FT) TO: OF CASING O BOTTOM OF HOLE O BOTTOM OF HOLE O O DEPTH (FT) TO: O O Open End Rod T OVERBURDEN (LIN FT): 24.0 ROCK CORED (LIN FT):							 Installed monitoring we Monitoring Well Report. 	ell in boreh	ole, see Groundwater		
WATER LEVEL DATA SAMPLE IDENTIFICATION SUMMARY DATE TIME ELAPSED TIME (HR) DEPTH (FT) TO: O Open End Rod T Thin Walt Tube OF CASING OF HOLE O Open End Rod T Thin Walt Tube U Undisturbed Sample OVERBURDEN (LIN FT): 24.0	 										
DATE TIME ELAPSED TIME (HR) BOTTOM BOTTOM WATER T Thin Wall Tube ROCK CORED (LIN FT): OF CASING OF HOLE U Undisturbed Sample			WATER LEVEL	DATA	L	<u>I</u>					
	DATE	TIME		BOTTOM	BOTTOM						
BORING NO. MW-165							S Split Spoon SAMPL				

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Co	nsulting	YORK, ROCHES Geotechnica ts and Hydro	l Engineer	s,		TEST BORING REPORT	BOR	ING NO. MW-16D	
PROJECT: CLIENT: CONTRACT	CIT	MER EMERSON Y OF ROCHEST HNAGLE DRILL	ER	DFILL MODI	FIED REME	DIAL INVESTIGATION	SHE	E NO. 70352-46 ET NO. 1 OF 3 ATION: Edison Tech.	
]	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROC	EDURES Educ	Occupational cation Center (See /ATION: 544.20 Plar	
TYPE INSIDE D HAMMER W HAMMER F		(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30	NX 2-1/8 	RIG TYPE: CME-75, Truck-M BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to	M: NGVD RT: 9 June 1993 ISH: 14 June 1993 LER: S. Loranty REP: M. Corrigan		
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSI	FICATION AND REM	MARKS	
		2 6 7	s1 24"/24"	0.0 2.0		Medium dense brown coarse t trace glass, plastic, aspha fibers from 05 ft., damp.	lt, and foam rul	.T, some gravel, wit ober, with root	
		3 5 18	\$2 24"/24"	2.0 4.0		Medium dense brown silty GR little clay, dry.	-FILL- AVEL, some coars	se to fine sand,	
 5		22 8 12 18	\$3 24"/24"	4.0 6.0	5.8	Medium dense brown coarse t	o fine SAND, dar -FILL-	np.	
 		28 6 3	S4	6.0		Medium dense black ASH, wit			
	-	5 6 13	6"/24" · \$5	8.0 8.0		Loose black ASH, with metal Medium dense black ASH, wit damp.	-FILL-		
- 10		9 13 3 5	6"/24" \$6	10.0 10.0		Loose black ASH, with wood,	glass and metal	l, moist to wet.	
		3 5	4"/24" \$7	12.0 12.0		Same, except medium dense.			
		6 6 6	2"/24" \$8	14.0 14.0		Same.			
- 15 - 		2 4 4	6"/24" \$9	16.0 16.0			-FILL-		
·		4 2 8	59 6"/24"	18.0		Same, except with trace bri	ck fragments.		
 _20		1 6 3	s10 1"/24"	18.0 20.0	20.0	Same, except trace metal ar	d wood.		
· _		3 2 1	s11 3"/24"	20.0 22.0		Very loose black fine sandy SameMARSH D		anic material, wet.	
		100/.2	\$12 1"/2"	22.0 22.2	22.2	Moderately hard, highly wea dolomitic MUDSTONEROC	thered, gray, f HESTER FORMATIO		
						Auger Refusal at 23.7 ft. Apparent Top of Competent Rock at 23.7 ft.			
		WATER LEVEL	DATA			SAMPLE IDENTIFICATION SUMMARY			
DATE	TIME	ELAPSED TIME (HR)	BOTTOM	H (FT) TO: BOTTOM	WATER			• • • • •	
			OF CASING	OF HOLE		U Undisturbed Sample S Split Spoon	SAMPLES:	125	
							BORING NO.	MW-16D	

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H	Consulting	YORK, ROCHE g Geotechnic sts and Hydr	al Engineer	rs,		TEST BORING REPORT	BORING NO. MW-16D FILE NO. 70352-46 SHEET NO. 2 OF 3
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION	AND REMARKS
						Notes: 1. OVA readings from sample screeni s1 = 0 ppm S2 = 20 ppm (methane) S3 = 10 ppm (methane) S4 = 45 ppm (methane) S5 = Submitted for laboratory and S6 = 100 ppm (methane) S7 = 30 ppm (methane) S10 = 10 ppm (methane) S10 = 10 ppm (methane) S12 = 5 ppm (methane) No OVA readings above background 2. No explosimeter or radioactivity background from sample screening 3. Sample S5 submitted for TCLP methanet characteristics analysis. 4. See Core Boring Report, page 3. 5. Installed monitoring well in bork Monitoring Well Report. 5. Monitoring Well Report. 5. Moni	alysis in the breathing zone. meter readings above or in the breathing zone. als and hazardous

Consulting G	eotechnical	Enginee	ers,			CORE BORING REPORT FILE NO. 70352- SHEET NO. 3 OF 3					
DRILLING	CORE NO.	RECOVER	Y/RQD	WEATH-	STRATA						
(MIN./FT.)	DEPTH(FT)	IN.	x	ERING	(FT)	VISUAL CLASSIFICATION AND REMARKS					
2	25.0				1	Began Coring at	25.0 ft.				
2						Moderately hard, light to dark g dolomitic MUDSTONE, very thinly	gray, fine-grained, color-banded. Trace pit				
2						and vugs. Closely to very close	ely spaced, horizontal,				
2						-ROCHESTER FORM	MATION-				
<u> </u>	P1	<u>119</u>	<u>99</u> 58	MOD							
	N 1	07	50								
<u> </u>											
						Smooth, planar, high angle joint 25.3 ft.	t from 25.1 ft. to				
						Rough, planar, vertical joint fr	rom 26.8 ft. to 27.0 ft.				
2	35.0				1						
3	35.0					Tataanating anoth plane and	1				
3						high angle joints at 30.6 ft.	erately dipping, and				
3											
3											
3		118	98	MOD							
3	R2	91	76								
3											
	<i>(</i> 5 a										
3	45.0										
						Bottom of Boring a	t 45.0 ft.				
						Notes-					
						process.	during coring and reamin				
	-										
	Consulting G Geologists DRILLING RATE (MIN./FT.) 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Consulting Geotechnical Geologists and HydrogDRILLING RATE (MIN./FT.)CORE NO. DEPTH(FT)2222222222222222233333333333333333	Consulting Geotechnical Enginee Geologists and Hydrogeologist Recover DRILLING RATE (MIN./FT.) CORE NO. DEPTH(FT) RECOVER 2 25.0 119 2 2 69 2 2 119 2 2 69 2 35.0 119 2 35.0 35.0 3 35.0 118 3 3 91 3 3 3 3 3 3 3 3 3 3 3 3	RATE (MIN./FT.) DEPTH(FT) IN. X 2 25.0 119 99 2 R1 119 99 2 R1 69 99 2 2 35.0 111 2 35.0 118 91 98 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Consulting Geotechnical Engineers, Geologists and Hydrogeologists WEATH- ERING DRILLING RATE (MIN./FT.) CORE NO. DEPTH(FT) RECOVERY/RQD IN. WEATH- ERING 2 25.0 119 69 99 58 MOD 2 2 119 69 99 58 MOD 2 2 119 69 99 58 MOD 2 35.0 118 91 98 76 MOD 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 91 98 76 MOD	Consulting Geotechnical Engineers, Geologists and Hydrogeologists WEATH- ERING STRATA CHANGE (HIN./FT.) 2 25.0 WEATH- DEPTH(FT) STRATA IN. 2 25.0 MOD 2 25.0 MOD 2 R1 119 69 99 58 MOD 2 2 35.0 MOD 2 35.0 MOD MOD 3 35.0 MOD MOD 3 35.0 MOD MOD 3 35.0 MOD MOD	Consulting Geotechnical Engineers, Geologists and Hydrogeologists CORE BORING REPORT DRILLING CORE NO. DEPTH(FT) RECOVERY/RQD IN. Z WEATH- ERING STRATA CHANGE (FT) VISUAL CLASSIFICATION Weather and Hydrogeologists 2 25.0 RECOVERY/RQD DEPTH(FT) WEATH- FING STRATA CHANGE (FT) VISUAL CLASSIFICATION Weather and Hydrogeologists 2 25.0 R1 119 59 99 58 MOD 2 R1 119 59 99 58 MOD 2 R1 119 59 99 58 MOD 3 35.0 Intersecting smooth, planar, high angle joint 23 Smooth, planar, vertical joint ft Rough, planar, vertical joint ft Rough, planar, wertical joint ft Rough, planar, mod high angle joints at 30.6 ft. 3 3 45.0 MOD				

H&,	A OF NEW	YORK, ROCHE	STER, NEW	ORK	T							
C		Geotechnic Sts and Hydr				TEST BORING REPORT		BORING NO. MW-17				
PROJECT CLIENT: CONTRACT	CIT	IMER EMERSON Y OF ROCHES HNAGLE DRIL	TER	IDFILL MODI	FIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: Edison Tech. and Occupational (See				
ITEM CASING SAMPLER B							DRILLING EQUIPMENT & PROCEDURES Education Control ELEVATION: 5					
TYPE INSIDE (HAMMER) HAMMER		(IN) (LB) (IN)	Auger 4-1/4 	\$ 1-3/8 140 30	NX 2-1/8 	RIG TYPE: CME-75, Truck-Mou BIT TYPE: 4-1/4 in. I.D. H. DRILL MUD: OTHER: Advanced augers to	S. Augers	DATUM: NGVD START: 16 June 1993 FINISH: 17 June 1993 DRILLER: S. Loranty H&A REP: M. Corrigan				
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSI	FICATION AND	REMARKS				
		2 10	S1	0.0	.5	Loose brown SILT, little c dampTOPSO		e sand, trace gravel,				
		20 14 10	24"/24" \$2	2.0 2.0		Dense red-brown fine sandy trace gravel, dryFI	SILT, little LL-	coarse to medium sand,				
		20 20 10	24"/24"	4.0	4.0	Same, except damp.						
<u> </u>		11 11 6	\$3 24"/24"	4.0 6.0	4.5 5.5	Medium dense red-brown fi medium sand, trace organi						
		11 100/.4		6.0		SameFL	UVIAL DEPOSI	TS-				
			5"/15"	6.4		Completely to highly weathe MUDSTONE, damp.	red, gray, f	ine-grained, dolomitic				
┣ -		49	\$5 5 8"/8"	8.5 9.2 r		-ROC Same.	HESTER FORMA	TION-				
- 10 -		26 100/.3	\$6 9"/19"	10.0 10.8		Same.						
		100/.2	S7 NR	12.0 12.2		No Recovery.						
		100/.2	\$8 2"/2"	14.0 14.2		SameROC	HESTER FORMA	TION-				
				_		Auger ref Apparent top of c	usal at 15.0 ompetent roci					
						Notes:						
						 OVA readings from sampl S1 = 0 ppm S2 = 0 ppm 	e screening (noted as follows:				
20						S3 = 10 ppm (methane) S4 = 6 ppm (methane)						
						S5 = 0 ppm S6 = 0 ppm S7 = 0 ppm						
						S7 = 0 ppm S8 = 0 ppm						
						No OVA readings above b 2. No explosimeter or radi	oactivity me	ter readings above back				
						ground from sample scre 3. See Core Boring Report, 4. Installed monitoring we Monitoring Well Report.	page 2. Il in boreho					
		WATER LEVEL	DATA		L	SAMPLE IDENTIFICATION		SUMMARY				
			DEPT	H (FT) TO:			(LIN FT): 15.0					
DATE	TIME ELAPSED TIME (HR) BOTTOM BOTTOM W. OF CASING OF HOLE		WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	(LIN FT): 10.0							
						S Split Spoon	SAMPLES:	· 8S				
							BORING NO.	MW-17				

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H	& A OF NEW Y Consulting G Geologists	ORK, ROCHES eotechnical and Hydrog	Enginee	ers,			CORE BORING REPORT	BORING NO. FILE NO. SHEET NO.	MW-17 70352-46 2 OF 2
DEPTH	DRILLING	CORE NO.	RECOVER	Y/RQD	WEATH-	STRATA			
(FT)	RATE (MIN./FT.)	DEPTH(FT)	IN.	*	ERING	CHANGE (FT)	VISUAL CLASSIFICATION	N AND REMARKS	
	2	15.0					Began coring at 15.0 ft.		
	2						Moderately hard, moderately wear	thered, light	to dark
	2						gray, fine-grained, dolomitic M banded. Trace pits throughout.	JDSTONE, very	thinly cold
	2		120	100	MOD		spaced, horizontal, argillaceous -ROCHESTER FORM	s partings.	,
	2	R1	<u>120</u> 59	<u>100</u> 49			Smooth, planar, low angle joints		9 and
-20 —	2						19.1 ft.		i, una
	2								
	2								
	2								
-25	2	25.0							
							Bottom of Boring a	at 25.0 ft.	
							Note:		
							1. Lost 300 gallons of water du	ring coring	and reaming
							process.		sina realitring
-30									
-35 —									
-									
-									
· -									
40 —									
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45									
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50 —	 								

Co	nsulting	Geotechnic	STER, NEW Y al Engineer ogeologists	s,		TEST BORING REPORT	BORING NO.	MW-18S		
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSO TY OF ROCHE THNAGLE DRI	STER	NDFILL MOD	DIFIED RE	MEDIAL INVESTIGATION		FILE NO. SHEET NO. LOCATION:	70352-46 1 OF 1 PEKO (See Plan)	
I	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROC		ELEVATION:	531.84	
TYPE INSIDE D HAMMER W HAMMER F	EIGHT	(IN) (LB) (IN)	Augers 4-1/4 	RIG TYPE: CME-75, Truck-Mounted BIT TYPE: 4/14 in. I.D. H.S. Auge DRILL MUD: OTHER: Advanced augers to 8.0 f		S. Augers	DATUM: START: FINISH: DRILLER: H&A REP:	NGVD 25 May 1993 26 May 1993 S. Loranty J. Marschne		
DEPTH (FT)	WELL POINT PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSI	FICATION AN	D REMARKS		
						Auger Re Apparent Top of C Notes: 1. No OVA readings above b 2. No explosimeter or radi background in the breat 3. Set 6.0 in. temporary c 4. Reamed with 3-7/8 in. t 5. Installed monitoring we	wackground i oactivity m hing zone. asing to 8. ri-cone rol	ck at 8.0 f n the breath eter reading 0 ft. lerbit to 1	ning zone. gs above 7.7 ft.	
- 42		ATER LEVEL	DATA		<u> </u>	SAMPLE IDENTIFICATION		SUMMARY		
				H (FT) TO:		OVERBURDEN (LI			8.0	
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	O Open End Rod OM WATER T Thin Wall Tube ROCK CORED (LIN					
5/21/93	1023		19.0			SAMPLES:				

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IT TYPE INSIDE DI HAMMER WE	CIT R: NOTI	MER EMERSON Y OF ROCHEST HNAGLE DRILL	ER					
TYPE INSIDE DI HAMMER WE	EM		ING		FIED REMEDIAL INVESTIGATION			FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: PEKO
INSIDE DI HAMMER WE		ITEM CASING SAMPLER		DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCE	DURES	(See Plan) ELEVATION: 531.96
HAMMER FA	IGHT	(IN) (LB) (IN)	Auger S NX RIG TYPE: Gus Peck, 750-C 4-1/4 1-3/8 2-1/8 BIT TYPE: 4-1/4 in. I.D. H.S. Augu 140 OTHER: Advanced augers to 7.8		-	DATUM: NGVD START: 20 May 1993 FINISH: 25 May 1993 DRILLER: K. Busch H&A REP: M. Corrigan		
	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSIF	ICATION AN	D REMARKS
		6 9 20	\$1 15#/24#	0.0		Medium dense brown silty fir little gravel, with roots, c		me coarse to medium sand
		26 17	s2	2.0	7 /	Very dense brown coarse to f silt, dry.	fine SAND, -FILL-	little gravel, little
		43 29 11	13"/24" \$3	4.0	3.4 4.0	4" layer of asphalt, dry. 3" layer of brick, dry.	-	 FILL-
5		6 5 8 15	53 10"/24"	4.0 6.0		Medium dense brown gravelly dampGLA	coarse to ACIAL TILL-	
		6 15 50/.4	S4 14"/17"	6.0 7.4		Very dense brown coarse to 1 damp. -GLA		
 						Auger Ref Apparent Top of Co	8 ft.	
 						Notes: 1. See Core Boring Report,	page 2.	
 15						2. OVA readings from sample S1 = 1 ppm (methane) S2 = 0 ppm S3 = 1 ppm (methane) S4 = 0 ppm No OVA readings above backstopping	-	
						 No explosimeter or radioactivity meter readings about background from sample screening or in the breathin Installed monitoring well in completed borehole, se Groundwater Monitoring Well Report. 		
20								
		WATER LEVEL	DATA]	SAMPLE IDENTIFICATION		SUMMARY
				TH (FT) TO	•		OVERBURDEN	I (LIN FT): 7.8
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM		T Thin Wall Tube U Undisturbed Sample) (LIN FT): 18.8
			or charme c	1				4\$

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н 8 (& A OF NEW Y Consulting G Geologists	ORK, ROCHES eotechnical and Hydrog	Enginee	rs,		CORE BORING REPORT BORING NO. MW-180 FILE NO. 70352- SHEET NO. 2 OF 2					
DEPTH	DRILLING	CORE NO.	RECOVER	Y/RQD	WEATH-	STRATA					
(FT)	RATE (MIN./FT.)	DEPTH(FT)	IN.	%	ERING	CHANGE (FT)	VISUAL CLASSIFICATION AND REMARKS				
· -											
							Began Coring at	7 9 ++			
	10	7.9			 	4	Light to dark gray, fine-grained				
· -	10						very thinly color banded. Trace -ROCHESTER FC	e pits throughout.			
-10 —	10				NOO	10.5	Highly weathered, rough, stained	d, high angle joint from			
	10	R1	96 45	91	MOD	10.5	-7.9 ft. to 9.7 ft.				
• -	10	K I	45	42			Light to medium gray, fine-grained, thin-bedded, DOLOSTONE, very thinly color-banded. Trace pits th	nded. Trace pits throug			
· -							out. Secondary gypsum seams in spaced partings.	closely to very closely			
• •	10										
15 —	10						-LOCKPORT FORM	MATION-			
·	7	16.7					,				
· _	7	16.7				1	Core block at 16.7 ft.				
· -	10						Highly weathered vertical joints	s from 15.8 ft. to			
	10		118	98	MOD		16.0 ft., and from 16.5 ft. to 1	16.8 ft.			
-20	10	R2 103 86									
· _	10										
	10										
	10										
	10										
-25	10						-LOCKPORT FORM	MATION-			
	10	26.7									
	10	26.7				4	Core block at 26.7 ft.				
							Bottom of Boring a	at 26.7 ft.			
							Notes:				
							1. Reamed with 5-7/8 in. tri-co	one rollerbit from			
-30 —							7.9 ft. to 20.5 ft.				
· -							2. Set 4.0 in. PVC to 20.0 ft.				
• •							 Reamed with 3-7/8 in. tri-co 20.0 ft. to 30.0 ft. 	one rollerbit from			
• -							4. Lost 400 gallons during cori	ing and reaming process.			
• -											
35											
• -											
• -											
• -				l							
• •	<u> </u>										
40 —											

5	UBS	URFA	CE	EXPL	OR/	TION	 EST	BO	RIN	G	LO	G_	E
							 and the second						

Boring No. <u>GW-12</u> Project No. <u>576-005</u>

Sheet _____ of ____

Project Name	EMERSON	STREET

Data by _______ Pm

Driller AMERICAN AUGERS

Monitoring Instrument(s) DUSIMETER, MSA. HNULICGI

SAMPLE HAMMER

Weight 140 lb

Fall 30 in.

Date	39
start	finish
Boring Location	FIELD SOUTH of SCHOOL - BEHIND CANON
Total Depth	32
Depth to Water	22.86
Hole Diameter _	.1 3 '
Ground Surface	ElevationS44.2

										.u	CLASSIFICATION OF MATERIAL	
Depth		LOV AMF			Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	f - fine and - 35-50% % m - medium some - 20-35% % c - coarse little - 10-20% %	
_	6"	12"	18"	24*							trace - 0-10%	
0-2	3	3	6	8		1.3	/		DRY M.		BROWN SILTY SAND, ROUTS	
									Dense	.5	PLANT MATERIAL BROWN - DARK BROWN SILTY SAND	
5-7	3	18	33	80	-	.2	2		Moist		BLACK WOOD , SILT - PETROLEUM CGI-10	50%
		-		-							TYPE ODOR NO HALL DEFLECTION FUMPED WATER IN HOLE FOR	
7									12		SPARK ARRESTING	
V	_	1		<u>e 1</u>	~	18	<u>*</u>				HNULZ-	
10-12	14	14	24	26		- 3	3		DENSE		BLACK, CINDERS, ASH, GLASS	OP.
	_									100	DLASTIC BAG PAPER PULP COMPA	LT
	-	-									INCINERATOR REFLESE (POSS, BLE)	
15-17	15	B	в	7	-	.1	4		NENSE WET		BLACK GREY MIXED FILL, ERADEL	
-	-										WOOD - TOO LITTLE RELOVERY	
20-22	10	10	8	5	-	0	5		SENSE		FOR NOMPLETE DESCRIPTION NO RECOVERY - SPOON ADVANLING	
and		6		301					Louse		THROUGH TRASH - POSSIBLE WIRE	
22-24	10	5	5	30/0	5-	,3	6		DENSE		EREY BROWN MIKED SAND,	
											SILT BROKEN ROLK	
				-							REFUSAL AT 24.5' HO CORING BEGAN @ 24'	
											HO CORING BEGAN @24'	
												_

LAWLER, MATUSKY & SKELLY ENGINEERS

Boringt No. <u>GW-12</u> Project No. <u>576-005</u>

Sheet <u>~</u>

BLOWS ON					-	>				Jic	CLASSIFICATION OF MATERIAL	
Depth		LOW AMP 6° to		18"	Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
	0.	6.	12"		Retain Samp	Recov	Samp	Instrum Read	2.5 m. W. 2.0 2.0 1.5 1.5 2.0 2.0 2.5	2.5 26	m - medium some - 20-35%	

LAWLER, MATUSKY & SKELLY ENGINEERS

PROJECT:				son Street Landfill- SVI Investigation ew York	Lo	og of Well No	o. GW-7R		
BORING L	CA	TION	: 53	5 Colfax Street (in road)	TOP OF RIS	ER ELEVATION:	DATUM:		
DRILLING	CON	ITRA	CTOR	R: Nothangle Drilling	DATE STAR 12/13/10	TED:	DATE FINISHED: 12/14/10		
DRILLING	MET	HOD	: 41	/4" Diameter HSA	TOTAL DEP 19.0 fbgs	TH:	SCREEN INTERVAL: 9-19 fbgs		
DRILLING	EQL	JIPME	ENT:	CME 850	DEPTH TO WATER:	FIRST COMPL.	CASING: 4" steel		
SAMPLING	6 ME	THO	D: no	ot sampled	LOGGED BY	·			
HAMMER	NEI	GHT:	140	DROP: 30"	RESPONSIB	LE PROFESSIONAI	L: REG. NO.		
E a	MPL		(mdd)	DESCRIPTION NAME (USCS Symbol): color, moist, % by weigh cementation, react. w/HCl, geo. in	it, plast., structure,		TRUCTION DETAILS RILLING REMARKS		
DEPT (feet ^{Sample} No.	Sample	Blows/ foot	ਹੁੰਦ	Surface Elevation: fm			flush-mount surface casing		
1-									
2				Advance air knife without sampling to re approximately 7.0' bgs. Air knife cutting silt with some medium-fine angular grav Trace fill material (rubber). Moist throug encountered. Advance 4 1/4" HSA to 9.0' bgs. Begin NX Core run at 9.0' bgs. Run #1 Depth: 9.0-14.0 'bgs Rec: 47" (78%) RQD: 0" (0%)	gs consist of brown vel, little fine sand.		4" permanent steel casing to 9.0' bgs		
13 14 15 16				Run #2 Depth: 14.0-19.0 'bgs Rec: 53" (88%) RQD: 8" (13%)			Cement/bentonite grout Bedrock		
$\begin{array}{c} 17 \\ 18 \\ 19 \\ 20 \\ 21 \\ 22 \\ 23 \\ 24 \\ 25 \\ 26 \\ 27 \\ 28 \\ 29 \\ 30 \\ 31 \\ 32 \\ 31 \\ 31 \\ 31 \\ 31 \\ 31 \\ 31$				Lithology: LOCKPORT FORMATION (Penfield Dolostone Member) Light to medium gray, fine-grained, me- moderately hard to hard, siliceous Dolo occassional to frequent argillaceous pa occassional shale interbeds. Zones of and vugs are present. Secondary cryst gypsum) infilling of bedding planes, joir common. Rock coring details: *Severely fractured "rubble" zones 9.0- 15.7-16.7' bgs. *very closely spaced bedding plane joir *planar, vertical joint 10.7-11.5' *irregular vertical joint 13.3-13.6'. *severely fractured rubble zone 17.5-17	ostone, with irtings and occassional pits allization (calcite or nts and vugs is 9.2', 11.0-11.2, nts 9.0-14.0'		Open Bedrock Corehole (reamed to 3 7/8")		
40						WELL OVM FES	SL WELL LOGS 9-2010.GPJ (1/11)		
Project No.				Geor	matrix Consultants	_	Page 1 of 1		

	Та	raet D	orilling (Compa	anv				Test Boring No.: B98-1		
			akeville	•	•				Job No 98149		
			lew Yor						Page: 1 of 1		
	A	von, n		רדיו א	17				Report Date: 11.03.98		
Projec	ct: (CALVA	RY AUT		ON. EM	ERS	ON S	T, ROCHE			
			tion Desi								
Eleva	_		99.8	<u></u>				Geologist:			
Wate	r Le	vel - Ca	asin <u>g In:</u>	• 					S. Kahn		
Below	/ Su	rface -	Casing C	Dut:					11.03.98		
					•			Completed:			
Seaso	onal	and cli	imatic ch	anges	may alte		serve	d water leve	BIS.	<u> </u>	
		Ble	ows on	Samp	ler				Soil and Rock Information		
						Ν	_	Sample	501 and Rock Information		
0		0"/6"		12"/18	18"/24"		No.	depth		0'3"	
	Ц	11	11			04		0'0"-2'0"	ASPHALT STONE ROAD BASE	0'6"	
	H			10	6	21	1	00-20	MISC. FILL MATERIAL C/O ASH, GLASS, CINDERS		
	Н			+					SILT, SAND AND GRAVEL		
5	H		1	†							
		50/5				50/5	2	5'0"-5'5"	FILL MATERIAL C/O SILT, SAND AND GRAVEL AND		
						ļ	ļ		ROCK FRAGMENTS AUGURING VERY ROUGH FROM 5' TO 7' REFUSAL		
	Ц		<u> </u>			 			AUGURING VERT ROUGH FROM 5 10 7 NEI 00/12	7'0"	
10	H		<u> </u>	<u> </u>			├				
				+					BORING TERMINATED @ 7'0"		
•	H				1	1		1			
									NOTES: ELEVATIONS PROVIDED BY OTHERS		
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15	_						╞──	-			
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35					_ 40"			D Ib. wt.	Ea. Blow		
		f Blows f		_ Spoo		- wit wit	h <u>14</u>	JID. W <u>t</u> Ib. Wt	Ea. Blow		
N=N	0. 0	I BIOWS	to Drive	Spoo	···	- WIL	"				

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			rilling C						Test Boring No.: B98-2 Job No 98149						
			akeville						Page: 1 of 1						
	A	von, N	ew Yor	K 144	14				Report Date: 11.03.98						
Client:		Foundat	RY AUTO tion Desi 100.1	OMATI gn, PC	ON, EM	ERS	ONS	Geologist:	STER						
			ising In:					Driller:	S. Kahn						
			Casing C					Start: Completed:	11.03.98						
See	nol	ond cli	matic ch	anges	mav alte	er obs	serve	d water leve	NS.						
<u>Seasu</u>	Seasonal and climatic changes may alter observed water levels. C Blows on Sampler N Sample Soil and Rock Information 0 0"/6" 6"/12" 12"/18" 18"/24" No. depth														
^	C	0"/6"	6"/12"	12"/18	18"/24"		No.	depth							
0	\square	4	7	12710	IV ILT				TOPSOIL AND MISC. FILL MATERIAL C/O GLASS, ASH,						
		······································		15`	50/3	22	1	0'0"-1'9"	SILT SAND AND GRAVEL						
	\vdash		 		<u> </u>										
5	\vdash								MISC. FILL MATERIAL C/O CONCRETE, WIRE, ASH,						
		50/2				50/2	2	5'0"-5'2"	SULT SAND AND GRAVEL						
	Н								AUGURING VERY ROUGH FROM 4' TO 7'6" REFUSAL						
		-			[L								
10				1					BORING TERMINATED @ 7'6"						
	\vdash								THERS						
						┇		Į	NOTES: ELEVATIONS PROVIDED BY OTHERS MOVED APPROX 8' AND RESTARTED BORE						
15	\vdash		+		+	┼──	+	1	HOLE DESIGNATED AS B98-2A, REFUSAL AT 4'6"						
	t						<u> </u>								
				<u> </u>			+	4							
	\vdash							1							
20							-								
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35		f Dieure -	to 2"	Spoo	on 12"		h 14	0 lb. wt.	' Ea. Blow						
		of Blows		Spoc	and the second s	wit		lb. wt.	Ea. Blow						

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Seaso	Seasonal and climatic changes may alter observed water levels. Blows on Sampler													
		Blo	ows on	Samp	ler		_		o the state of the					
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	\square	6	7						TOPSOIL AND ORGANIC MATTER WITH FILL MIXED IN BRICK ASH GLASS, SILT, SAND AND GRAVEL 2'0"					
			05	13	21	20	1	0'0"-2'0"	BRICK, ASH, GLASS, SILT, SAND AND GRAVEL 2'0"					
	H	23	25	50/3		75/9	2	2'0"-3'3"	FILL MATERIAL CONSISTING OF BRICK, GLASS, ASH,					
5	Н		 	50/5		10/0		20.00	SILT SAND AND GRAVEL 4'0"					
		6	6						MISC. FILL MATERIAL C/O ASH, METAL, SILT, SAND AND					
				10	11	16	3	5'0"-7'0"	GRAVEL					
		10	6						MISC FILL					
				6	8	12	4	7'0"-9'0"	MISC. FILL C/O ASH, METAL AND GLASS					
10			0.5	-		ļ								
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Target Drilling Company 1850 Lakeville Road Avon, New York 14414 Test Boring No:		т_	ract D	rillina (`omno	m\/			Test Boring No.: B98-4							
Avon, New York 14414 Page: 1 of 1 Report Date: 11.03.98 Project: CALVARY AUTOMATION, EMERSON ST, ROCHESTER Client: Foundation Design, PC Everation: Down Sampler Date: Differ: S. Kahn Below Surface - Casing Job: Driller: S. Kahn Seasonal and climatic changes may alter observed water levels. Driller: S. Kahn Seasonal and climatic changes may alter observed water levels. TOPSOIL AND ORGANIC MATTER WITH FILL MIXED IN Seasonal and climatic changes may alter observed water levels. Soil and Rock Information 0 0/6/6* 6/12* 1/2/18/18*/24* N Sample Soil and Rock Information 0 0/7/6* 6/12* 1/2/18/18*/24* N Sample Soil and Rock Information 0 0/7/6* 6/12* 1/2/18/18*/24* N Sample Soil and Rock Information 0 0/7/6* 6/12* 1/2/18/18*/24* N Sample Soil and Rock Information 0 0/7/6* 6/12* 1/2/18/18*/24* No. Sample Soil and Rock Information 0 0/7/6* 6/12* 1/2/18/18*/24* No. Sample Sample Soil and																
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1850 Lakeville Roed Job No 98149 Avon, New York 14414 Pege: 1 of 1 Report Date: 1 of 1 Seasonal and elimatic changes may after observed water levels. Soil and Rock Information 0 0 /0 /0 /0 /0 /0 /0 /0 /0 /0 /0 /0 /0 /0		Ta	raet D	rilling (Compa	anv	Test Boring No.: B98 5				
Avon, New York 14414 Page: 1 of 1 Report Date: 11.03.98 Project: CALVARY AUTOMATION, EMERSON ST, ROCHESTER Client: Foundation Design, PC Everation: Doller: Statt: Statt: Water Level - Casing In: Driller: Below Surface - Casing Un: Statt: C Blows on Sampler C Blows on Sampler C No. C Blows on Sampler 2 2 2 2 3 2 3 2 3 2 3 2 3 2 3 3 2 4 6 3 10 2 3 2 3 2 3 2 10 3 2 4 6 3 1007 1007 1007 1007 1007 1007			-	-	•	•				Job No	
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Client: Foundation Design, PC Elevation: 100.5+/ (EST) Geologist: 5. Kahn Below Surface - Casing In: 5. Kahn Statt: 11.03.98 Complete: 11.03.98 Complete: 11.03.98 Complete: 11.03.98 Soil and Rock Information 0 0/0*8 0712* 12*/1818/24* No. depth AuguRED THROUGH MISC. FILLS FROM SURFACE 10 - 27 24 22 20 46 1 27 24 22 20 46 1 300 - 3 2 - 6 6 3 100*-120* GRAB SAMPLE FROM AUGERS BLACK PULPY WOOD WITH SULT 100* GRAB SAMPLE FROM AUGERS BLACK PULPY WOOD WITH SULT 100* 100*-120* LOOSE BLACK BROWN SILT, LITTLE FINE TO VERY 13 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -						••				Report Date:	11.03.98
Client: Foundation Design, PC Elevation: 100.5+/ (EST) Geologist: 5. Kahn Below Surface - Casing In: 5. Kahn Statt: 11.03.98 Complete: 11.03.98 Complete: 11.03.98 Complete: 11.03.98 Soil and Rock Information 0 0/0*8 0712* 12*/1818/24* No. depth AuguRED THROUGH MISC. FILLS FROM SURFACE 10 - 27 24 22 20 46 1 27 24 22 20 46 1 300 - 3 2 - 6 6 3 100*-120* GRAB SAMPLE FROM AUGERS BLACK PULPY WOOD WITH SULT 100* GRAB SAMPLE FROM AUGERS BLACK PULPY WOOD WITH SULT 100* 100*-120* LOOSE BLACK BROWN SILT, LITTLE FINE TO VERY 13 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Proje	ct:	CALVA	RY AUT	OMATI	ON, EM	ERS	ON S	T, ROCHE	STER	
Water Level - Casing In: Driller: S. Kahn Bolow Surface - Casing Out: Stat: 11.03.98 Seasonal and climatic changes may after observed water levels. Complete: 11.03.98 Seasonal and climatic changes may after observed water levels. Soil and Rock Information 0 0'/8" 6'/12" 12'/18'16'/24" No 0 0'/8" 6'/12" 12'/18'16'/24" No depth 10 10 10 10 10 10 10 12 24 6 3 10''''''''''''''''''''''''''''''''''''	Client		Foundat	tion Desi	ign, PC						
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Target Drilling Company 1850 Lakeville Road Avon, New York 14414 Test Borng No:		Ta	raet D	rillina (lomos	anv				Test Boring No.: B98 6
Doc Lines Note: 1 of 1 Avon, New York 14414 Report Date: 11.03.98 Project: CALVARY AUTOMATION, EMERSON ST, ROCHESTER 11.03.98 Clent: Foundation Design, PC Skath Elevation: 100.54/ (EST) Stath: Water Level: Stath: 11.03.98 Completed: 11.03.98 Seasonal and climatic changes may alter observed water levels. Soil and Rock Information 0 0/76° 6*/12*/12*/1818*/24 No. 0 0/76° 6*/12*/12*/1818*/24 No. 5 Image: Image: Image: 10 Image: Image:										
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H&. C	onsulting	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	ers,		TEST BORING REPORT		BORING NO. B115
PROJECT CLIENT: CONTRAC	CI	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: Edison Tech.
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	DCEDURES	and Occupational Education Center (See ELEVATION: Plan)
TYPE INSIDE I HAMMER HAMMER		(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30		RIG TYPE: CME-75, Truck-Mo BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers t while standard samplin	.S. Augers	DATUM: START: 11 June 1993 FINISH: 11 June 1993 DRILLER: S. Loranty H&A REP: M. Corrigan
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	D REMARKS
						6 in. of topsoil.		
		7 11 11 19	S1 244/244	3.0		Medium dense brown coarse glass, metal and brick, da		y SILT, some gravel, with
]				6.5			
		8 10 11 12	·S2 24"/24"	8.0 10.0		Medium dense red-brown fin sand, trace gravel, damp. -LA	e sandy SILT CUSTRINE/FLU	-
	-					Bottom of	Boring at 10	0.0 ft.
	1					Notes:		
						1. Backfilled borehole to		
15						2. OVA readings from samp S1 = 800 ppm (methane) S2 = 0 ppm No OVA readings above 1		
						3. No explosimeter or rad	ioactivity me	
						4. Sample S1 submitted for characteristics analyse	r TCLP metals	
		WATER LEVEL	I DATA			SAMPLE IDENTIFICATION	I	SUMMARY
		[H (FT) TO:		or a le identification	OVERBURDEN	
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	ROCK CORED	
						S Split Spoon	SAMPLES:	25
							BORING NO.	B-115

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Co	onsultin	YORK, ROCH g Geotechnig sts and Hyd	cal Enginee	ers,		TEST BORING REPORT		BORING NO. B117
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSON TY OF ROCHES THNAGLE DRII	STER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: Edison Tech.
1	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	DCEDURES	and Occupational Education Center (See ELEVATION: Plan)
TYPE INSIDE D HAMMER W HAMMER F	EIGHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30	 	RIG TYPE: CME-75, Truck- BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to while standard sampling	I.S. Augers	DATUM: START: 8 June 1993 FINISH: 8 June 1993 DRILLER: S. Loranty H&A REP: M. Corrigan
DEPTH (FT)	CASING BLOWS PER FT	BLOWS	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	SIFICATION AN	D REMARKS
						2 in. of topsoil.		
 		3 3 3 3	S1 5"/24"	3.0		Loose black ASH, some meta	l pieces, wi -FILL-	th glass, moist.
 		11 7 6	·\$2 1"/24"	8.0 10.0		Medium dense black ASH, mo	ist to wet. -FILL-	
 15		2 2 3 12	\$3 34/244	13.0		Loose black ASH, with meta -		brick, moist to wet.
 20 		3 5 3 5	S4 1#/24#	18.0 20.0		Loose black ASH, with glass	s, wet. -FILL-	
 							Boring at 22 fusal at 22.0	
		ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
				H (FT) TO:			OVERBURDEN	(LIN FT): 22.0
DATE TIME ELAPSED				WATER	U Undisturbed Sample			
						S Split Spoon	SAMPLES:	45
							BORING NO.	B117

Hå	Consulting	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	rs,	BORING NO. B117 TEST BORING REPORT FILE NO. 70352-46 SHEET NO. 2 OF 2					
EPTH	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION	AND REMARKS			
						Notes: 1. Backfilled borehole to ground sur 2. OVA readings from sample screenin S1 = 40 ppm (methane) S2 = 18 ppm (methane) S3 = 7 ppm (methane) S4 = 0 ppm No OVA readings above background 3. No explosimeter or radioactivity background from sample screening	ng noted as follows: in the breathing zone. meter readings above			

	onsulting	YORK, ROCHE Geotechnic sts and Hydro	al Enginee	rs,		TEST BORING REPORT		BORING NO. B118		
PROJECT: CLIENT: CONTRACT	CII	RMER EMERSON Y OF ROCHES THNAGLE DRIL	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: UDC (See Plan)		
1	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO		ELEVATION:		
TYPE INSIDE D HAMMER V HAMMER F		(IN) (LB) (IN)	Auger 2-1/4 	S 1-3/8 140 30	 	RIG TYPE:Diedrich D-50 Tru BIT TYPE: 2-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to while standard samplin	.S. Augers 23.4 ft.	DATUM: START: 14 May 1993 FINISH: 14 May 1993 DRILLER: R. Bauer H&A REP: M. Corrigan		
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	D REMARKS		
 		16 11 6 5	S1 6"/24"	3.0		Medium dense black ASH, wi moist to wet.	th glass, me -FILL-	tal slag, trace wood,		
 - 10	- 28 coal, metal, ce 9 15"/24" 10.0						ium dense black ASH, little gravel, with glass, cinders or l, metal, ceramic fragments, moist.			
- 15		¹⁰ 12 10 9	s3 15"/24"	13.0 15.0		Medium dense iron-stained b wood, and glass, trace meta		ith cinders, charred		
-20		¹³ 10 11 6	\$4 10"/24"	18.0 20.0	21.5	Medium dense black ASH, wit	th glass, me -FILL-	tal, cinders, wet.		
-25		100/.4	\$5 5"/5"	23.0 23.4		L	clay seams of RINE/FLUVIAL- Boring at 23	•		
		ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY		
DATE	TIME	ELAPSED TIME (HR)	DEPTI BOTTOM DF CASING	BOTTOM OF HOLE	WATER	- O Open End Rod T Thin Wall Tube II Undisturbed Sample				
					E U Undisturbed Sample S Split Spoon SAMPLES:	55				
							BORING NO.	B118		

H& (Consulting	YORK, ROCH Geotechnic sts and Hydi	cal Enginee	rs,	TEST BORING REPORT BORING NO. B118 FILE NO. 70352-46 SHEET NO. 2 OF 2				
DEPTH	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION	AND REMARKS		
						Notes: 1. Backfilled borehole to ground sur 2. OVA readings from sample screenin S1 = 200+ ppn methane S2 = 300 ppn methane S4 = 6 ppn methane (H.S.) No OVA readings above background 3. No explosimeter or radioactivity background from sample screening S4 = 0 ppn methane S5 = 0.2 ppn methane (H.S.) No OVA readings above background 3. No explosimeter or radioactivity background from sample screening S5 = 0.2 ppn methane S5 = 0.2 ppn methane (H.S.) S5 = 0.2 ppn methane (H.S.) S6 = 0.2 ppn methane (H.S.) S7 = 0.2 ppn methane (H.S.) S7 = 0.2 ppn methane (H.S.) S7 = 0.2 ppn methane (H.S.) S6 = 0.2 ppn methane (H.S.) S7 = 0.2 ppn	g noted as follows: in the breathing zone. meter readings above		

								· · · · · · · · · · · · · · · · · · ·
Co	nsulting	YORK, ROCHE Geotechnic Sts and Hydr	al Engineer	s,		TEST BORING REPORT		BORING NO. B119
PROJECT: CLIENT: CONTRACT	CII	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	IDFILL MODI	FIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: Emerson St.
	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROC	CEDURES	R.O.W. (See Plan) ELEVATION:
TYPE INSIDE D HAMMER L HAMMER F	IAMETER ÆIGHT	(IN) (LB) (IN)	Auger 2-1/4 	SAMPLER S 1-3/8 140 30	 	RIG TYPE:Diedrich D-50, Tru BIT TYPE: 2-1/4 in. I.D. H. DRILL MUD: OTHER: Advanced augers to while standard sampling	S. Augers	DATUM: START: 17 May 1993 FINISH: 17 May 1993 DRILLER: R. Bauer H&A REP: M. Corrigan
DEPTH (FT)	CASING BLOWS PER FT	BLOWS	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSI	FICATION AN) REMARKS
		10 11 12	S1 4"/24"	3.0		Medium dense brown coarse t trace ceramic fragments.	to fine sand	y GRAVEL, little silt,
5 		10			6.5		-FILL-	
 		38 50/.5	·s2 12"/12"	8.0 9.0		Hard, highly weathered, gra	ay, fine-gra DCKPORT FORM	
 						Bottom of	Boring at 1	1.0 ft.
						Notes:	, ,	
							radioactiv	ace with soil cuttings. ity meter readings above ning or in the breathing
		WATER LEVEL	DATA		L	SAMPLE IDENTIFICATION		SUMMARY
				H (FT) TO:			OVERBURDEN	
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	ROCK CORED	(LIN FT):
					25			
							BORING NO.	B119

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Cons	ulting	YORK, ROCHE Geotechnic ts and Hydr	al Enginee	rs,		TEST BORING REPORT		BORING NO. B120			
PROJECT: LIENT: CONTRACTOR	CIT	MER EMERSON Y OF ROCHES HNAGLE DRIL	TER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: Edison Tech			
ITE	м		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	OCEDURES	and Occupational Education Center (See ELEVATION: Pla			
YPE NSIDE DIA AMMER WEI AMMER FAL	GHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30		RIG TYPE: CME-75, Truck- BIT TYPE: 4-1/4 in. I.D. DRILL MUD: OTHER: Advanced augers t while standard sampli	H.S. Augers	DATUM: START: 8 June 1993 FINISH: 8 June 1993 DRILLER: S. Loranty H&A REP: M. Corrigan			
B	ASING LOWS ER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	IFICATION AN	D REMARKS			
-						6" of topsoil					
- - -5		10 14 11 8	\$1 6"/24"	3.0		Medium dense black ASH, so wood and cloth, moist.	me silt and · -FILL-	fine sand, with glass,			
 -10		5 6 7 10	\$2 10"/24"	8.0		Medium dense black ASH, wi	th brick, met -FILL-	tal and glass, wet.			
		18 100/.5	s3 7 ^{5"/12"}	13.0 ^{14.0} г	11.5		STER FORMATIC	N -			
15 — - -						Bottom of Notes: 1. Backfilled borehole to 2. OVA readings from samp	-	ace with soil cuttings			
- - 20						S1 = 80 ppm (methane) S2 = 80 ppm (methane) S3 = 10 ppm (methane) No OVA readings above h	background in the breathing z				
_							tted for TCLP metals and hazar				
25											
	W	ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY			
ATE TI		ELAPSED		4 (FT) TO:		0 Open End Rod	OVERBURDEN	(LIN FT): 14.0			
		TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	T Thin Wall Tube U Undisturbed Sample S Split Spoon	ROCK CORED				
		T				s spire spoon	BORING NO.	3s 			

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на С	onsultir	YORK, ROCHE ng Geotechnic ists and Hydr	al Engine	ers,		TEST BORING REPORT		BORING NO. B121				
PROJECT CLIENT: CONTRAC	CI	ORMER EMERSON TY OF ROCHES OTHNAGLE DRIL	TER	ANDFILL MO	DIFIED REM	IEDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: Batty & Hoyt (See Plan)				
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	OCEDURES	ELEVATION:				
TYPE INSIDE HAMMER HAMMER	WEIGHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30		DRILL MUD: OTHER: Advanced augers t	CME-75, Truck-Mounted DATUM: 4-1/4 in. I.D. H.S. Augers START:					
DEPTH (FT)	CASING BLOWS PER FT	BLOWS	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	SIFICATION ANI	D REMARKS				
 		3 2 1 1	S1 14"/24"	3.0		Loose black iron-stained A dry.	\SH with glass -FILL-	s, cinders and plastic,				
· _		2	·\$2	8.0	6.5	Loose dark gray and brown	mottled SILT	and ASH, little coarse				
- 10		2 2 1	18"/24"	10.0	8.8	to fine sand, trace glass, topsoil. Loose gray-brown fine sand	-FILL-					
· _					11.5	and gravel, moist.	-FILL-					
		3 2 2 3	\$3 12"/24"	13.0 15.0		Loose black ASH with glass	, cinders and -FILL-	wood, moist.				
· _						Same.	-FILL-					
_		55 42 100/.5	\$4 16"/18"	18.0 19.5	18.4 19.5	Hard, highly weathered, g -LOCKPORT	ray, fine-gra FORMATION-	inded DOLOSTONE.				
-20						Bottom of Notes: 1. Backfilled borehole to 2. OVA readings from sample S1 = 25 ppm methane S3 = 20 ppm methane No OVA readings above b 3. No explosimeter or radi background from sample	le screening S2 = S4 = background in ioactivity me	ce with soil cuttings. noted as follows: 15 ppm methane 28 ppm methane the breathing zone. ter readings above				
		WATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY				
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM DF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN					
						S Split Spoon	SAMPLES:	45				
							BORING NO.	B121				

H&/ Ci	onsultin	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	ers.		TEST BORING REPORT		BORING NO. B122
PROJECT CLIENT: CONTRACT	CI	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	NDFILL MOD	IFIED REM	IEDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 2 LOCATION: Batty & Hoyt
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	OCEDURES	(See Plan) ELEVATION:
TYPE INSIDE D HAMMER W HAMMER F	ÆIGHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30		RIG TYPE: CME-75, Truck-H BIT TYPE: 4-1/4 in. I.D. DRILL MUD: OTHER: Advanced augers t while standard sa	H.S. Augers to 20.0 ft.	DATUM: START: 17 May 1993 FINISH: 17 May 1993 DRILLER: S. Loranty H&A REP: J. Marschner
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	SIFICATION AN	D REMARKS
 		15 16 9 8	\$1 3"/24"	3.0		Medium dense dark gray-bro damp.	own ASH and Si -FILL-	ILT with glass and wood
 - 10		7 4 3	\$2 6"/24"	8.0 10.0		Same.	-FILL-	
 - 15		22 20 4 4 18	\$3 1"/24" \$4	13.0 15.0 15.0		Medium dense black ASH with moist. Dense black ASH with glass one piece of wire and meta	-FILL-	her organic material.
		24 40	16"/24"	17.0			-FILL-	
-20		8 10 10 14	s5 16"/24"	18.0 20.0	18.7	Same. Medium dense gray silty fin -LACUS	ne SAND, trac STRINE/FLUVIA	e clay, wet. L-
		14			·	Bottom of	Boring at 20	.0 ft.
	W	ATER LEVEL C	ATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM DF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN	(LIN FT): 20.0 (LIN FT):
						S Split Spoon	SAMPLES: BORING NO.	5S

Ha	Consulting	g Geotechnic	STER, NEW 1 cal Engineer rogeologists	rs,		TEST BORING REPORT BORING NO. B122 FILE NO. 70352-46 SHEET NO. 2 OF 2
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION AND REMARKS
		BLOWS	NUMBER &	DEPTH	CHANGE	VISUAL CLASSIFICATION AND REMARKS Notes: 1. Backfilled borehole to ground surface with soil cuttings. 2. OVA readings from sample screening noted as follows: S1 = 0 ppm S2 = 2 ppm methane S4 = 0 ppm No OVA readings above background in the breathing zone. 3. No explosimeter or radioactivity meter readings above background from sample screening or in the breathing zone. 4. Sample S4 and duplicate were submitted for TCLP metals and hazardous characteristics analyses. 5. Used 3 in, 0.D. split-spoon sampler to recover sample for laboratory analysis.

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PROJECT: LOCATION E" Log of Well No. LAB-102 SU FESL (NUBTIGATION BORING LOCATION: PROVER ELEVATION AND DATUM: EMORDAN DRILLING CONTRACTOR: DATE STARTED: 9/27/10 DATE FINISHED DRILLING METHOD: 44404 TOTAL DEPTH: SCREEN INTERVAL: DRILLING EQUIPMENT: DEPTH TO FIRST COMPL CASING: MEPS WATER: SAMPLING METHOD: LOGGED BY: 4 MARAGENER MOR HAMMER WEIGHT: 140# RESPONSIBLE PROFESSIONAL: DROP: REG. NO. NAMMER SN OVM Reading (ppm) SAMPLES DEPTH (feet) No. DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast. Sample Blows/ Foot WELL CONSTRUCTION DETAILS consistency, structure, cementation, react, which geo, inter-AND/OR DRILLING REMARKS Surface Elevation: 0-15' SP-5M 1048 5/4 Day (silt a/ the soul & little fine subandral pure Dich trignation X 2 returned in withing duy through t lif' - when the shall figures of matrix as above 4 At, wist, MACLOURE (refusal 0 5.0'5p) 1:44 comme in sampling stop 2 544 0 þ Ś RAS= Bkgd $\overline{\sigma}$ NA NA S NA & Advance With "& HSA to 11.5 bys. About grindling evenly throughout investore Iddatore themuslowit Tverby in land Stration N ڻ ¢ fugaests actured in withings UČ-* set 4" & steel casing @ 11.5' Lys ("b.5' into well) Bisty NK Love von O => Dull whe ~1-1.5 min./ft. 14 Runt 1 115-31.54 6 -love ~ log of REC \$5/10.0 > 93% water Lunin cove was. 17-RAD: ATRAS'> -vensue ~201 HARD, Guer Linsters of shale introbab water with Still is 20 Firsquert menting along state bediting place perting - Few small (5-10mm) was thoughout. Few weathing tractions where MOYNO DUN. WATT 2 enitering conclude att it's popul day Reason 24 10 idlyshill is wanthed to day - Calcute precip. or NX conclude recommend 26 in hoir. Fucture @ 1716. No vertical fination observed (All prior to to star & with æ willow 6.7. be mechanical breaks W-1 (12/95) Project No. Geomatrix Consultants Figure W-1 (Blank)

ROJECI: Former Emers Rochester, Ne	son Street Landfill- SVI Investigation ew York	Lo	og of Well N	o. LAB-102
· · ·	N Corner of Colfax and Emerson St intersection	TOP OF RISE fmsl	R ELEVATION:	DATUM:
DRILLING CONTRACTOR	2: Nothnagle Drilling	DATE START	ED:	DATE FINISHED: 9/28/10
DRILLING METHOD: 41	/4" Diameter HSA	TOTAL DEPTI 21.5 fbgs	SCREEN INTERVAL 11.5-21.5 fbgs	
ORILLING EQUIPMENT:	CME 850		FIRST COMPL.	CASING: 4" steel
SAMPLING METHOD: 4'	Macrocore Sampler	LOGGED BY: MAC		
HAMMER WEIGHT: 140	DROP: 30"	-	E PROFESSIONAL	REG. NO.
DEPTH (feet) aample Bilows/ foot (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast cementation, react. w/HCl, geo. inter.	ŀ		TRUCTION DETAILS
DEPT (feet No. Sample Blows/ foot (ppm)	Surface Elevation: fmsl			ush-mount surface casing
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Brown silt with fine sand and little fine subro trace brick and coal fragments, dry through advance 4 1/4" dia HSA to 11.5' bgs through Begin NX Core run at 11.5' bgs. Run #1 Depth: 11.5-21.5 'bgs Rec: 114" (95%) RQD: 43" (36%) Lithology: LOCKPORT FORMATION (Penfield Dolostone Member) Light to medium gray, fine-grained, medium moderately hard to hard, siliceous Dolostono occassional to frequent argillaceous parting occassional shale interbeds. Zones of occa and vugs are present. Secondary crystalliza gypsum) infilling of bedding planes, joints ar common. Rock coring details: *closely space partings 11.5-16' bgs. *short high angle joint at 14.3' *rough vertical joint at 14.5-15' *severely weathered seam at 15.4' *highly fractured zone at 18-18.3' *severely weathered seam at 18.7'.	-bedded e, with s and ssional pits tion (calcite or		 4" permanent steel casing to 11.5' bgs Cement/bentonite grout Bedrock Open Bedrock Corehole (reamed to 3 7/8")
			=	
	Geomatr	ix Consultants	_	WELL LOGS 9-2010.GPJ (11/10) Page 1 of 1

							60 M	erocker v	tendos	e lot				404 M
[-							r end a			4R 10	15]
		1	BF		N		Subsurface J	Investigation		BORIN SHEET		K OF 2	0	
		300 5	Ase STATE STREET, RO	sociates, I CHESTER, NEW				ster, New York	t.	JOB #		1	3	
	1007	ENVIRO	NMENTAL ENGIN	EERING CONSU	ILTANTS	1		2		CHKD.				
A High in	TRACTO		Nothnagle Dril				BORING LOCATION		DPI		Nee	ds		1 Martin
DRIL	A Car	DDESE	NTATIVE: KI	P. Millor			GROUND SURFACE ELEVAT START DATE: 9271		DATE:	DATUM			· ·	and a state
LADI	<u>SELA KE</u>	FRESE	NIAIIVE: KI	K WITTER			START DATE:		ER LEVEL D	ATA			14.13	
TYPE	OF DR	LL RIG	CME	trade	mt.	AT	V. [*]	DATE TIME		CASING	F	REMARKS	-	
AUG	ER SIZE	AND 7	YPE: 4.25 -Inc	ch ID Hollow-	stem							900) 2		-
			IPLING METH		•	spoons								
D			ETHOD: MAL	HQ water Ko	tary Coring								N	3
E			SAM	PLE		set)	SA	MPLE DESCRIPTI	ION			PID	0	10
Р	40		1			H (Fe		· · ·				READINGS	T	- No. 1
T	BLOWS	NO.	DEPTH	N-VALUE	RECOVERY	DEPTH (Feet)							E	. *
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		9	" 4		0.0	and is				Mar ist	-		1	
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16	4.4 M		- B		5		1		Re.	0.5		1 7	in the	C
and and	C CDIT		<u>LEGEND</u> DN SOIL SAMP	TE	1	NOTES	Les A	4 Osl	Ppm	PID	bc,	13nd	141	1.1.1
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Che B	RAL NO				1		10 M			1	right	ditter to		
N. Contraction							UNDARY BETWEEN SOIL TY			and the second	Contraction 1	A. A.		
1							AND UNDER CONDITIONS S ESENT AT THE TIME MEASU			GROUNDW	ATEK	CARLES		
. frik.		19							1	E P	ORING	#	10 1 1	

ABOCIALES, P.C. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	Subsurface Investigation BORING FESL SHEET City of Rochester, New York JOB # 2 (CHKD. BY: CHKD. BY:	2 OF Z 0173
CONTRACTOR: Nothnagle Drilling Co. DRILLER: LABELLA REPRESENTATIVE: K R Miller	BORING LOCATION: GROUND SURFACE ELEVATION DATUM START DATE: END DATE:	
TYPE OF DRILL RIG: AUGER SIZE AND TYPE: 4.25 -Inch ID Hollow-stem OVERBURDEN SAMPLING METHOD: Standard 2" ID Split-spoons ROCK DRILLING METHOD: NX & HQ Water Rotary Coring	Heref	EMARKS
D E P T BLOWS ND. DEPTH N-VALUE RECOVERY		PID O READINGS T E S
H 76" (FEET) /RQD(%) (FEET) \square	14-18 Debris in shees Glack FESL ash black FESL ash	-
	black FESL ash 9-10 MR G	7-0.4
4 33 18 20 Dal	black FESL ash	002 8-14/
$\begin{array}{c} 6 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\$		
8 4 9 4 22-24 0.2	sature by i, hat ash dira FESL as L plasis	0. 2 F/ 10-12
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		0.3 P/
12 7 13 14 26-28 27	Saturated -	15 - 00
14	black of ESL Ash gray chie & 26.5-27	0.10
LEGEND	TES: 11 378 \$ 2.7	1)
S - SPLIT SPOON SOIL SAMPLE M - MACROCORE SOIL SAMPLE C - ROCK CORE SAMPLE GENERAL NOTES:	prewalled Alvanced poller bit to 30. to 30' (15' screen)	7 de
 STRATIFICATION LINES REPRESENT APPROXIMATE WATER LEVEL READINGS HAVE BEEN MADE AT TIME 	BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. MES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER PRESENT AT THE TIME MEASUREMENTS WERE MADE. BORING	3 #

1 mar

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and

		son Street Landfill- SVI Investigation	L	og of Well N	o. LAB-105			
BORING LOCATION	N: 60	McCrackenville Street (East end of lot)	TOP OF RIS fmsl	ER ELEVATION:	DATUM:			
DRILLING CONTRA	CTOR	: Nothnagle Drilling	DATE STAR 9/27/10	TED:	DATE FINISHED: 9/28/10			
DRILLING METHOD): 4 1/	4" Diameter HSA	TOTAL DEP 27.7 fbgs	TH:	SCREEN INTERVAL: 13.9-30.0 fbgs			
DRILLING EQUIPM	ENT:	CME 55 ATV	DEPTH TO	DEPTH TO FIRST COMPL.				
SAMPLING METHO			WATER: LOGGED BY	· · · · · · · · · · · · · · · · · · ·	2" PVC			
			KRM RESPONSIE	LE PROFESSIONAL	.: REG. NO.			
HAMMER WEIGHT: SAMPLES	140	DROP: 30" DESCRIPTION	RM	WELL CONS				
DEPTH (feet) No. Sample Sample File foot	(mdd)	NAME (USCS Symbol): color, moist, % by wei cementation, react. w/HCl, geo.			RILLING REMARKS			
		Surface Elevation: f	fmsl	st	ick-up protective casing			
1 - 1 2 - 1 $1 - 1$ $1 -$	0.1	FILL- brownish grey silty clay with fine and sand. Trace brick.	e to coarse gravel					
$\begin{array}{c} 2 \\ 3 \\ 4 \end{array}$ 2 $\begin{array}{c} 5 \\ 6 \\ 5 \\ 4 \end{array}$	0.2	and sand. Trace block.						
3 2 4 2 2 4 4 2 2 4 4 5 4 4 10 10 16	0.4	black FESL ash with glass, clinker an	d fine gravel at 5.0'.		Cement/bentonite grout			
7 - 4	0.2	▼						
9 5 5 20 6	0.2				2" dia. schedule 40 PVC riser			
10 11 6 10 10 10 10 10 10 10 10 10 10 10 10 10	0.1							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.5				Bentonite Seal			
14 - 13 - 13 - 13 - 13 - 12 - 13 - 13	0.4							
	0.2							
	0.2							
20^{-}_{-} 11 3^{-}_{-}	0.2				#00N Filter sand			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.2	saturated at 22' bgs.						
	0.3							
26 27 14	0.1				schedule 40 PVC well screen			
28		gray clay between 26.5 and 27' bgs. refusal at bedrock surface at 27.0' bgs roller bit to 30.0' bgs.	Spoon and auger s. Advance 3 7/8"					
29- 30-		LOCKPORT FORMATION (Penfield I	Dolostone Member)					
32_ 33_								
34 - 35 -								
36								
37								
38_ 39-								
40				_	WELL LOGS 9-2010.GPJ (11/10)			
Project No.		Ger	omatrix Consultant	s	Page 1 of 1			

PROJECT: Log of Well No. LAR mirathe ation ELEVATION AND DATUM **BORING LOCATION:** DATE STARTED: DRILLING CONTRACTOR: DATE FINISHED: OTHAIAGI E 11>s DRILLING METHOD: TOTAL DEPTH: $\mathsf{H}_{\mathcal{U}}(\mathcal{O})$ SCREEN INTERVAL: DEPTH TO FIRST WATER: DRILLING EQUIPMENT: COMPL CASING: ME SAMPLING METHOD: LOGGED BY: 14(MAP wan D 间的举 RESPONSIBLE PROFESSIONAL HAMMER WEIGHT: DROP: REG. NO. SAMPLES OVM Reading (ppm) DESCRIPTION DEPTH (feet) NAME (USCS Symbol): color, moist, % by weight, plast, WELL CONSTRUCTION DETAILS Sample No. Sample None Poor consistency, structure, cementation, react. which geo. Inter. AND/OR DRILLING REMARKS Surface Elevation: 0-1-0' ML Silfw/ He & some worked navel, day 2 હુરવા typsoi Amalar 4 within raid 0-1.0' Af (0000 i,uq 3.0 2 b 10-20 + saple LAB-107 5-B.5" collected db years to Stade sitt of Y sark 0 nound , Mais O. Mised fill AM K 0 14:00 ℓ_0 trum, slight pohotion causon odor-NO odas $\langle \rangle$ birken Lis beduck figurate bund to fine-sand size particles (sorr, day. X ∂_{∂} 4 14. 14 we whered/ Hts Appeniance of Shosted Schoole (serier trench?) BLARTED ZONE l_0 to H" Opern. (ç-, Sampler frebesvil () 16.0 Kgo Cashe mobility 1 18:51 Supert TOR @ 12'13 due to . تولي greance of blastal work. 22 Bista NK live VVJ0 19.0 60 readinance 3th Willer bit 22 Hed & 19.5" 25 Litt had gray 13. 1/ RUNHA in-Za'bo ADD: 3. F. 10- 1007 A Shale into bads liquent More than the state and the shale also shale parting Movember the training from open moving that 24 Drill wite \mathcal{C} ~Zmin/H. ðb 26 * Love todg total thoghat sweet sud sight sight was during come is willierbiffing califite previo tother though A of + pup vood from boly Ser. after completion W-1 (12/95) Project No. Geomatrix Consultants Figure W-1 (Blank) 118 RQD Rec 84 127% d 206, with

	Emerson Street er, New York	Landfill- SVI Investigation	L	.og of Wel	l No. LAB-107
BORING LOCATION		on Street	TOP OF RIS fmsl	ER ELEVATION	: DATUM:
DRILLING CONTRAC	CTOR: Nothna	igle Drilling	DATE STAR 9/28/10	TED:	DATE FINISHED: 9/29/10
DRILLING METHOD	4 1/4" Diame	ter HSA	TOTAL DEP	TH:	SCREEN INTERVAL
DRILLING EQUIPME	NT: CMF 850			FIRST COM	
			WATER: LOGGED BY	· · · · · · · · · · · · · · · · · · ·	4" steel
		-	MAC RESPONSIE		NAL: REG. NO.
AMMER WEIGHT:	140	DROP: 30" DESCRIPTION	RM	WELL C	CONSTRUCTION DETAILS
E o T	(mqq)	NAME (USCS Symbol): color, moist, % by weight cementation, react. w/HCl, geo. int			OR DRILLING REMARKS
DEPT (feet Sample No. Sample Blows/ foot		Surface Elevation: fm	sl		flush-mount surface casing
1	arour	oil. Silt with fine sand (ML) and sor	me fine, rounded		
$\begin{array}{c c} 2 \\ 3 \\ \hline \end{array}$	0 -=	l, dry lar limestone bedrock gravel withir	/ n fine sand/ silt		
4	matri	x (fill), loose, dry throughout.		•	4" permanent stee casing to 19.0' bgs
5- 6- 2 NA	5.0 Dark	gray to black silt with fine to mediu			
7	grave	(fill). moist, firm, slight petroleum odor at 6.0' bgs.	n-hydrocarbon		
8-1		U U			
	0				
13 14 4 15		en limestone bedrock fragments (g sized particles), loose, dry, appea			Cement/bentonite
		ler refusal at 16.0' bgs.	/-		grout
17 <u>-</u> 18-	<i>∼</i> ∸	nced roller bit to 19.0' bgs			
19	Begir	NX bedrock core at 19.0' bgs.			
20 <u>-</u> 21 <u>-</u> 22 <u>-</u> 22 <u>-</u>	Rec:	n: 19.0-29.0 'bgs 118'' (98%)			Bedrock
23 _ 24 _ 25 _ 26 _	Lithol (Pent Light	: 84" (70%) ogy: LOCKPORT FORMATION ield Dolostone Member) to medium gray, fine-grained, mec erately hard to hard, siliceous Dolos	lium-bedded stone, with		Open Bedrock Corehole (reamed to 3 7/8")
27 - 28 - 29 - 30 - 31 -	occas and v	ssional to frequent argillaceous par ssional shale interbeds. Zones of o ugs are present. Secondary crysta um) infilling of bedding planes, join non.	occassional pits allization (calcite or		
32- 33-	*irreg	coring details: ular cracks at 19.8' bgs			
34 - 35 - 36 -		cal joint at 23.1-23.4' rely weathered seam at 26.7'			
37 - 38 -					
39- 40-					
Project No.		Geor	natrix Consultant		A FESL WELL LOGS 9-2010.GPJ (11/10 Page 1 of 1

DO STAT	As:	SOCIATES, P.C. CHESTER, NY VEERING CONSULTANTS			PROJEC Edison Te			BORING: SHEET JOB: CHKD BY:	ET-SB-01 1 OF	OF
DR		Trec			ACE ELEVATION	Rochester, NY		DATUM:		
LA	BELLA REPRES TYPE OF DRII AUGER SIZE OVERBURDE	LL RIG:	Jason Jaskowia Track Mount Direct Push	ISTART DATE:	12/10/2012	END DATE DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P T H	SAMPLE DEPTH	SAMPLE SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL (CLASSIFICATION		PID FIELD SCREEN (PPM)	Radiation (uR/hr)	Gases (See notes
0						Asphalt		0	0.2	No Chang
					Gra	vel and Silt				
2	VOC @ 3 ft	75%		Ash @ 3 ft		ft	Saturated @ 4	0	0.3	
4					:	Silty Clay		0	0.2	
6		80%			Re	fusal @ 7.3		0 0	0.2	
8								0		
10										
12										
16										
20										
-•		I		DEPTH (FT)	7.3 ft	NOTES:		1		1
DATE	WATER TIME	LEVEL DATA ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED					
GE	2) WATER LE	CATION LINES REPRES	BEEN MADE A	T TIMES AND UN	IDER CONDITIONS	YPES, TRANSITIONS MA' STATED, FLUCTUATIONS ASUREMENTS WERE MA	OF GROUNDW	ATER		

Λ	RF	LLΛ			PROJEC Edison Te		BORING: SHEET	ET-SB-02 1 OF	OF
		sociates, P.C.					JOB: CHKD BY:		
	MENTAL ENGIN	EERING CONSULTANTS		BORING LOCA		Rochester, NY			
		Trec			ACE ELEVATION		DATUM:		
LAE	ELLA REPRES	SENTATIVE:	Jason Jaskowia	ISTART DATE:	12/10/2012	END DATE			
	TYPE OF DRIL AUGER SIZE / OVERBURDEI		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:			
D E P		SAMPLE					PID FIELD SCREEN		
т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION	(PPM)	Radiation (uR/hr)	Gases (See note:
)						Asphalt		0 0.2	No Chan
					Gra	avel and Silt			
						Silt		0.2	
		100%						0	
	VOC @ 3 ft				L	oamy Silt		0 0.3	
Ļ								0 0.4	
					L	oamy Silt		0 0.2	
5		100%			Ref	usal @ 6.9 ft		0 0 0.1	
3									
0									
2									
6									
~									
20				DEPTH (FT)	6.9 ft	NOTES:			1
	WATER	LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER	CH4 = 0%			
TE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED	CO = 0 ppm			
						H2S = 0 ppm			
GEI	NERAL NOTES		ENT APPROXM	IATE BOUNDAR'	Y BETWEEN SOIL T	YPES, TRANSITIONS MAY BE G	RADUAL.		
		VEL READINGS HAVE	BEEN MADE A	T TIMES AND UN	IDER CONDITIONS	STATED, FLUCTUATIONS OF G	ROUNDWATER		

00 STAT NVIRON	As: E STREET, ROO MENTAL ENGIN	EERING CONSULTANTS			PROJEC Edison Te	ch	BORING: SHEET JOB: CHKD BY:	:	ET-SB-03 1 OF	OF
	NTRACTOR:			BORING LOCA	FION: FACE ELEVATION	Rochester, NY	DATUM:			
	BELLA REPRES	Trec SENTATIVE:	Jason Jaskowia			END DATE	DATUM:			
	TYPE OF DRIL AUGER SIZE /	L RIG:	Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P T	SAMPLE	SAMPLE	STRATA		VISUAL	CLASSIFICATION	PID FIELD SCREE (PPM)	N	Radiation	Gases
Н 0	DEPTH	AND RECOVERY	CHANGE			Asphalt		0	(uR/hr) 0.1	(See notes
0						avel and Silt		Ū	0.1	i to onang
						Silt			0.3	
2		75%			Trace Mix C	nders @ 3.5 to 4.5 ft		0 0		
	VOC & Full from 3.5 to 4.5 feet							Ū	0.4	
4						Silty Clay		0 0		
								0	0.1	
6		90%			Ref	usal @ 7.6 ft		0 0		
8										
10										
12										
16										
20										
				DEPTH (FT)	7.6 ft	NOTES: 10 ft off wall				
		LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED					
	2) WATER LE	ATION LINES REPRES	BEEN MADE AT	TIMES AND UN	IDER CONDITIONS	H2S = 0 ppm YPES, TRANSITIONS MAY BE G STATED, FLUCTUATIONS OF G ASUREMENTS WERE MADE			BORING:	

	Ass	Sociates, P.C.			PROJEC Edison Ter			BORING: SHEET JOB: CHKD BY:	ET-SB-04 1 OF	OF
NVIRON		EERING CONSULTANTS								
	NTRACTOR: ILLER:	LaBella Trec		BORING LOCAT	TION: FACE ELEVATION	Rochester, NY		DATUM:		
	BELLA REPRES		Jason Jaskowia			END DATE		-		
	TYPE OF DRIL AUGER SIZE A OVERBURDE		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P T	SAMPLE	SAMPLE SAMPLE NO.	STRATA		VISUAL	CLASSIFICATION		PID FIELD SCREEN (PPM)	Radiation	Gases
н	DEPTH	AND RECOVERY	CHANGE		VIOUNE			(1110)	(uR/hr)	(See note:
0						Asphalt		0	0.1	No Chang
					Gra	ivel and Silt				
						Silt			0.4	
2		60%			Silty	Clay @ 3 ft		0		
									0.2	
4								0	0.1	
4					Silt a	nd gravel 4 ft		0		
									0.1	
6		85%						0		
0		0070		Saturated @ 7 f	:	ft	Refusal @ 7.8	0		
	VOC @ 7.5 ft					п				
8										
10										
12										
16										
20				DEPTH (FT)	7.8 ft	NOTES:				ļ
	WATER	LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED	CO = 0 ppm				
						H2S = 0 ppm				
GE	NERAL NOTES									
						YPES, TRANSITIONS MAY		TED		
						STATED, FLUCTUATIONS ASUREMENTS WERE MAI		NIEK		
									BORING:	

00 STAT	As:	CHESTER, NY			PROJEC Edison Ter		S⊦ JC	DRING: IEET D B: IKD BY:	ET-SB-05 1 OF	OF
	NTRACTOR: ILLER:			BORING LOCAT	TION: FACE ELEVATION	Rochester, NY	D	TUM:		
	ILLER: BELLA REPRE	Trec SENTATIVE:	Jason Jaskowial			END DATE	DF	ATUM:		
	TYPE OF DRII AUGER SIZE OVERBURDE		Track Mount DRIVE SAMPLER TYPE: INSIDE DIAMETR: Direct Push OTHER:							
D E P T	SAMPLE	SAMPLE	STRATA	VISUAL CLASSIFICATION			PID FIELD SCREEN (PPM)	Radiation	Gases	
<u>н</u> 0	DEPTH	AND RECOVERY	CHANGE			Asphalt		0	(uR/hr) 0.1	(See notes) No Chang
						vel and Silt				
						y Silt 1 to 3 ft			0.1	
2		75%				layey Silt		0	0.1	
					C	ayoy On		0	0.1	
4	VOC @ 4.5ft				Trace Ash and	I Ciders from 4 to ~6 ft		0 0	0.1 0.1	
6		75%			S	Silty Clay		0 0	0.1	
8					Ref	usal @ 8.4 ft		0	0.1	
10										
12										
16										
20										
	1			DEPTH (FT)	8.4 ft	NOTES:	I		I	1
			BOTTOM OF	BOTTOM OF	GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED	CO = 0 ppm H2S = 0 ppm				
	2) WATER LE	ATION LINES REPRES	BEEN MADE AT	TIMES AND UN	IDER CONDITIONS	YPES, TRANSITIONS MAY BE G STATED, FLUCTUATIONS OF G ASUREMENTS WERE MADE			BORING:	

		CHESTER, NY			PROJEC Edison Te			BORING: SHEET JOB: CHKD BY:	ET-SB-06 1 OF	OF
	IMENTAL ENGIN	IEERING CONSULTANTS LaBella		BORING LOCA	FION:	Rochester, NY				
		Trec			ACE ELEVATION			DATUM:		
LA	BELLA REPRES	SENTATIVE:	Jason Jaskowia	ISTART DATE:	12/10/2012	END DATE				
	TYPE OF DRIL AUGER SIZE / OVERBURDEI		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P		SAMPLE						PID FIELD SCREEN		
Т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION		(PPM)	Radiation (uR/hr)	Gases (See notes
0						Asphalt		0	0.2	No Chan
					C	layey Silt				
					<i>.</i>	layey Silt			0.1	
2		60%				layey Silt		0		
	TCLP from 3 to 4.5 ft			Misc Ash @ ~ 3		m 3.5 to 4.5 ft	Trace Cinders	0	0.3	
4					Silt	and gravel		0 0	0.2	
6	VOC @ 7.5 ft	85%				Silty clay		0	0.1	
8					Re	fusal @ 8 ft				
10										
12										
16										
20										
			DOTTOMOS	DEPTH (FT)	8 ft	NOTES: No GW				
DATE	TIME		BOTTOM OF	BOTTOM OF	GROUNDWATER					
		ELASPED TIME	CASING	BORING	ENCOUNTERED	CO = 0 ppm H2S = 0 ppm				
GE	2) WATER LE	ATION LINES REPRES VEL READINGS HAVE	BEEN MADE A	TTIMES AND UN	IDER CONDITIONS	YPES, TRANSITIONS MAY STATED, FLUCTUATIONS ASUREMENTS WERE MAI	OF GROUNDW	ATER		
									BORING:	

		ELLA			PROJEC Edison Ter		BORIN SHEET JOB:		ET-SB-07 1 OF	OF
	TE STREET, RO	sociates, P.C. OCHESTER, NY NEERING CONSULTANTS					СНКД	BY:		
	NTRACTOR:			BORING LOCA	FION:	Rochester, NY				
			lesse leskewie		ACE ELEVATION		DATU	И:		
LA	BELLA REPRE	SENTATIVE:	Jason Jaskowia	ISTART DATE:	12/10/2012	END DATE				
	TYPE OF DRI AUGER SIZE OVERBURDE		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P		SAMPLE					FII SCF	PID ELD REEN		
Т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL (CLASSIFICATION	(P	PM)	Radiation (uR/hr)	Gases (See notes
0					(Concrete		0	0.4	No Chang
	Full (1/4)				Silt/ash/gravel/gla	ass/cinders from ~1 to 4 ft				
									0.4	
2	Full (1/4)	40%						0		
	Full (1/4)							0	0.4	
4	Full (1/4)					Silt		0	0.1	
								0		
6	VOC @ 6 ft	35%				Silt		0	0.1	
								-		
								0		
8					Clayey Silt - I	Moist from 7 to 11.1 ft			0.1	
								0		
10					Refu	sal @ 11.1 ft		0	0.1	
12										
16										
16										
20										
20				DEPTH (FT)	8 ft	NOTES:				
		LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED					
	ļ	<u> </u>		<u> </u>	<u> </u>	H2S = 0 ppm				
GE										
						YPES, TRANSITIONS MAY BE GF STATED, FLUCTUATIONS OF GF				
						ASUREMENTS WERE MADE				
									BORING:	

Δ	BE				PROJEC Edison Te		BORING: SHEET JOB:		ET-SB-08 1 OF	OF
	E STREET, RO	sociates, P.C. CHESTER, NY NEERING CONSULTANTS					JOB: CHKD BY	' :		
	NTRACTOR:			BORING LOCA		Rochester, NY				
	ILLER: BELLA REPRE	Trec SENTATIVE:	Jason Jaskowia		ACE ELEVATION	END DATE	DATUM:			
	TYPE OF DRI	LL RIG:	Track Mount			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P T	SAMPLE	SAMPLE SAMPLE NO.	STRATA		VISUAL	CLASSIFICATION	PID FIELI SCREI (PPM	D EN	Radiation	Gases
Н	DEPTH	AND RECOVERY	CHANGE				((uR/hr)	(See note
0						Asphalt		0	0.3	No Chan
					Silt	and gravel				
2	Full (1/4)	50%			Distinct layer of	cinders/slag @ 3 ft to 4 ft		0		
					Distinct layer of	unders/slag @ 3 it to 4 it		0	0.3	
4	Full (1/4) VOC @ 4 ft				Trace silt/grave	l/cinders from 4 ft to 6 ft		0 0		
6		75%			Claye	ey Silt 6 to 8 ft		0 0		
	Full (1/4)									
8	Full (1/4)	100%				′cinders from 8 ft to 9.6 ft usal @ 9.6 ft		0	0.2	
10										
12										
16										
20						Γ				
			POTTOMOS	DEPTH (FT)	9.6 ft	NOTES:				
ATE	TIME	LEVEL DATA ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED					
			0.000	DOMINO		H2S = 0 ppm				
		ATION LINES REPRES				YPES, TRANSITIONS MAY BE GF STATED, FLUCTUATIONS OF GF				
	MAY OCCL	JRE DUE TO OTHER FA	ACTORS THAN	THOSE PRESEN	IT AT THE TIME ME	ASUREMENTS WERE MADE				

L		LLA sociates, P.C.		PROJECT Edison Tech	BORING: SHEET JOB: CHKD BY:	ET-SB-09 1 OF	OF
	E STREET, RO	CHESTER, NY NEERING CONSULTANTS					
CON DRII	NTRACTOR:	LaBella Trec	Jason Jaskowia	BORING LOCATION: Rochester, NY GROUND SURFACE ELEVATION START DATE: 12/11/2012 END DATE	DATUM:		
	TYPE OF DRII AUGER SIZE OVERBURDE		Track Mount Direct Push	DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:			
D E P T	SAMPLE	SAMPLE SAMPLE NO.	STRATA	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	Radiation	Gases
Н	DEPTH	AND RECOVERY	CHANGE	VISUAL CLASSIFICATION		(uR/hr)	(See note:
0				Concrete	0	0.3	No Chan
2		75%		Trace Silt/gravel/ash/cinder from 0.5 to 10 ft	0	0.3 0.3	
4					0	0.3	
6		100%			0	0.3	
8	VOC @ 8 ft				0	0.2	
10		60%		Clayey Silt from 10 to 12.6 ft	0	0.2	
12		100%		Refusal @ 12.6 ft	0	0.2	
16							
20				DEPTH (FT) 12.6 ft NOTES:			
DATE	WATER TIME	LEVEL DATA ELASPED TIME	BOTTOM OF CASING	BOTTOM OF GROUNDWATER CH4 = 0% BORING ENCOUNTERED CO = 0 ppm H2S = 0 ppm			
	2) WATER LE	ATION LINES REPRES	BEEN MADE A	ATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.	ATER		
	MAY OCCL	JKE DUE TO OTHER F	ACTORS THAN	THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE		BORING:	

	ELLA	PROJECT Edison Tech			BORING: ET-SB-10 SHEET 1 OF OF JOB:			
As	sociates, P.C.					JOB: CHKD BY:		
CONTRACTOR:			BORING LOCA	TION:	Rochester, NY			
DRILLER:	Trec			FACE ELEVATION		DATUM:		
LABELLA REPRI	ESENTATIVE:	Jason Jaskowia	ISTART DATE:	12/10/2012	END DATE			
TYPE OF DR AUGER SIZE OVERBURDI		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:			
D E P	SAMPLE					PID FIELD SCREEN		
T SAMPLE H DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION	(PPM)	Radiation (uR/hr)	Gases (See note
0					Asphalt	C		No Char
				Silt	t and gravel			
					-			
2	60%			Cru	ushed stone	C	0.2	
				C	Clayey Silt	C	0.2	
4							0.2	
VOC @ 4.5 ft				Clayey Silt - P	PID hits around 4.5 feet	6		
						13.6		
6	85%			Silt	t and gravel	C		
8				Ref	usal @ 7.7 ft		0.1	
10								
2								
6								
20								
	•		DEPTH (FT)	7.7 ft	NOTES: No GW	•	-	-
	R LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER				
ATE TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED				
	<u> </u>	<u> </u>	l	ļ	H2S = 0 ppm			
GENERAL NOTE			IATE BOUNDAR'	Y BETWEEN SOIL T	YPES, TRANSITIONS MAY BE G	RADUAL.		
				DER CONDITIONS	STATED, FLUCTUATIONS OF G	ROUNDWATER		

00 STAT	As:				PROJEC Edison Te		Sł JC	DRING: HEET DB: HKD BY:	ET-SB-11 1 OF	OF
	IMENTAL ENGIN NTRACTOR:	IEERING CONSULTANTS LaBella		BORING LOCA	FION:	Rochester, NY				
		Trec			ACE ELEVATION		D/	ATUM:		
LAE	BELLA REPRES	SENTATIVE:	Jason Jaskowia	ISTART DATE:	12/11/2012	END DATE				
	TYPE OF DRII AUGER SIZE OVERBURDE		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P T	SAMPLE	SAMPLE SAMPLE NO.	STRATA		VISUAL	CLASSIFICATION		PID FIELD SCREEN (PPM)	Radiation	Gases
Н	DEPTH	AND RECOVERY	CHANGE		VISOAL			(11 M)	(uR/hr)	(See notes
0					(Concrete		0	0.1	No Chang
					Silty C	lay and stone				
									0.1	
2		70%						0		
									0.1	
4								0 0		
		2007								
6		90%						0 0		
8					Silty clay and	l stone - moist at 9 ft		0		
0					Only day and				0.1	
								0		
10		100%								
		10070			Refu	sal @ 11.1 ft		0	0.1	
	VOC @ 11ft									
12										
16										
20						r				
				DEPTH (FT)	11.1 ft	NOTES:				
DATE	WATER TIME	LEVEL DATA ELASPED TIME	BOTTOM OF	BOTTOM OF	GROUNDWATER					
		ELASTED HIME	CASING	BORING	ENCOUNTERED	H2S = 0 ppm				
05			•	•						
	NERAL NOTES 1) STRATIFIC		ENT APPROXM	ATE BOUNDAR	Y BETWEEN SOIL T	YPES, TRANSITIONS MAY BE GF	RADUAL.			
	2) WATER LE	VEL READINGS HAVE	BEEN MADE AT	TTIMES AND UN	IDER CONDITIONS	STATED, FLUCTUATIONS OF GF		ER		
	MAY OCCL	JRE DUE TO OTHER F	ACTORS THAN	THOSE PRESEN	IT AT THE TIME ME	ASUREMENTS WERE MADE			BORING:	

_					PROJEC	т	BORING	G:	ET-SB-12	
Δ	BE	ELLA			Edison Te	ch	SHEET		1 OF	OF
		sociates, P.C.					JOB:			
0 STAT	E STREET, RO	CHESTER, NY					CHKD E	3Y:		
	NTRACTOR:	Trec		BORING LOCAT	ACE ELEVATION	Rochester, NY	DATUM	:		
LAI	BELLA REPRE	SENTATIVE:	Jason Jaskowia			END DATE				
	TYPE OF DRI AUGER SIZE OVERBURDE		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E		SAMPLE					PI FIE			
P T H	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL (CLASSIFICATION	SCR (PP	EEN	Radiation (uR/hr)	Gases (See notes
0						Concrete		0		No Chan
					Silt	y and stone				
									0.2	
2		40%						0	0.2	
								0	0.1	
4								0	0.2	
								0		
6		25%						0		
								0	0.3	
8	VOC @ 8 ft				Silty and s	tone - moist at 8 ft		0		
								0	0.1	
								0		
10		90%								
					Refu	sal @ 10.7 ft		0	0.1	
12										
16										
20										
				DEPTH (FT)	10.7 ft	NOTES:				
		LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED					
	<u> </u>	ļ		<u> </u>	ļ	H2S = 0 ppm				
GE	NERAL NOTES									
						YPES, TRANSITIONS MAY BE GE STATED, FLUCTUATIONS OF GE				
						ASUREMENTS WERE MADE				
									BORING:	

Ŋ		Sociates, P.C.			PROJEC Edison Ter		S⊦ JC	DRING: IEET DB: IKD BY:	ET-SB-13 1 OF	OF
	TE STREET, RO	CHESTER, NY NEERING CONSULTANTS					-			
CO DR	NTRACTOR:	LaBella Trec	Jason Jaskowia		ACE ELEVATION	Rochester, NY END DATE	DA	TUM:		
	TYPE OF DRI AUGER SIZE	LL RIG:	Track Mount			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P T	SAMPLE	SAMPLE SAMPLE NO.	STRATA		VISUAL	CLASSIFICATION		PID FIELD SCREEN (PPM)	Radiation	Gases
<u>н</u> 0	DEPTH	AND RECOVERY	CHANGE			Concrete		0	(uR/hr) 0.4	(See notes
	Full (1/4)				Trace Silt	ash/cinders to 5 ft				
2	Full (1/4)	80%						0	0.5	
	Full (1/4)								0.3	
4	Full (1/4)							0 0	0.4	
6	VOC @ 6 ft	80%			s	ilt 5 to 7 ft		0 0	0.3	
8					Silty c	lay 7 to 10.9 ft		0	0.3	
10		60%			Refu	sal @ 10.9 ft		0	0.3	
12										
16										
20										
			DOTTOMOT	DEPTH (FT)	10.9 ft	NOTES:				
DATE	TIME	LEVEL DATA ELASPED TIME	BOTTOM OF CASING	BOTTOM OF	GROUNDWATER					
UAIE	TIVE	ELASPED HME	CASING	BORING	ENCOUNTERED	CO = 0 ppm H2S = 0 ppm				
GE	2) WATER LE	CATION LINES REPRES	BEEN MADE AT	TTIMES AND UN	IDER CONDITIONS	YPES, TRANSITIONS MAY BE GI STATED, FLUCTUATIONS OF GI ASUREMENTS WERE MADE		R		
									BORING:	

	—				PROJEC	г	BORING:	ET-SB-14	
		CHESTER, NY			Edison Tea	ch	SHEET JOB: CHKD BY:	1 OF	OF
	IMENTAL ENGIN NTRACTOR:	IEERING CONSULTANTS		BORING LOCAT		Rochester, NY			
		Trec			ACE ELEVATION		DATUM:		
LA	BELLA REPRE	SENTATIVE:	Jason Jaskowia	START DATE:	12/11/2012	END DATE			
	TYPE OF DRII AUGER SIZE OVERBURDE		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:			
D E P	0.000	SAMPLE					PID FIELD SCREEN		
т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION	(PPM)	Radiation (uR/hr)	Gases (See note
0						Grass		0 0	No Chan
					L	oamy Silt			
2		55%			Stone/silt/trace	e cinders from 2 to 4 ft		0.2 0 0 0.1	
4	VOC @ 4.5ft							0 0 0	
6		80%			clayey	silt and stone		0 0 0	
8								0 0.2 0	
10		100%			Refu	sal @ 10.8 ft		0 0	
12									
16									
20					10.9.#	NOTES:			
	WATER	LEVEL DATA	BOTTOM OF	DEPTH (FT) BOTTOM OF	10.8 ft GROUNDWATER				
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED				
						H2S = 0 ppm			
GE	2) WATER LE	ATION LINES REPRES	BEEN MADE AT	TIMES AND UN	IDER CONDITIONS	YPES, TRANSITIONS MAY BE G STATED, FLUCTUATIONS OF G			
	MAY OCCL	JRE DUE TO OTHER F	ACTORS THAN	HOSE PRESEN	II AT THE TIME ME.	ASUREMENTS WERE MADE		BORING:	

~					PROJEC			ET-SB-15	
0 STAT	Ase TE STREET, ROO	CHESTER, NY			Edison Te	ch	SHEET J OB: CHKD BY:	1 OF	OF
	NTRACTOR:			BORING LOCAT	TON:	Rochester, NY	1		
		Trec			ACE ELEVATION		DATUM:		
LA	BELLA REPRES	SENTATIVE:	Jason Jaskowia	ISTART DATE:	12/11/2012	END DATE			
	TYPE OF DRIL AUGER SIZE / OVERBURDEI		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:			
D E P		SAMPLE					PID FIELD SCREEN		
T H	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION	(PPM)	Radiation (uR/hr)	Gas (See no
0	DEITI	AND RECOVERT	OTANOL			Grass	0	0.1	No Cha
	Full (1/4)								
2		95%					0	0.2	
				Silt and stone	with ash and trace c	inders mixed sporatically from 0.5 to 10.5 ft	0	0.2	
4	Full (1/4)						0	0.1	
6		95%					0	0.1	
8	Full (1/4)						0		
	VOC @ 9.5ft						0	0.2	
0		95%							
					Clay @ 10.5 ft -	moist just above the clay	0	0.2	
	Full (1/4)								
12					Refu	sal @ 11.6 ft	0	0.2	
6									
20									
			DOTTO:	DEPTH (FT)	11.6 ft	NOTES:			
ATE	WATER TIME	LEVEL DATA ELASPED TIME	BOTTOM OF						
11E		ELASPED HME	CASING	BORING	ENCOUNTERED	CO = 0 ppm H2S = 0 ppm			
	ıl	<u> </u>		ļ	ļ	p. 20 – 0 ppm			
GE									
						YPES, TRANSITIONS MAY BE GRADUAL. STATED, FLUCTUATIONS OF GROUNDW	ATER		
						ASUREMENTS WERE MADE		[
								BORING:	

		Sociates, P.C.			PROJEC Edison Te		SHE JOE		ET-SB-16 1 OF	OF
NVIRON	MENTAL ENGI	NEERING CONSULTANTS								
	ILLER:	LaBella Trec		BORING LOCA	TION: FACE ELEVATION	Rochester, NY		TUM:		
	BELLA REPRE		Jason Jaskowia			END DATE	DAI	UIVI.		
	TYPE OF DRI AUGER SIZE OVERBURDE		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P		SAMPLE						PID FIELD SCREEN		
Т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL (CLASSIFICATION		(PPM)	Radiation (uR/hr)	Gases (See notes
0						Asphalt		0		No Chang
					Cit	and gravel				
					511	anu yiavei				
2	Full (1/4)	40%						0	0.2	
-		-070						0		
									0.3	
4	Full (1/4)				Satura	ated Silt @ 4 ft		0 0	-	
	VOC @ 5ft									
	Full (1/4)									
6		75%						0		
								0	0.2	
	E.J. (4 /4)							0		
8	Full (1/4)				Ref	usal @ 7.1 ft		0		
								0	0.2	
								0		
10										
10										
12										
16										
20						1				
				DEPTH (FT)	7.1 ft	NOTES: GW @ 4ft				
			BOTTOM OF	BOTTOM OF	GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED					
	Ļ	<u> </u>		1	ļ	H2S = 0 ppm				
GE	NERAL NOTES									
						YPES, TRANSITIONS MAY BE GE		2		
						STATED, FLUCTUATIONS OF GF ASUREMENTS WERE MADE	CONDWATER	`		
									BORING:	

Δ		LLA ociates, P.C.			PROJEC Edison Te		BORING: SHEET JOB:	ET-SB-17 1 OF	OF
00 STAT	E STREET, ROCI	-					CHKD BY:		
		ERING CONSULTANTS		BORING LOCAT	FION:	Rochester, NY			
		Trec			ACE ELEVATION		DATUM:		
LAE	BELLA REPRES	ENTATIVE:	Jason Jaskowia	ISTART DATE:	12/11/2012	END DATE			
	TYPE OF DRILI AUGER SIZE A OVERBURDEN		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:			
D E P		SAMPLE					PID FIELD SCREEN		
Т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION	(PPM)	Radiation (uR/hr)	Gases (See notes
0			0. // IIOL			Grass	C		No Chan
	VOC @ 1.5ft				Mostly silt with son	ne gravel and trace cinders			
	TCLP 1.5 to 4							0.1	
2		95%					C		
							C	0.3	
4					Mostly silt with son	ne gravel and trace cinders	C C		
6		90%					C C		
8					Ref	usal @ 7.7 ft	C	0.1	
10							C		
10									
12									
16									
20									
				DEPTH (FT)	7.7 ft	NOTES:			
			BOTTOM OF	BOTTOM OF	GROUNDWATER				
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED	CO = 0 ppm H2S = 0 ppm			
						(PES, TRANSITIONS MAY BE GRAI STATED, FLUCTUATIONS OF GRO			
	,					SUREMENTS WERE MADE		BORING:	

			PROJECT				BORING: ET-SB-18			
0 STAT	Ase E STREET, ROC				Edison Te	ch	SHEET JOB: CHKD BY:	1 OF	OF	
		EERING CONSULTANTS LaBella		BORING LOCAT	TION:	Rochester, NY				
	LLER:	Trec			ACE ELEVATION		DATUM:			
LAE	BELLA REPRES	ENTATIVE:	Jason Jaskowia	ISTART DATE:	12/11/2012	END DATE				
	TYPE OF DRIL AUGER SIZE A OVERBURDEN		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P	SAMPLE	SAMPLE SAMPLE NO.	STRATA	-	VICUAL	CLASSIFICATION	PID FIELD SCREEN	Dediction	0	
Т Н	DEPTH	AND RECOVERY	CHANGE		VISUAL	CLASSIFICATION	(PPM)	Radiation (uR/hr)	Gases (See note	
0						Asphalt		0.1	No Chan	
					Silt	and gravel				
								0.1		
2		80%								
								0.2		
4	VOC @ 4ft				Small amoun	t of trace cinder @ 4 ft		0 0.2 0		
6		100%						0 0.2		
8					Ref	usal @ 6.4 ft		0.1		
10										
12										
16										
20										
_•	1	1		DEPTH (FT)	6.4 ft	NOTES: No Moisture	I	1	1	
		LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED					
		ATION LINES REPRESE				H2S = 0 ppm 'PES, TRANSITIONS MAY BE GRA				
	,					STATED, FLUCTUATIONS OF GRO SUREMENTS WERE MADE	DUNDWATER	BORING:		

					PROJEC	т	BORING:	ET-SB-19	
	Ase	LLA sociates, P.C.			Edison Te	ch	SHEET JOB: CHKD BY:		OF
	TE STREET, ROO NMENTAL ENGIN	HESTER, NY EERING CONSULTANTS							
	NTRACTOR:	LaBella		BORING LOCA	TION:	Rochester, NY			
		Trec	lesse leskowie		FACE ELEVATION		DATUM:		
LAI	BELLA REPRES	SENTATIVE.	Jason Jaskowia	ISTART DATE.	12/11/2012	END DATE			
	TYPE OF DRIL AUGER SIZE A OVERBURDEN		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:			
D E P		SAMPLE					PID FIELD SCREET	N	
т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION	(PPM)	Radiation (uR/hr)	Gases (See note
0						Concrete		0 0.1	No Char
					Silt	t and gravel			
								0.1	
2		50%						0	
								0 0.2	
4	Full (1/4)				Clayey silt with tr	race cinders from 4 to 6 ft		0 0.2 0	
6	Full (1/4) VOC @ 6.5ft	60%			Silt	t and gravel		0 0 0.3	
8	Full (1/4)				Silt	and gravel		0 0.3	
	Full (1/4)							0	
10		100%			Ref	usal @ 9.1 ft		0.2	
12									
10									
16									
20									
				DEPTH (FT)	9.1 ft	NOTES: No moisture			
			BOTTOM OF	BOTTOM OF	GROUNDWATER				
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED				
GE	NERAL NOTES	ł		I	Ļ	H2S = 0 ppm			
	1) STRATIFIC 2) WATER LE	ATION LINES REPRESE VEL READINGS HAVE E	BEEN MADE AT	TIMES AND UND	DER CONDITIONS S	YPES, TRANSITIONS MAY BE GRAD			
	MAY OCCU	RE DUE TO OTHER FA	CTORS THAN T	HOSE PRESENT	AT THE TIME MEA	SUREMENTS WERE MADE		BORING:	

	ПГ				PROJEC			BORING: SHEET	ET-SB-20	05
0 STAT	Ase	CHESTER, NY HEERING CONSULTANTS			Edison Te	CTI		JOB: CHKD BY:	1 OF	OF
		LaBella		BORING LOCAT	ION:	Rochester, NY				
	ILLER:	Trec			ACE ELEVATION			DATUM:		
LA	BELLA REPRES	SENTATIVE:	Jason Jaskowia	AISTART DATE:	12/11/2012	END DATE				
	TYPE OF DRIL AUGER SIZE A OVERBURDER		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P		SAMPLE						PID FIELD SCREEN		
Т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION		(PPM)	Radiation (uR/hr)	Gases (See note
0						Grass		0	0.1	No Chan
						Gravel				
									0.1	
2	VOC @ 2ft	50%			Silt and s	tone from 1 to 9 ft		0		
									0.2	
4								0	0.2	
4								0		
6		60%						0		
								0		
8					Trace cinders	s at approximately 9 ft		0		
								0	0.2	
									0.1	
10		100%					D. (0.1	
				Clayey Silt @ 10) π	10.5 ft	Refusal @			
12										
16										
00										
20	l	I		DEPTH (FT)	10.5 ft	NOTES: Moist @ 8 ft		1	1	I
	WATER	LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER	CH4 = 0%				
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED					
	<u> </u>	ļ		<u> </u>	ļ	H2S = 0 ppm				
GE	NERAL NOTES									
						PES, TRANSITIONS MAY BE		TFR		
	,					SUREMENTS WERE MADE	SKOUNDWA			
									BORING:	

SAMPLE NO. AND RECOVERY	Jason Jaskowia Track Mount Direct Push STRATA CHANGE	BORING LOCAT GROUND SURF	ACE ELEVATION 12/12/2012	Rochester, NY END DATE DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:	SHEET JOB: CHKD BY: DATUM: PID	1 OF	OF
NEERING CONSULTANTS LaBella Trec SENTATIVE: ILL RIG: AND TYPE: EN SAMPING METHOD: SAMPLE SAMPLE SAMPLE NO. AND RECOVERY	Jason Jaskowia Track Mount Direct Push STRATA CHANGE	GROUND SURF	ACE ELEVATION 12/12/2012	END DATE DRIVE SAMPLER TYPE: INSIDE DIAMETR:			
Trec SENTATIVE: ILL RIG: AND TYPE: EN SAMPING METHOD: SAMPLE SAMPLE NO. AND RECOVERY	Track Mount Direct Push STRATA CHANGE	GROUND SURF	ACE ELEVATION 12/12/2012	END DATE DRIVE SAMPLER TYPE: INSIDE DIAMETR:			
ESENTATIVE: ILL RIG: AND TYPE: EN SAMPING METHOD: SAMPLE SAMPLE NO. AND RECOVERY	Track Mount Direct Push STRATA CHANGE		12/12/2012	DRIVE SAMPLER TYPE: INSIDE DIAMETR:			
ILL RIG: AND TYPE: EN SAMPING METHOD: SAMPLE SAMPLE NO. AND RECOVERY	Track Mount Direct Push STRATA CHANGE			DRIVE SAMPLER TYPE: INSIDE DIAMETR:	PID		
AND TYPE: EN SAMPING METHOD: SAMPLE SAMPLE NO. AND RECOVERY	Direct Push STRATA CHANGE	-	VISUAL	INSIDE DIAMETR:	PID		
SAMPING METHOD: SAMPLE SAMPLE NO. AND RECOVERY	STRATA CHANGE	-	VISUAL		PID	T	
SAMPLE SAMPLE NO. AND RECOVERY	STRATA CHANGE	_	VISUAL	UTTER.	PID	<u>т</u>	
SAMPLE NO. AND RECOVERY	CHANGE	-	VISUAL		PID		1
AND RECOVERY	CHANGE	-	VISUAL				
AND RECOVERY	CHANGE		VISUAL (FIELD SCREEN		
			1.00. LE	CLASSIFICATION	(PPM)	Radiation	Gases
50%				0		(uR/hr)	(See notes
50%	5			Grass	C	0.1	No Chan
50%	ั่ว			Silt			
50%	5		Cin	ders ~ 1.5 ft		0.1	
	1		Misc trace cind	ers and silt from 2 to 6 ft	C		
						0.2	
					C	-	
					C	1	
60%	6				c)	
			Moist sil	t from 6 to 11.2 ft	C		
					C)	
						0.1	
					C)	
						0.1	
100%	Ď		Rofi	ısal @ 11.2 ft			
			Keit				
		DEPTH (FT)	11.2 ft	NOTES:		<u> </u>	<u> </u>
	BOTTOM OF	BOTTOM OF	GROUNDWATER	CH4 = 0%			
R LEVEL DATA	CASING	BORING	ENCOUNTERED	CO = 0 ppm			
R LEVEL DATA ELASPED TIME			<u> </u>	H2S = 0 ppm			
		ATE BOUNDARY	BETWEEN SOIL TY	PES, TRANSITIONS MAY BE GRADU	AL.		
ELASPED TIME	ENT APPROXMA				IDWATER		
ELASPED TIME S CATION LINES REPRES EVEL READINGS HAVE	BEEN MADE AT	HUSE PRESENT	AT THE TIME MEA	SUREMENTS WERE MADE		ROPING	
_	ELASPED TIME	ELASPED TIME CASING CASING ATION LINES REPRESENT APPROXM/ VEL READINGS HAVE BEEN MADE AT	LEVEL DATA BOTTOM OF BOTTOM OF ELASPED TIME CASING BORING ATION LINES REPRESENT APPROXMATE BOUNDARY VEL READINGS HAVE BEEN MADE AT TIMES AND UND	LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER ELASPED TIME CASING BORING ENCOUNTERED ATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TY VEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS S	LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER CH4 = 0% ELASPED TIME CASING BORING ENCOUNTERED CO = 0 ppm H2S = 0 ppm H2S = 0 ppm ATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADU	LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER CH4 = 0% ELASPED TIME CASING BORING ENCOUNTERED CO = 0 ppm H2S = 0 ppm H2S = 0 ppm ATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. VEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER	LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER CH4 = 0% ELASPED TIME CASING BORING ENCOUNTERED CO = 0 ppm H2S = 0 ppm H2S = 0 ppm ATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. VEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

			PROJECT				BORING: ET-SB-22			
		HESTER, NY			Edison Te	ch	SHEET JOB: CHKD BY:	1 OF	OF	
VIRO	MENTAL ENGINE	EERING CONSULTANTS								
		LaBella Trec			TON: ACE ELEVATION	Rochester, NY	DATUM:			
	BELLA REPRES		Jason Jaskowia	ISTART DATE:		END DATE	DATONI.			
	TYPE OF DRILI AUGER SIZE A OVERBURDEN		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P		SAMPLE					PID FIELD SCREEN			
т Н	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	-	VISUAL	CLASSIFICATION	(PPM)	Radiation (uR/hr)	Gases (See note	
0	1		-			Concrete	(0.1	No Char	
					Silt w	ith misc. stone				
2		25%						0.2		
								0.2		
4	VOC @ 4ft				Silt w	ith misc. stone		0 0.2		
6	TCLP 4 to 8ft	55%						0 0.1		
8								0.1		
10		50%			Refu	ısal @ 11.2 ft		0.2		
12										
16										
20										
				DEPTH (FT)	11.2 ft	NOTES:				
		LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED					
GE	NERAL NOTES		NT APPROXM4			H2S = 0 ppm /PES, TRANSITIONS MAY BE GR/	ADUAL.			
	2) WATER LEV	/EL READINGS HAVE E	BEEN MADE AT	TIMES AND UND	ER CONDITIONS	STATED, FLUCTUATIONS OF GRO				

Δ		LLA sociates, P.C.			PROJEC Edison Te		BORI SHEE JOB:	T	ET-SB-23 1 OF	OF
	E STREET, ROO						СНК	OBY:		
	MENTAL ENGIN NTRACTOR:	IEERING CONSULTANTS LaBella		BORING LOCAT	FION:	Rochester, NY				
	LLER:	Trec			ACE ELEVATION	,	DATU	JM:		
LAB	ELLA REPRES	SENTATIVE:	Jason Jaskowia	ISTART DATE:	12/12/2012	END DATE				
	TYPE OF DRIL AUGER SIZE / OVERBURDEI		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D		SAMPLE						PID		
Е							FI	ELD		
P T H	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	-	VISUAL	CLASSIFICATION		REEN PPM)	Radiation (uR/hr)	Gase (See not
0						Asphalt		0	0.2	No Char
					Silt	and Gravel				
									0.2	
2		75%			Sor	nd @ ~ 2.8 ft		0 0		
					Sa	iu @ ~ 2.0 it		0	0.2	
4					Ref	usal @ 3.2 ft		0		
								0		
6										
8										
10										
12										
10										
16										
20				DEPTH (FT)	3.2 ft	NOTES: No sample				
	WATER	LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER	CH4 = 0%				
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED					
		<u> </u>			<u> </u>	H2S = 0 ppm				
	NERAL NOTES									
						(PES, TRANSITIONS MAY BE GRA STATED, FLUCTUATIONS OF GRO				
	,					SUREMENTS WERE MADE	JUNDWALER			
									BORING:	

					PROJEC	т	в	ORING:	ET-SB-24	
Δ		Deciates, P.C.			Edison Te	ch	J	HEET OB: HKD BY:	1 OF	OF
	TE STREET, ROO IMENTAL ENGIN	HESTER, NY EERING CONSULTANTS								
		LaBella		BORING LOCA	TION:	Rochester, NY				
	ILLER:	Trec			FACE ELEVATION		D	ATUM:		
LA	BELLA REPRES	SENTATIVE:	Jason Jaskowia	ISTART DATE:	12/12/2012	END DATE				
	TYPE OF DRIL AUGER SIZE A OVERBURDEN		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E		SAMPLE						PID FIELD		
P T H	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	-	VISUAL	CLASSIFICATION		SCREEN (PPM)	Radiation (uR/hr)	Gases (See note
0						Asphalt		0	0	No Char
	Full (1/4)				Sil	t and gravel				
					Silt and trace	cinders @ ~ 2ft to 8 ft			0	
2		60%						0		
	Full (1/4)							0	0.1	
									-	
4								0	0.2	
	Full (1/4)							0		
	1 011 (1/4)									
6		85%						0		
	E							0	0.1	
	Full (1/4)									
8	VOC @ 8 ft				Silt	(moist) @ 8 ft		0		
						(0.1	
								0		
10		50%							0.1	
10		5070			Ref	usal @ 8.5 ft				
12										
12										
40										
16										
00										
20	I	1		DEPTH (FT)	8.5 ft	NOTES:			l	1
	WATER	LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER	CH4 = 0%				
ATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED	CO = 0 ppm				
						H2S = 0 ppm				
GE	NERAL NOTES									
	1) STRATIFIC	ATION LINES REPRESE		TE BOUNDARY	BETWEEN SOIL T	(PES, TRANSITIONS MAY BE GRA	DUAL.			
						STATED, FLUCTUATIONS OF GRO	DUNDWATE	R		
		RE DUE TO UTHER FA	CIUKS IHAN I	NUSE PRESENI	AT THE TIME MEA	SUREMENTS WERE MADE			BORING:	

0 STAT	As TE STREET, RO IMENTAL ENGI	NEERING CONSULTANTS		PROJECT Edison Tech BORING LOCATION: Rochester, NY				DRING: IEET IB: IKD BY:	ET-SB-25 1 OF	OF
	NTRACTOR: ILLER:	LaBella Trec			FION: FACE ELEVATION	Rochester, NY		TUM:		
	BELLA REPRE		Jason Jaskowia			END DATE				
	TYPE OF DRI AUGER SIZE OVERBURDE		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P T H	SAMPLE DEPTH	SAMPLE SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION		PID FIELD SCREEN (PPM)	Radiation (uR/hr)	Gases (See notes
0	DEPTH	AND RECOVERT	CHANGE			Asphalt		0		No Chan
					Silt	and gravel				
						Silt			0	
2		50%			Dark stained ailt	and gravel - PID @ ~ 3ft		0 1.3		
	E				Dark Stained Sill			7.8	0.2	
	Full @ 3ft							0.2		
4					Sil	and stone		0	0.2	
6		100%						0 0	0.1	
8					Ref	usal @ 7.7 ft			0.2	
10										
12										
16										
20										
	1	1		DEPTH (FT)	7.7 ft	NOTES: No GW	1		. <u> </u>	1
			BOTTOM OF		GROUNDWATER					
DATE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED	CO = 0 ppm H2S = 0 ppm				
GE	2) WATER LE	CATION LINES REPRES	BEEN MADE A	TTIMES AND UN	IDER CONDITIONS	YPES, TRANSITIONS MAY BE G STATED, FLUCTUATIONS OF G ASUREMENTS WERE MADE		R		

Δ		ΕLLΛ			PROJEC Edison Te		BORING: SHEET JOB:	E	T -SB-26 1 OF	OF
	E STREET, ROO	sociates, P.C. CHESTER, NY NEERING CONSULTANTS					CHKD BY:			
CO	NTRACTOR:	LaBella		BORING LOCA	TION:	Rochester, NY	·			
		Trec	laaan laakawia	GROUND SURF	FACE ELEVATION		DATUM:			
LAB	ELLA REPRE	SENTATIVE:	Jason Jaskowia	ISTART DATE:	12/10/2012	END DATE				
	TYPE OF DRII AUGER SIZE OVERBURDE		Track Mount Direct Push			DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:				
D E P		SAMPLE					PID FIELD SCREEN	1		
T H	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE		VISUAL	CLASSIFICATION	(PPM)	F	Radiation (uR/hr)	Gases (See note:
0						Asphalt		0	0.1	No Chan
					Silt	and gravel				
						·			0.1	
2		50%				Silt		0	0.1	
					Dark stained	silt and gravel @ ~ 3ft		0	0.2	
4									0.2	
					Sil	t and stone		0		
6		100%						0		
								0	0.1	
8					Ref	usal @ 8.1 ft			0.2	
0										
2										
6										
20						Γ				
				DEPTH (FT)	8.1 ft	NOTES: No sample				
			BOTTOM OF	BOTTOM OF	GROUNDWATER					
\TE	TIME	ELASPED TIME	CASING	BORING	ENCOUNTERED	CO = 0 ppm H2S = 0 ppm				
05				<u>.</u>	1					
	NERAL NOTES				Y BETWEEN SOULT	YPES, TRANSITIONS MAY BE G	RADUAI			
						STATED, FLUCTUATIONS OF G				
						ASUREMENTS WERE MADE		_		
								в	ORING:	

	As	SOCIATES, P.C.		Parking 1	PROJECT Characterization tot Expansion 667 Emerson St cochester, New Y	BORING: SHEET JOB: CHKD BY:		B - 1 1 OF 1 210173 	
DR	NTRACTOR: ILLER: BELLA REPRE	DDS Environmental Eric Winters SENTATIVE:	MFP	BORING LOCA GROUND SURI START DATE:	FACE ELEVATION	END DATE: 29-Oct-2012	TIME: DATUM:		то
AU	PE OF DRILL F GER SIZE ANI ERBURDEN S		NA	Geoprobe 54LT		DRIVE SAMPLER TYPE: Macro INSIDE DIAMETER: 1.8-inch OTHER:	core		
EET)		SAMPLE					PID / FID	EET)	
DEPTH (FEET)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH (FEET)	STRATA CHANGE (FEET)		VISUAL CLA	SSIFICATION	FIELD SCREEN (PPM)	DEPTH (FEET)	NOTE
0	3.2		0.2	Topsoil Brown SILT, littl	e f Sand, moist, no	odor	0	0	
2			2.3	Gray to Black S	ILT and Cinders, mo	sist, petroleum odor	10	2	
4	1.0	Grab-4'					17.2	4	
6		Comp-2.5'-5'		Bottom of Bori	ng at 5 Feet Below	the Ground Surface		6	
					5				
8								8	
10								10	
12								12	
14								14	
16				DEPTH (FT)		NOTES:		16	
DATE	WATER TIME	LEVEL DATA ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED				
				5.0	no				
	2) WATER L	CATION LINES REPRE	E BEEN MADE	AT TIMES AND U	JNDER CONDITION	IL TYPES, TRANSITIONS MAY BE NS STATED, FLUCTUATIONS OF		R	
	and = 35 to some = 20 t		little = 10 to 20% trace = 1 to 10%		c - coarse m = medium	ND = Non Detect BGS = Below the Ground Surface			
					f = fine	NA = Not Applicable	BORIN	B - 1	

CONTRACTOR: DDS Environmental GROUND SURFACE ELEVATION TIME: TO DRILLER: Eine Winners BORING LOCATION: END DATE: DATUM: DAT	1
AUGRER 32E AND TYPE: NA INSIDE DIAMETER: 1.8-Inch. OVERBURDEN SAMPLING METHOD: Direct Push OTHER: 0 Instantial instantialinterimente instantial instantial instantial instente instantiali	
0 3.2 Topool Brown SiLT, little f Sand, moist, no odor 0 0 2 1.0 Dark Brown SiLT, little f Sand, moist, no odor 2.3	
0 3.2 Topool Brown SiLT, little f Sand, moist, no odor 0 0 2 1.0 Dark Brown SiLT, little f Sand, moist, no odor 2.3	
0.2 Brown SILT, little f Sand, moist, no odor 0 2 1.0 Dark Brown SILT, intermixed with glass and cinders, petroleum odor 2.3 4	E
2 1.0 Dark Brown SiLT, intermixed with glass and cinders, petroleum odor -increasing amount of cinders from 2-5' 2.3 2 4	
2	
4 1.0 Grab-4' Comp-1-5' 6 6	
4 1.0 Grab-4' Comp-1'-5' 10 6 9 Bottom of Boring at 5 Feet Below the Ground Surface 6 8 8 8 8 10 10 10 11 10 10 12 10 10 14 12 12 14 14 14 16 DATE ELAPSED TIME CASING BOTIOM OF BOTIOM OF BORING ENCOUNTERED DATE TIME ELAPSED TIME CASING BORING BORING BORING BORING BORING BORING	
1.0 Grab-4: Comp-1'-5' 10 6 6 8 8 10 10 11 10 10 10 10 10 10 10 10 10 10 10 11 10 12 112 14 114 16 DATE VATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BOTIOM OF BOTIOM OF BOTIOM OF SROUNDWATER	
1.0 Grab-4: Comp-1'-5' 10 6 6 8 8 10 10 11 10 10 10 10 10 10 10 10 10 10 10 11 10 12 112 14 114 16 DATE VATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BOTIOM OF BOTIOM OF BOTIOM OF SROUNDWATER	
Comp-1'-5' Bottom of Boring at 5 Feet Below the Ground Surface 6 8 8 8 8 10 10 10 10 12 12 12 12 14 14 14 14 16 VATER LEVEL DATA BOTTOM OF BOTTOM OF BORING DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED	
6 Bottom of Boring at 5 Feet Below the Ground Surface 6 8 8 8 10 10 10 12 10 10 14 14 14 16 DEPTH (FT) NOTES: WATER LEVEL DATA BOTTOM OF BORING DATE TIME ELAPSED TIME 11 CASING BORING 12 11	
8 8 8 10 10 10 12 10 10 14 14 14 16 DEPTH (FT) NOTES: WATER LEVEL DATA BOTTOM OF BOTTOM OF DATE TIME ELAPSED TIME CASING BOTTOM OF BOTION F DATE TIME ELAPSED TIME	
10 10 10 12 10 10 14 14 14 16 16 16	
10 10 10 12 10 10 14 14 14 16 16 16	
10 10 10 12 10 10 14 14 14 16 16 16	
12 12 14 12 16 14 16 16	
12 12 14 12 16 14 16 16	
14 14 14 16 DEPTH (FT) NOTES: VATER LEVEL DATA BOTTOM OF BOTTOM OF DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no	
14 14 14 16 DEPTH (FT) NOTES: VATER LEVEL DATA BOTTOM OF BOTTOM OF DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no	
14 14 14 16 DEPTH (FT) NOTES: VATER LEVEL DATA BOTTOM OF BOTTOM OF DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no	
16 DEPTH (FT) NOTES: WATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no	
16 DEPTH (FT) NOTES: WATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no	
16 DEPTH (FT) NOTES: MATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no	
DEPTH (FT) NOTES: WATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no NOTES:	
DEPTH (FT) NOTES: WATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no NOTES:	
DEPTH (FT) NOTES: WATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no NOTES:	
WATER LEVEL DATA BOTTOM OF BOTTOM OF GROUNDWATER DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no	
DATE TIME ELAPSED TIME CASING BORING ENCOUNTERED 5.0 no	
GENERAL NUTES	
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.	
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER	
and = 35 to 50 % little = 10 to 20% c - coarse ND = Non Detect	
some = 20 to 35% trace = 1 to 10% m = medium BGS = Below the Ground Surface f = fine NA = Not Applicable BORING: B -	2

	As	SOCIATES, P.C.		Parking 1	PROJECT Characterization g Lot Expansion 667 Emerson S Rochester, New Y	BORING: SHEET JOB: CHKD BY:		B – 3 1 OF 1 210173 	
DR	NTRACTOR: ILLER: BELLA REPRE	DDS Environmental Eric Winters SENTATIVE:	MFP	BORING LOCA GROUND SUR START DATE:	FACE ELEVATION	END DATE: 29-Oct-2012	TIME: DATUM:		то
AU	PE OF DRILL F GER SIZE ANI ERBURDEN S		Track Mounted NA Direct Push	Geoprobe 54LT		DRIVE SAMPLER TYPE: Macro INSIDE DIAMETER: 1.8-inch OTHER:	core		
DEPTH (FEET)	SAMPLE RECOVERY	SAMPLE SAMPLE NO. AND DEPTH	STRATA CHANGE			SSIFICATION	PID / FID FIELD SCREEN (PPM)	DEPTH (FEET)	NOTE
0 DEI	(FEET) 3.2	(FEET)	(FEET)	Topsoil Brown SII T, littl	e f Sand, moist, no		0	DE	NOTE
			1.2	Brown SILT and		ed with glass pieces, and trace	3.5		
2			2.4		Black SILT and SAN , petroleum odor	ID, intermixed with Cinders, some	9.7	2	
4	1.0	Grab-4'					18.4	4	
6		Comp-1'-5'		Bottom of Bori	ng at 5 Feet Below	v the Ground Surface		6	
8								8	
10								10	
12								12	
14								14	
16								16	
16				DEPTH (FT)		NOTES:		16	
DATE	WATER TIME	LEVEL DATA ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED				
 GE	 NERAL NOTE:	 S		5.0	no	I			
	1) STRATIFIC 2) WATER LI	CATION LINES REPRE	E BEEN MADE	AT TIMES AND U	JNDER CONDITIO	NIL TYPES, TRANSITIONS MAY BE NS STATED, FLUCTUATIONS OF		R	
	and = 35 to some = 20 t		little = 10 to 20% trace = 1 to 10%		c - coarse m = medium f = fine	ND = Non Detect BGS = Below the Ground Surface NA = Not Applicable	BORIN	B - 3	

	As	SOCIATES, P.C.	PROJECTBORING:BWaste Characterization SamplingSHEET1Parking Lot Expansion - ValTechJOB:2101731667 Emerson StreetCHKD BY:Rochester, New York								
DR	NTRACTOR: ILLER: BELLA REPRE	DDS Environmental Eric Winters SENTATIVE:	MFP	BORING LOCA GROUND SUR START DATE:	FACE ELEVATION	END DATE: 29-Oct-2012	TIME: DATUM:		то		
AU	PE OF DRILL F GER SIZE ANI ERBURDEN S		Track Mounted NA Direct Push	Geoprobe 54LT		DRIVE SAMPLER TYPE: Macroo INSIDE DIAMETER: 1.8-inch OTHER:					
EET)		SAMPLE					PID / FID	EET)			
DEPTH (FEET)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH (FEET)	STRATA CHANGE (FEET)		VISUAL CLA	SSIFICATION	FIELD SCREEN (PPM)	DEPTH (FEET)	NOTE		
0	2.5			Topsoil				0			
			0.2	Brown SILT, littl	e f Sand, moist, no	odor	0				
			1.2	Brown to Dark E and ash	Brown SILT, little f S	Sand, intermixed with glass, cinders,	0.2				
2							1.4	2			
		Grab-2.5'					1.4				
		Comp-1'-2.5'		Bottom of Bori	ng at 2.5 Feet Bel	ow the Ground Surface					
4					-			4			
6								6			
8								8			
10								10			
12								12			
14								14			
16				DEPTH (FT)		NOTES:		16			
	WATER	LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATE						
DATE	TIME	ELAPSED TIME	CASING	BORING	ENCOUNTERED						
				5.0	no						
GE	NERAL NOTE:						CDADUAL				
						DIL TYPES, TRANSITIONS MAY BE INS STATED, FLUCTUATIONS OF		र			
	and = 35 to		little = 10 to 20%		c - coarse	ND = Non Detect					
	some = 20 t	o 35%	trace = 1 to 10%	0	m = medium	BGS = Below the Ground Surface	P.O.D.Y.	D 4			
L					f = fine	NA = Not Applicable	BORIN	J:	B - 4		

	AS	BOCIATES, P.C.		Parkinç 1	PROJECT Characterization tot Expansion 667 Emerson St cochester, New Y	- ValTech reet	BORING: SHEET JOB: CHKD BY:		B – 5 1 OF 1 210173 	
DR	INTRACTOR: ILLER: BELLA REPRE	DDS Environmental Eric Winters SENTATIVE:	MFP	BORING LOCA GROUND SURI START DATE:	FACE ELEVATION	END DATE: 29-Oct-2012	TIME: DATUM:		то	
AU	pe of drill f ger size ani 'Erburden s		Track Mounted NA Direct Push	Geoprobe 54LT		DRIVE SAMPLER TYPE: Macroo INSIDE DIAMETER: 1.8-inch OTHER:	core			
DEPTH (FEET)	SAMPLE	SAMPLE SAMPLE NO. AND	STRATA				PID / FID FIELD SCREEN	DEPTH (FEET)		
DEP	RECOVERY (FEET)	DEPTH (FEET)	CHANGE (FEET)		VISUAL CLA	SSIFICATION	(PPM)	DEP	NOTE	
0	2.9		0.2	Topsoil Brown SILT, littl	e f Sand, moist, no	odor	0	0		
			1.1	Brown to Dark E amounts of cind		SAND, intermixed with glass, trace	2.3			
2			2.2	Dark Brown to C ciners, little ash	Gray SILT and mf SA	AND, intermixed with glass,	8	2		
4								4		
	1.2	Grab-6' Comp-1'-9'					10			
6								6		
8	0.2							8		
10				Bottom of Bori	ng at 9 Feet Below	the Ground Surface		10		
12								12		
12								12		
14								14		
16								16		
	WATER	LEVEL DATA	BOTTOM OF	DEPTH (FT) BOTTOM OF	GROUNDWATER	NOTES:				
DATE	TIME	ELAPSED TIME	CASING	BORING	ENCOUNTERED	-				
 GE				5.0	no					
GE		CATION LINES REPRE				IL TYPES, TRANSITIONS MAY BE		R		
	and = 35 to some = 20 t		little = 10 to 20% trace = 1 to 10%		c - coarse m = medium	ND = Non Detect BGS = Below the Ground Surface				
					f = fine	NA = Not Applicable	BORIN	G:	B - 5	

	As	SOCIATES, P.C.		Parkino 1	PROJECT Characterizatior g Lot Expansion 667 Emerson S tochester, New	- ValTech treet	BORING: SHEET JOB: CHKD BY:		B – 6 1 OF 1 210173 	
DR	NTRACTOR: ILLER: BELLA REPRE	DDS Environmental Eric Winters SENTATIVE:	MFP	BORING LOCA GROUND SURI START DATE:	FACE ELEVATION	END DATE: 29-Oct-2012	TIME: DATUM:		то	
AU	pe of drill f Ger size ani 'Erburden s		Track Mounted NA Direct Push	Geoprobe 54LT		DRIVE SAMPLER TYPE: Macroo INSIDE DIAMETER: 1.8-inch OTHER:	core			
ET)		SAMPLE					PID / FID	ET)		
DEPTH (FEET)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH (FEET)	STRATA CHANGE (FEET)		VISUAL CLA	SSIFICATION	FIELD SCREEN (PPM)	DEPTH (FEET)	NOTE	
0	2.5			Topsoil				0		
			0.2		e f Sand, moist, no	odor	0			
			1.0		Brown SILT, little f S	and, intermixed with glass, cinders,	0			
2				and ash				2		
		Orah 0.5					0			
		Grab-2.5' Comp-1'-2.5'								
4				Bottom of Bori	ng at 2.5 Feet Belo	ow the Ground Surface		4		
-								4		
6								6		
8								8		
10								10		
12								12		
14								14		
16								16		
				DEPTH (FT)	1	NOTES:				
	WATER	LEVEL DATA	BOTTOM OF	BOTTOM OF	GROUNDWATER	R				
DATE	TIME	ELAPSED TIME	CASING	BORING	ENCOUNTERED	4				
 GE	 NERAL NOTE	 S		5.0	no					
			SENT APPROX	IMATE BOUNDA	ARY BETWEEN SC	DIL TYPES, TRANSITIONS MAY BE	GRADUAL.			
	,					NS STATED, FLUCTUATIONS OF		R		
	and = 35 to		little = 10 to 20%		c - coarse	ND = Non Detect				
	some = 20 t	o 35%	trace = 1 to 10%	6	m = medium f = fine	BGS = Below the Ground Surface NA = Not Applicable	RODIN	BORING: B - 6		
L					1110		DOMIN	~ .		

									`			
	Т	arget D	Drilling	Comp	any				Test Boring No.:	B01-1		
		1850 L	akevill	e Roa	ad				Job No			
	A	von, N	lew Yo	rk 144	14				Page:			
									Report Date:	4/23/01		
-	Test Statements		NG MET			MER	SON	ST.	-			
	and the second s		DATION					.				
Eleva			536.8		•			Geologist:				
			asing In:						<u>S. KAHN</u>			
Below Surface - Casing Out: Start: 4/23/01 Completed: 4/23/01												
Seasonal and climatic changes may alter observed water levels.												
Blows on Sampler												
	lc.			Q all the		N	Soil and Rock	Information				
σ	Ľ	0"/6"	6"/12"	12"/18	18"/24"	1	No.	Sample depth		momaton		
		2	7						TOPSOIL AND ORGANIC MATTER	{	0'6"	
				9	11	16	1	0'0"-2'0"	MISC. FILL MATERIAL C/O MOIST			
		10	18						GLASS, SILT, SAND & GRAVEL			
5		32	50/3	18	16	36 82/8	2	2'0"-4'0"	MISC FILL MOIST (CONCRETE N			
5		50/5	50/3			02/0 50/5		4'0"-4'9" 6'0"-6'5"	FILL MATERIAL SILT, SAND & GR			
	Н	30/0			<u> </u>	30/3		00-00	GRAVEL, LITTLE SILT (POSSIBLE		6'5	
	H								(AUGER REFUSAL @ 6'6") SEE N			
									· · · ·			
10												
	\vdash				 	<u> </u>						
	\vdash				<u> </u>				BORING TERMINATED @ 8'6			
	\vdash											
15									NOTES: ELEVATIONS PROVIDED	BY OTHERS		
									DRILLED TWO ADDITION			
				<u> </u>					VICINITY TO VERIFY REFUSAL (
	Η				<u> </u>				IVLY) GRINDING SMOOTH FROM BEDROCK	14-01 ACTED LINE		
20	Η											
	П											
	Щ		 		ļ	ļ						
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35												
I=No.	of	Blows to	2"	Spoon	12"	with	140	lb. wt	<u>'E</u> a. Blow			

	Ta	arget D	orilling (Compa	any				Test Boring No.: B01-2	
			akevill						Job No 302	
	Α	von. N	lew Yor	k 144	14				Page: 1 OF 1	
									Report Date: 4/23/01	
Proje	ct:	PRINTI	NG MET	HODS	INC.,EN	IERS	SON	ST.		
Client	:	FOUNE	DATION I							
	-	1:	533.05	•	١			Geologist:		
			asin <u>g In:</u>						S. KAHN	
Below	I SL	urface -	Casing_C	Dut:				Start:		
•		6 1 - 1						Completed:		
Seaso	na T						serve	d water leve		
		BIG	ows on	Samp	ler	NI		Comolo	Soil and Rock Information	
_	C		1 011/01	koruol	4 011/0 41	Ν		Sample	Soli allu Nock mormation	
0		0"/6"		12"/18	18"/24"		No.	depth	ASPHALT	0'3"
	\vdash	40	28	15	17	45	1	0'0"-2'0"	MISC. FILL MATERIAL C/O MOIST CINDERS, ASH,	
	H	11	7	15	17	45		00-20	GLASS, SILT, SAND & GRAVEL	
	H		<u> </u>	6	7	13	2	2'0"-4'0"	MISC FILL SATURATED (SLAG NOTED)	
5	H	3	3							
				2	2	5	3	4'0"-6'0"	LOOSE FILL SATURATED	
	Ц	6	4					6'0"-8'0"	LOOSE FILL SATURATED	
	Н		3	3	4	7	4	0.08.0.	LOOSE FILL SATURATED	
10	\vdash	2		3	3	6	5	8'0"-10'0"	LOOSE SATURATED PROBABLE FILL	9'6"
	1 4								LOOSE GREY BROWN SATURATED SILT AND FINE	
	H			5	6	9	6	10'0"-12'0"	TO VERY FINE SAND, LITTLE ORGANIC MATTER	
		5	7							
	Ц		ļ	8	11	15	7	12'0"-14'0"	FIRM GREY SATURATED	
15		8	9	9	50/3	18	8	14'0"-15'9"	FIRM GREY SATURATED	15'9"
	Н			3	- 50/5	10	- -	140-100	(SPOON BOUNCING @ 15'9")	
	H									
20						ļ				
							 		BORING TERMINATED @ 15'9""	
	Н		<u> </u>						BORING TERMINATED @ 103	
	Н						[·····		NOTES: ELEVATIONS PROVIDED BY OTHERS	
25				+	<u> </u>			1		
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20			4					4		
30	÷		1	+	<u> </u>		+	1		
	H		1	1		1	1	1		
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35					<u> </u>	<u> </u>		11 1		
		Blows to	The second s	_Spoon			140	lb. <u>wt</u> lb. <u>wt</u>	<u> </u>	
N=NO	. of	Blows to		_Spoon		with		- ID. WL		

	Та	arget D) Drilling (Compa	any				Test Boring No.: B01-3			
		1850 L	akevill	e Roa	d				Job No 302			
	Α	von. N	lew Yor	k 144	14				Page: 1 OF 1			
		····, ···,							Report Date: 4/23/01			
			NG MET			MER	SON	ST.	-			
	-		539.18					Geologist:				
			asing In:						S. KAHN			
Below	r Si	urface -	Casing_	Dut:				Start:				
0		l and ali	matic ch		movalte	vr obi		Completed:				
Sease	ла		ows on				Serve	d water leve				
		DI	JWS 011	Janip		NI		Sampla	Soil and Rock Information			
C N Sample Soil and Rock Information 0 0"/6" 6"/12" 12"/18 18"/24" No. depth												
		076	0/12	12/10	10 /24		NO.	depui	ASPHALT	0'2"		
	\vdash	6	3						CONCRETE	0'8"		
	H	<u>-</u>	<u> </u>	3	2	6	1	1'0"-3'0"	CRUSHED STONE	<u> 1'0" </u>		
	Η	2	1						MISC FILL C/O GLASS, ASH, CINDERS, BRICK, SILT			
5				1	1	2	2	3'0"-5'0"	SAND AND GRAVEL			
		1	1						MISC. FILL SATURATED	6'6"		
				1	23	2	3	5'0"-7'0"	MISC FILL SATUARED LOOSE MUSTARD BROWN SATURATED SILT, SOME			
	$\left - \right $								VERY FINE SAND			
10	H	· · · ·							AUGERED TO REFUSAL @	8'2"		
									BORING TERMINATED @ 8'2"			
						<u> </u>						
15	Н								NOTES: ELEVATIONS PROVIDED BY OTHERS			
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30	\square			1								
					 							
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	l. of	Blows to) 2"	I Spoon	12"	with	140	lb. <u>wt.</u>	<u> </u>			
		Blows to	Contraction of the local division of the loc	Spoon		with		lb. wt	Ea. Blow			

	Та	arget D	Drilling (Compa	any				Test Boring No.: B01-4	
		1850 L	_akevill	e Roa	d				Job No 302	
	A	von, N	lew Yor	rk 144	14				Page: 1 OF 1	
		,							Report Date: 4/23/01	
			ING MET			MER	SON	ST.		
			DATION		•					
Eleva		,	593.72					Geologist:		
			asing In:						S. KAHN	
Below	1 31	unace -	Casing (<u> </u>			Start: Completed:		
Seaso	ona	l and cli	imatic ch	anges	may alte	er ob		ed water leve		
<u> </u>			ows on			ľ				
	C			-		N		Sample	Soil and Rock Information	
0		0"/6"	6"/12"	12"/18	18"/24"		No.	depth		
	Н	5	6					· · · · ·	TOPSOIL AND ORGANIC MATTER	0'3"
				7	7	13	1	0'0"-2'0"	MISC. FILL MATERIAL C/O MOIST CINDERS, ASH,	
		17	11						GLASS, SILT, SAND & GRAVEL	
F			6	14	14	25	2	2'0"-4'0"	MISC FILL MOIST	
5	\mathbb{H}	5	5	3	4	8	3	4'0"-6'0"	LOOSE FILL SATURATED (POOR RECOVERY)	6'0"
	Н	2	2				–	40.00	LOOSE BLCK GREY SATURATED MEDIUM TO FINE	
	H		1	2	4	4	4	6'0"-8'0"	SAND, SOME SILT AND CLAY AND M-F GRAVEL	8'4"
		5	50/0					8'0"-8'5"	ROCK FRAGMENTS	8'5"
10	Ц					ļ			(AUGER REFUSAL @ 8'6")	
	Н				L				BORING TERMINATED @ 8'6"	
	Н								BORING TERMINATED @ 00	
15				1					NOTES: ELEVATIONS PROVIDED BY OTHERS	
	\square					ļ				
	\vdash									
20	Н									
			1							
			<u> </u>	ļ		ļ				
25	\vdash				<u> </u>					
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	Н		<u> </u>	<u> </u>						
	Η		1	1		 		1		
35										
		Blows to		Spoon			140	-	<u>' E</u> a. Blow	
N=No.	of	Blows to	Drive	Spoon		with		Ib. wt	Ea. Blow	

Target Drilling Company	Test Boring No.:	B01-5	
1850 Lakeville Road	Job No	302	
Avon, New York 14414	Page:	1 OF 1	
	Report Date:	4/23/01	
Project: PRINTING METHODS INC., EMERSON ST.			

	: PRINTI				NER	SON	<u>ST.</u>		
	FOUND						-		
Elevati		536.76		5			Geologist:		
	Level - Ca							S. KAHN	
Below	Surface -	Casing_	Dut:				Start:	4/23/01	
•							Completed:		
Seasor	nal and cli	matic cn	anges	may alle		Serve	d water leve	15.	
		ows on	Samp	her		,)	Soil and Rock Information	
[C				N	_	Sample	Soli and Rock information	
0	0"/6"	1	12"/18	18"/24"		No.	depth	TODOOL AND ODOANIC MATTER & FULL MIX	0'9"
	4	5	[TOPSOIL AND ORGANIC MATTER & FILL MIX MISC. FILL MATERIAL C/O MOIST CINDERS, ASH,	
-			11	8	16	1	0'0"-2'0"	GLASS, CONCRETE SILT, SAND & GRAVEL	
F	11	11	9	6	20	2	2'0"-4'0"	MISC FILL SATURATED	
5	7	3	9	0	20	2	20-40		
		<u> </u>	3	4	6	3	4'0"-6'0"	LOOSE FILL SATURATED (POOR RECOVERY)	
ŀ	5	4	<u> </u>	<u> </u>	<u> </u>				
ŀ			3	2	7	4	6'0"-8'0"	LOOSE FILL SATURATED	
F	5	7							
10			6	4	13	5	8'0"-10'0"	NO RECOVERY (BASKET IN USE)	
	4	4							12'6"
[7	9	11	6	10'0"-12'0"	MISC. FILL SATURATED VERY DENSE BROWN WET FINE TO VERY FINE SAND	120
ļ	25	50/4		<u></u>	75/10	7	12'0"-12'10"	AND SILT, SOME ROCK FRAGMENTS	12'10
45			┨────	<u> </u>	<u> </u>			(SPOON BOUNCING @ 12'10")	
15				+		+			
		+	+	<u> </u>					
ŀ				1		1			
ŀ		1		1	<u> </u>	1			
20									
					<u> </u>	<u> </u>		BORING TERMINATED @ 12'10"	
		<u> </u>				<u> </u>	-	NOTES: ELEVATIONS PROVIDED BY OTHERS	
		ļ	_		+		4	NOTES. ELEVATIONS PROVIDED BY OTHERO	
25							4		
	_					+	1		
			+		+	+	1		
		1	+	1	1	1	1		
30		1	1				1		
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					 		4		
			_		_		4		
35	of Diama t	<u> </u>	- Snoo	n 12"	. <u> </u>	1 1 140	l	Ea. Blow	
	of Blows to of Blows to		_ Spool		- with		lb. wt	Ea. Blow	
IN-INO.			_ 0p00	· ·		·	-		

Target Drilling Company	Test Boring No.:	B01-6	
1850 Lakeville Road	Job No	302	
Avon, New York 14414	Page:	1 OF 1	
	Report Date:	4/23/01	
	• • •		

	PRINTING METHODS INC., EMERSON ST.
Client:	FOUNDATION DESIGN PC

Elevation: 536.83 539.9 Water Level - Casing In: Below Surface - Casing Out:

Geologist:	
Driller:	S. KAHN
Start:	4/23/01
Completed:	4/23/01

Seasonal and climatic changes may alter observed water levels.

с			ows on			N		Sample	Soil and Rock Information	
0		0"/6"	6"/12"	12"/18	18"/24"	IN	No.	depth		
		4	8				-		TOPSOIL AND ORGANIC MATTER	0'3"
	\square			9	9	17	1	0'0"-2'0"	MISC. FILL MATERIAL C/O MOIST CINDERS, ASH,	
		9	8						GLASS, WOOD, METAL, SILT, SAND & GRAVEL	
			-	9	6	17	2	2'0"-4'0"	MISC FILL MOIST	
5		10	7							
				7	5	14	З	4'0"-6'0"	MISC. FILL MOIST	
		2	1							
				3	4	4	4	6'0"~8'0"	NO RECOVERY	
	Ш	4	4					8'0"-10'0"	LOOSE MISC. FILL SATURATED	9'6"
10		<u> </u>		3	4	7	5	80-100	LOOSE MUSTARD BROWN WET SILT, SOME VERY	<u> </u>
	Ц	5	12	- 40	40	25	6	10'0"-12'0"	FINE SAND	
	Н	47	45	13	13	25	0	100-120		12'0"
		17	15.	13	13	28	7	12'0"-14'0"		
15		13	14	13	10	20		120-140	FINE SAND , LITTLE MEDIUM TO FINE GRAVEL	
				17	20	31	8	14'0"-16'0"	COMPACT BROWN MOIST TO WET	
	\vdash	16	20							
				29	52	49	9	16'0"-18'0"	DENSE RED BROWN MOIST	
		38	58	1						
20		90/6		55	55	108	10	18'0"-20'0"		20'0"
									(SPOON BOUNCING @ 20'0")	
	\Box								BORING TERMINATED @ 20'0"	
		<u> </u>		ļ	ļ				NOTES: ELEVATIONS PROVIDED BY OTHERS	
25							ļ			
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	Ļ		<u> </u>					4		
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	\vdash	· · · ·		1		†		1		
35	F		1]		
N=No.	of	Blows to	2"	Spoon	12"	with	140		<u> </u>	
N=No.	of	Blows to	Drive	Spoon		with		lb. wt	Ea. Blow	

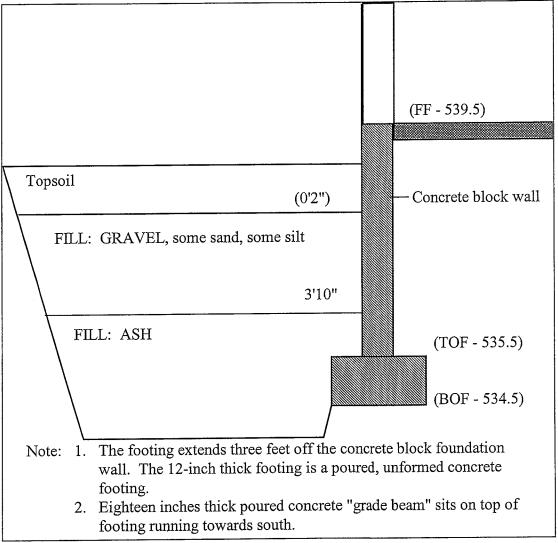


Project No.	1-2421.0	Page 1	of 1	Test Pit No.	TP01-1
Project Name	Printing Methods,	Inc. Additions, 1:	525 Emerson St.	Rochester, New Yo	ork
Client	Gary C. Sylvester	Architects, 452 L	ee Road, Roches	ster, New York 146	06
Elevation		Weather	60° Sunny	Inspector	J. Netzband
Date Started	04/30/01	Completed	04/30/01	Operator	D. Richards
Backhoe Subco	ontractor DiBatti	sto Construction		Equipment	Case 580 Backhoe

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
			TOPSOIL and ROOTS 0'6"
			FILL: Firm brown moist SAND, some silt
			1'7"
2			FILL: Loose to firm black moist ASH, with cans, glass, springs, pipe, brick,
			tile
4			
6			
8			Saturated below 7'6"
			9'0"
			Test pit terminated at 9'0"
10			
10			
12			
			Notes: 1. Sides caved below 7'6".
			2. Water constant at 7'6".
14			



Project No.	1-2421.0	Page 1	of	Test Pit No.	TP01-2
Project Name	Printing Methods, I	nc. Additions, 1	525 Emerson St	. Rochester, New Yo	ork
Client	Gary C. Sylvester A	Architects, 452 I	ee Road, Roche	ster, New York 146	
Elevation		Weather	60° Sunny	Inspector	J. Netzband
Date Started	04/30/01	Completed	04/30/01	Operator	D. Richards
Backhoe Subco	ontractor DiBattis	to Construction		Equipment	Case 580 Backhoe



Not to Scale

DATE	OTIOTED	8	/2/8	18	RECRA ENVIRONMENTAL, INC.		LE NO
	STARTED FINISHED	8/	/ <u>4/8</u> F		SUBSURFACE LOG	W. ELEV77.85	
PR		YSDE(ITE #		ASE IL INVES 023	TIGATION EMERSON ROCHESTI		T LANDEILI. V YORK
DEPTH-FT	RECOVERY	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 12 18 18	DESCRIPTION		NOTES
	1.0'	SB	1	13 25	Brown SAND and GRAVEL fill, dense, dry occasional cobbles encountered down to bedrock.		Boring advanced with
5	1.8'	SB	2	28 39 26 3	Grades to: Very dense.		Auger drilling refused at 6.4 ft. SB-3 from 6.4- 6.9 ft. revealed bedrock fragment in sampler. Take 2 ft. core then back
10	0.5' REC	SB	4	77	Light to dark gray, fine textured	<u>).0'</u>	into unconsolidated material, resume auger drilling.
-	88% RDQ 25%	NX	2		dolomite, numerous horizontal fractu some show iron staining, intense weathering evident on some	res,	Auger drilling refusal at 10.0 ft.
15	REC 100% RDQ 44%	NX	3		fractured surfaces, calcite and gypsum precipitates located on weathered surfaces and vugs.		NX core runs 2-5 drilled on 8/3/88. Rotary drilled with 3-7/8 in. tri-cone bit from 10-28.5 ft. Coring was done with a
20	REC				At 14.0 ft.: Some drilling fluid return was lost.		long ear 5.0 ft. NQ core barrel.
	98% RDQ 77%	NX	4		Water table encountered at approx- imately 20.5 ft. At 24.0 ft.: Several vertical fracture	es,	Runs 1-3 were drilled using a 58-60 carat drill bit.
25	REC 90% RDQ 68%	NX	5		possible water producing zone.		Runs 4-5 were drilled using a Series 2 drill bit.
30					[DOLOMITE BEDROCK]	29.0'	Boring completed at 29.0 ft.
							Oroundwater Elevation taken on 12/16/88.
35 CL	ASSIFICAT	10N .	Ι VIS	UAL	METHOD OF INVESTIGATION	AS	STM D1586-84. D2113-83

DATE	STARTED	ß	3/18	/88	RECRA ENVIRONMENTAL, INC.	HOLE NO. <u>GW-2</u> SURFACE ELEV. <u>98.2</u>
FINISHED					SUBSURFACE LOG	G.W. ELEV74.99
PR		IYSDE		ASE II INVES 023		STREET LANDFILL
DEPTH-FT	RECOVERY	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 1 12 18 18	2 DESCRIPTION	NOTES
	2.0.'	SB	1	8 16 13 16 6 10	Dark brown organic SILT, trace gravel, grading to light brown fine SAND and SILT, dry, medium dense.	Boring advanced with 4 1/4 in. I.D. HSA, truck mounted CME-55 drill rig. Driller - Rocky Baye
5	2.0' 1.4'	SB SB SB	2 3 4	16 11 4 8 6 28	At 4.0 ft.: Some gray clay. At 5.0 ft.: Moist.	Assistant - Shawn Penrod Augering becomes easier at 2.5 ft. HNU = 5-10 ppm on SB-3,
	REC 100% RQD 100%	NX	1	50	Light gray fine textured dolomite, moderately hard, little weathering, few horizontal fractures, some 4-6"	possibly due to moisture. Explosimeter = 0% :LEL Geiger Counter = 0 mr/hr
	REC 100% RQD 100%	NX	2		 vertical fractures present. At 12.5 ft.: Few vugs, some light and dark gray mottling. At. 17.5 ft.: Some white precipitate present which is highly reactive to HCI, some yellow precipitate observed which appears to contain 	Micro R Meter = 6-8 micro-rem/hr. NX core run 1 drilled on 8/18/88. Rotary drilled with 4.5 in. tri-cone bit from 7.5 ft. to 12.5 ft.
20	REC 100% RGD 100%	NX	3		sulfur (drilling fluid begins to have a sulfurous odor). At 19.5 ft.: Encountered water table At 23.0 ft.: Core exhibits increased fracture density and weathering, apparent transmissive zone.	NX core runs 2-4 drilled on 8/19/88. Coring was done using a long ear 5 ft. NQ core barrel. Run 1 was drilled with a
25 	REC 100% RQD 97%	NX	4		[DOLOMITE BEDROCK] 28.0'	58-60 carat bit. Run 2-4 were drilled with a Series 8 bit.
30 - - 35 -						Boring completed at 28.0 ft. G.W. elevation taken on 12/16/88.
	SIFICATIO	ж	VISU	AL	LOG DEVELOPED BY ROBER	ASTM D1586-84, D2113-83

ITEMCASINGSAMPLERBARRELRIG TYPE:CME-75, Truck-MountedELEVATION:532.81TYPEAugerBIT TYPE:4-1/4 in. I.D. H.S. AugersDATUM:NGVDINSIDE DIAMETER (IN)4-1/4DRILL MUD:FINISH:7 June 19HAMMER WEIGHT (LB)OTHER:Advanced augers to 10.3 ft.DRILLER:S. Lorant	H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists						TEST BORING REPORT		BORING NO. MW-15S		
ITEM DRIVE CASING DRIVE PREVER DREVER PREVER DREVER PREVER DREVIEW PREVER DREVER PREVER DREVER DREVER PREVER DREVER PREVER DREVER PREVER <th>CLIENT:</th> <th colspan="10">CLIENT: CITY OF ROCHESTER</th>	CLIENT:	CLIENT: CITY OF ROCHESTER									
TYPE INSIDE DLAMETER (IN) Auger (4'1/4	I	TEM		CASING				· · · · · · · · · · · · · · · · · · ·	Facility (See Plan)		
BLOWS CHANGE VISUAL CLASSIFICATION AND REMARKS	INSIDE D HAMMER W	EIGHT	(LB)	4-1/4			BIT TYPE: 4-1/4 in. I.D. DRILL MUD:	H.S. Augers	START: 4 June 199		
Auger Refusal at 10.3 ft. Auger Refusal at 10.3 ft. Apparent Top of Competent Rock at 10.3 ft. Apparent Top of Competent Rock at 10.3 ft. Notes: 1. No OVA readings above background in breathing zone. 2. No explosimeter or radioactivity meter readings above ground in breathing zone. 3. Set 6.0 in temporary casing to 10.3 ft. 4. Reamed with 5-7/8 in. tri-cone rollerbit to 15.0 ft. and grouted 4.0 in. PVC casing. 5. Reamed with 3-7/8 in. tri-cone rollerbit from 15.0 ft. 3. St 6.0 in temporary casing. 5. Reamed with 3-7/8 in. tri-cone rollerbit from 15.0 ft. 5. Reamed with 3-7/8 in. tri-cone rollerbit from 15.0 f		BLOWS	BLOWS	NUMBER &	DEPTH	CHANGE	VISUAL CLASS	IFICATION AN	D REMARKS		
Auger Refusal at 10.3 ft. Apparent Top of Competent Rock at 10.3 ft. Apparent Top of Competent Rock at 10.3 ft. Notes: 1. No OVA readings above background in breathing zone. 2. No explosimeter or radioactivity meter readings above ground in breathing zone. 3. Set 6.0 in temporary casing to 10.3 ft. 4. Reamed with 5-7/8 in. tri-cone rollerbit to 15.0 ft. and grouted 4.0 in. PVC casing. 5. Reamed with 3-7/8 in. tri-cone rollerbit from 15.0 ft. 31.0 ft. 6. Installed monitoring well in borehole, see Groundwater Monitoring Well Report. DATE TIME ELAPSED TIME (HR) BOTTOM DEPTH (FT) TO: 0 Open End Rod T Thin Wall Tube 0 Open End Rod T Thin Wall Tube 0 U Undisturbed Sample 0 U Undisturbed Sample							Advanced augers to 10.3 ft	. without sp	lit spoon sampling.		
-15 - 1. No OVA readings above background in breathing zone. - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	10 						Auger Re Apparent Top of (fusal at 10. Competent Ro	3 ft. ck at 10.3 ft.		
 No OVA Feadings above background in breathing zone. No explosimeter or radioactivity meter readings above ground in breathing zone. No explosimeter or radioactivity meter readings above ground in breathing zone. Set 6.0 in temporary casing to 10.3 ft. Reamed with 5-7/8 in. tri-cone rollerbit to 15.0 ft. and grouted 4.0 in. PVC casing. Reamed with 3-7/8 in. tri-cone rollerbit from 15.0 ft. 31.0 ft. Installed monitoring well in borehole, see Groundwater Monitoring Well Report. MATER LEVEL DATA MATER LEVEL DATA DATE TIME ELAPSED TIME (HR) DEPTH (FT) TO: DEPTH (FT) TO: O Open End Rod T Thin Wall Tube U Undisturbed Sample 	 15										
ground in breathing zone. 							2. No explosimeter or radi	ioactivity m			
-20 -20 4. Reamed with 5-7/8 in. tri-cone rollerbit to 15.0 ft. and grouted 4.0 in. PVC casing. -20 -20 5. Reamed with 3-7/8 in. tri-cone rollerbit from 15.0 ft. 31.0 ft. -20 -21 -21 -20 -22 -25 -22 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -25 -26 -27 -27 -28 -27 -29 -27 -29 -27 -29 -27 -29 -27 -29 -27 -29 -27 -29 -27 -29 -27 -29 -27 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>ground in breathing zor</td><td>ne.</td><td></td></t<>							ground in breathing zor	ne.			
-20 - - 5. Reamed with 3-7/8 in. tri-cone rollerbit from 15.0 ft. 31.0 ft. - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -							4. Reamed with 5-7/8 in. 1	tri-cone rol			
6. Installed monitoring well in borehole, see Groundwater Monitoring Well Report. 6. Installed monitoring well in borehole, see Groundwater Monitoring Well Report. 6. Installed monitoring well in borehole, see Groundwater Monitoring Well Report. 5. OVERBURDEN (LIN FT): 10.3 5. O Open End Rod TIME (HR) BOTTOM BOTTOM WATER T Thin Wall Tube U Undisturbed Sample	_20						5. Reamed with 3-7/8 in. 1	-	lerbit from 15.0 ft.		
DATE TIME ELAPSED DATE TIME (HR) BOTTOM BOTTOM OF CASING OF HOLE SAMPLE IDENTIFICATION SUMMARY OVERBURDEN (LIN FT): 10.3 ROCK CORED (LIN FT):							6. Installed monitoring we Monitoring Well Report.	ell in boreho	ole, see Groundwater.		
DATE TIME ELAPSED DATE TIME (HR) BOTTOM BOTTOM OF CASING OF HOLE SAMPLE IDENTIFICATION SUMMARY OVERBURDEN (LIN FT): 10.3 ROCK CORED (LIN FT):											
DATE TIME ELAPSED TIME (HR) BOTTOM BOTTOM WATER T Thin Wall Tube U Undisturbed Sample OVERBURDEN (LIN FT):	- 25										
DATE TIME ELAPSED 0 Open End Rod TIME (HR) BOTTOM BOTTOM WATER T Thin Wall Tube ROCK CORED (LIN FT): OF CASING OF HOLE U Undisturbed Sample		۱	WATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY		
TIME (HR) BOTTOM BOTTOM WATER T Thin Wall Tube ROCK CORED (LIN FT): OF CASING OF HOLE U Undisturbed Sample	DATE	TIME			H (FT) TO:		- O Open End Rod T Thin Wall Tube ROCK CORED (LIN FT) U Undisturbed Sample	(LIN FT): 10.3			
S Split Spoon SAMPLES:			TIME (HR)			WATER		(LIN FT):			
						<u>.</u>		SAMPLES:	•••		

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Co	pnsulting	YORK, ROCHES Geotechnica ts and Hydro	al Enginee	rs,		TEST BORING REPORT	BORING NO. MW-15D				
PROJECT: CLIENT: CONTRACT	CIT	MER EMERSON Y OF ROCHEST HNAGLE DRILL	ER	NDFILL MODI	IFIED REM	D REMEDIAL INVESTIGATION FILE NO. 70352-40 SHEET NO. 1 OF 2 LOCATION: MONFOR					
I	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	CEDURES Facility (See Plan) ELEVATION: 532.87				
TYPE INSIDE D HAMMER W HAMMER F	ÆIGHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30	NX 2-1/8 	RIG TYPE: CME-75, Truck-1 BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to	S. Augers START: 2 June 1993 FINISH: 4 June 1993				
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AND REMARKS				
						Augered through asphalt.					
		7 20 18	S1 15"/24"	1.0	2.0	Mediume dense brown gravel damp.	ly coarse to fine SAND, trace coal, -FILL-				
 		14 10 7	s2	3.0		Dense gray GRAVEL, little d Medium dense brown coarse t	coarse to fine sand, dry. to fine SAND, little gravel, damp.				
5		6	6"/24"	5.0		Medium dense brown coarse t	to fine SAND, little gravel, damp.				
		7 16 8	s3 8"/24"	5.0	6.8	Medium dense brown coarse sandy GRAVEL, some silt, damp. -FILL-					
		2 1				Loose red-brown fine SAND, trace coarse sand, trace silt, damp.					
		2 8	20"/24"	9.0	8.5		-FLUVIAL-				
— — — 10 —		11 100/.2	\$5 2"/2"	9.0		Hard, highly weathered, gray, fine-grained, DOLOSTONE. dampLOCKPORT FORMATION-					
			L			Auger Refusal at 10.1 ft. Apparent Top of Competent Rock at 10.1 ft.					
						Notes:					
						 OVA readings from sample screening noted as follows: S1 = 0 ppm 					
— 15 —						 S1 = 0 ppm S2 = 0 ppm S3 = 0 ppm S4 = 0 ppm S5 = 0 ppm No OVA readings above background in breathing zone. 2. No explosimeter or radioactivity meter readings above background from sample screening or in breathing zone.					
						3. See Core Boring Report,	page 2.				
20						 Installed monitoring we Monitoring Well Report. 	ell in borehole, See Groundwater				
25											
	<u> </u>	JATER LEVEL I	DATA			SAMPLE IDENTIFICATION	SUMMARY				
			DEPT	H (FT) TO:			OVERBURDEN (LIN FT): 10,1				
DATE	TIME (HR) BO	BOTTOM BOTTOM		WATER	0 Open End Rod T Thin Wall Tube	ROCK CORED (LIN FT): 30.0					
			OF CASING	OF HOLE	<u></u>	U Undisturbed Sample S Split Spoon	SAMPLES: 5S				
							BORING NO. MW-15D				

	A OF NEW Y Consulting G Geologists	eotechnical and Hydrog	Enginee	ers,			CORE BORING REPORT	BORING NO. MW-150 FILE NO. 70352- SHEET NO. 2 OF 2
DEPTH	DRILLING RATE	CORE NO.	RECOVERY/RQD		WEATH ERING		VISUAL CLASSIFICATION AND REMARKS	
(FT)	(MIN./FT.)	DEPTH(FT)	IN.	*		(FT)		· · · · · · · · · · · · · · · · · · ·
	2	10.3					Began Coring at 10.3 ft.	
	2				MOD		Hard, light to medium gray, fi	ne-grained thin-bedd
	2						DOLOSTONE, very thinly color-b Secondary gypsum seams in clos	panded. Trace pits, vu wely spaced partings.
	2	R1	<u>117</u> 84	98 70				
	2						-LOCKPORT FOR	MATION-
	2						Rough, planar vertical joint f	
	2						Vug at 13.0 ft., 0.1 ft. wide.	
	2						Rough, high angle stepped join	
							Kough, high angle scepped join	
	2				SL		Secondary gypsum seams and par	tings below 17.4 ft.
-20	2	20.3						
	2	20.3			1			
	2							
	2							
	2		116	07				
	2	R2	<u>116</u> 112	<u>97</u> 93	SL			
-25 —	2					25.4		
	2						Moderately hard, light to dark dolomitic MUDSTONE, very thinl	gray, fine-grained, y color-banded. Trace
	2						and vugs throughout. Closely horizontal argillaceous partin	
	2							-
	2							
-30	2	30.3					-ROCHESTER	FORMATION-
	2	30.3						
	2							
	2							
-35 —	2	R3	<u>123</u> 117	<u>103</u> 95*	SL		* RQD based on rock core recov	ered.
	2							
	2							
	2							
	2							
	2							
-40		40.3						
							Bottom of Boring	at 40.3 ft.
							Notes:	
							1. Lost 2,950 gallons of wate	r during coring and r
- 4							process.	- ··• -··• ·
-45							1	

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H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists				TEST BORING REPORT	BORING NO. MW-19			
PROJECT CLIENT: CONTRAC	CI	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	NDFILL MOD	IFIED REM	MEDIAL INVESTIGATION FILE NO. 703 SHEET NO. 1 O LOCATION:		
ITEM		CASING	DRIVE SAMPLER		DRILLING EQUIPMENT & PRO		Browning-Ferris Ind. (See Plan) ELEVATION: 530.97	
HAMMER	YPE NSIDE DIAMETER (IN) AMMER WEIGHT (LB) AMMER FALL (IN)		Auger 4-1/4 	S 1-3/8 140 30	NX 2-1/8 	RIG TYPE: CME-75, Truck-M BIT TYPE: 4-1/4 in. I.D. DRILL MUD: OTHER: Advanced augers	H.S. Augers	DATUM: NGVD START: 24 May 1993 FINISH: 26 May 1993 DRILLER: S. Loranty H&A REP: J. Marschner
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	D REMARKS
		2 9 16 2	\$1 15"/24" \$2	0.0 2.0 2.0	1.5	Medium dense brown silty fine SAND, little gravel, little coarse sand, dryFILL- Medium dense black ASH, with glass, metal slag, dry.		
 		4 4 1 1	15"/24"	4.0 4.0	4.0 0 6.0 0 8.0		olack and gray ASH with glass, moist. ose dark gray ASH with silt, trace fine sand, roots, ragments. -FILL- dense gray fine sandy GRAVEL, some silt, damp. -GLACIAL TILL- mse gray sandy GRAVEL, wet. -GLACIAL TILL-	
· _		1 5 10 15	8"/24" \$4 6"/24"	6.0		Medium dense gray fine san		
- 10		34 12 25 36 38	\$5 18"/24"	8.0 10.0		Very dense gray sandy GRAV		
• _		22 35 100/.5	5 56 10.0 12"/18" 11.5	11.5	Hard, highly weathered, gray-brown, fine-grained DOLOSTONE. -LOCKPORT FORMATION- Auger Refusal At 11.5 ft. Apparent Top of Competent Rock at 11.5 ft.			
 - 15 						Apparent Top of (Notes: 1. OVA readings from sampl S1 = 40 ppm (5 ppm meth S2 = 250 ppm (140 ppm m S3 = 400 ppm (10 ppm m S4 = 120 ppm (30 ppm me S5 = 100 ppm (30 ppm me S6 = 100 ppm (30 ppm me No OVA readings above b	le screening hane) methane) ethane) ethane) ethane) ethane)	noted as follows:
-20 —						 No explosimeter or radi background from sample See Core Boring Report, 	ioactivity me screening or	eter readings above
-						 Installed monitoring we Monitoring Well Report. 	ell in boreho	ole, see Groundwater
-25						· · · ·		
	<u>ا</u>	ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED TIME (HR)	DEPT	TH (FT) TO:	WATER	0 Open End Rod		
/24/93	1045		OF CASING			T Thin Wall Tube U Undisturbed Sample S Split Spoon	ROCK CORED	(LIN FT): 10.0 6S
				11.J ft.	4.5 ft.		BORING NO.	MW-19

H & A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists						CORE BORING REPORT BORING NO. MW-19 FILE NO. 70352-46 SHEET NO. 2 OF 2				
DEPTH DRILLING RATE		CORE NO.	RECOVER	RY/RQD	WEATH- ERING	STRATA CHANGE	VISUAL CLASSIFICATION AND REMARKS			
(FT)	(MIN./FT.)	DEPTH(FT)	IN.	*		(FT)				
							Began Coring at	11.5 ft.		
	5	11.5	5	83		-	Hard, slightly weathered, gray-			
	5	R1 12.0	<u>5</u> 5	<u>83</u> 83			DOLOSTONE. Trace pits and style	olites.		
	7	12.0			4		-LOCKPORT FORM	ATION-		
- 15 -	4									
	5	114		114 100	SL	si	Smooth, low angle, undulating joints at 12.6, 12.7 and 16.3 ft.			
	7	R2	<u>114</u> 94	82			Rough, low angle, undulating jo	int at 20.0 ft.		
	5						Horizontal partings at 12.2, 14.0, 15.1 and 19.3 ft.			
	6						Smooth, planar, low angle joint at 16.1 ft. Smooth, planar, high angle joint at 18.6 ft.			
 -20 —	5						Vugs at 18.1 ft.	ι αι 10.0 Τι.		
	4	21.5								
	2	21.5								
							Bottom of Exploration	n at 21.5 ft.		
			•							
-25										
-30 —										
-35 —										
• -										
· -										
·										
40										
_										
, Τ										
45 —										

Project No.	<u>2-1407</u>		Page <u>1</u>	_ of _1	Test Pit No.	L-I
Project Nan	ne <u>Outer I</u>	.oop Industr	ial Park, Lot No. 38	Emerson Street, R	ochester, New Yorl	<u> </u>
Client	<u>The Se</u>	<u>ar-Brown G</u>	roup, 85 Metro Park	, Rochester, New Y	ork	
Elevation	<u>539.2</u>		Weather	Cloudy, 30°	Inspector	J. J. etroand
Date Starte	China and China		Completed		Operator	Edd A
Backhoe Su	bcontractor	The N	lichols Team	Equipment	Kato 4D 700	
Devel			T			
Depth Below	Samula	Depth		Soil and Roc	k Classifications	A 14.
Surface	Sample Number	of Sample				
- Carrace		Sautine	ORGANIC MAT		marks	
					ottled FILL - 90% c	0'3"
			10% glass, scrap	metal, wire, brick &	comples	anders & asn,
1				,, .		
2						
			÷			
			TOPSOIL			3′2″
4			1010012			3'10"
						5 10 "
			Firm yellow brow	n moist SILT, some	e sand	
6						5'10"
			Compact light bro	wm moist SΠ T con	me sand, little grave	1.6
			compact ngin oro	wit moist 5121, 501	ne sand, intie grave	I, IEW CODDIES
					Ň	
8			-			
				-		
10						
10	Í					
,						
	·					10'10"
			Refusal on bedrock	k at 10'10"		
12						
			Notos			
			Notes: 1. Sides vertical a	nd stabl-		
			 Sides vertical a Dry on complet 			
			3. Elevations prov	ion rided by The Sear-E	Brown Grown Tra-	
14				nucu by The Seaf-E	nown Group, Inc.	
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Project No.	<u>2-1407</u>		Page _1 of _1	Test Pit No.	L-2
Project Nan	ne <u>Outer I</u>	oop Industr	al Park, Lot No. 38, Emerson St	reet, Rochester, New Yorl	
Client	The Sea	ar-Brown G	oup, 85 Metro Park, Rochester, 1	New York	A AN
Elevation	<u>540.3</u>		Weather Cloudy, 30°	Inspector	J. Netzoatte
Date Starte			Completed <u>4/7/95</u>	Operator	Todd
Backhoe Su	bcontractor	The N	chols Team Equipm	ient Kato 4D 700	
Depth		Depth	Soil an	d Rock Classifications	
Below	Sample	of			
Surface	Number	Sample		Remarks	
			Firm black moist ASH & CINI	DER FILL, trace glass, sci	rap metal
			TOPSOIL		0'11"
2			IOFSOIL	•	
2			· · · · · · · · · · · · · · · · · · ·		1'10"
			Firm yellow brown moist SILT	some sand little gravel	few cobbles
	•		,	, senne bund, mule Bruver,	iew coopies
ſ					
					[
4					
		**************************************			-
					1
			Compact below 5'0"		
	1				
6					
		· · · · · · · · · · · · · · · · · · ·	•		
				λ.	
8					
			-		
]					
10					
J					
12			Pofuel on hodroals of 11/4"		11'4"
			Refusal on bedrock at 11'4"		
			Notes:		
			1. Sides vertical and stable		
			2. Dry on completion		
			3. Elevations provided by The	Sear-Brown Group Inc	
14					

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Project No.	<u>2-1407</u>	7.1	Page <u>1</u> of <u>1</u> Test Pit No. <u>L-3</u>	
Project Nai	me <u>Outer</u>	Loop Industr	ial Park, Lot No. 38, Emerson Street, Rochester, New York	
Client	The Se	ar-Brown G	roup, 85 Metro Park, Rochester, New York	
Elevation	<u>538.7</u>		Weather Cloudy, 30° Inspector J. Jetz	nt
Date Starte			Completed <u>4/6/95</u> Operator Total	
Backhoe Su	ibcontractor	r <u>The N</u>	lichols Team Equipment Kato 4D 700	
				
Depth		Depth	Soil and Rock Classifications	
Below	Sample	of		
Surface	Number	Sample	Remarks	
			ASPHALT	0'3″
			Firm brown orange and black mottled FILL - 95% ash & cinders,	
			5% glass & tires	
2				Í
				2'6"
			Firm dark brown TOPSOIL	
4				
			Firm light brown to grow maint OUT	4'3"
			Firm light brown to grey moist SILT, some sand	
6			Compact below 6'0"	
		-		
			24" diameter boulder at 7'0"	
8				
			Dense below 9'0"	· · ·
10				
 				
				-
	,			
12				
14				12'2"
			Refusal on bedrock at 12'2"	
			Notes:	
	Ì		1. Sides near vertical	
			2. Dry on completion	
14			3. Elevations provided by The Sear-Brown Group, Inc.	
			- Freedow of the bound brown Group, mg.	

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Project No.		7.1	Page <u>1</u>	of	Test Pit No.	L-4	
Project Na		Loop Indust	rial Park, Lot No. 3	8, Emerson Street, R	lochester New Yor	<u>k</u>	
Client Elevation	<u>The Sector 539.1</u>	ear-Brown G	iroup, 85 Metro Par	k, Rochester, New Y	ork		
Date Starte			Weather Completed	Cloudy, 30°	Inspector	L Retrand	
	ubcontracto		Nichols Team	<u>4///95</u> Equipment	Operator Kate 4D 700	The state	<u> </u>
			didiois I duni	Eduihment	Kato 4D 700		A .
Depth		Depth		Soil and Roc	k Classifications		
Below	Sample	of			- Classifications		<u>ገ</u> ብዮ ' እ
Surface	Number	Sample		Re	marks		
			Black damp ASH	I & CINDERS, little	glass		
2			TOPSOIL				_1′5″ 1′10″
							1 10
			Firm yellow brow	vn moist SILT, some	e sand, little gravel,	few cobbles,	
			few boulders to 2	4" diameter			
4							
		· .					
6							
			1				
					١		
8							
				-			
10							
			•				
							-
	,						
12							
14						_	
			<u></u>]	4′0″

Project No.			Page 1		Test Pit No.	L-5	
Project Nan Client	The Se	2000 Industr ar-Brown G	ial Park, Lot No. 38 roup, 85 Metro Park	Emerson Street, R	ochester, New Yorl	<u> </u>	
Elevation	110 00		Weather	Cloudy, 30°	Inspector	Levezband	
Date Starte		······································	Completed		Operator	ode a	
Backhoe Su	bcontractor	The N	lichols Team	Equipment	Kato 4D 700		•
	1		r				
Depth Below	Sample	Depth of		Soil and Rocl	k Classifications		\mathbf{X}
Surface	Number	Sample		De	marks	. 4	₹
			Black ASH & CIN				
						1′()″
2			GLASS & BOTT	LES			
2					·····	2′0	D″
			TOPSOIL				
	•						
						3′0)″
4			Firm yellow brown	n moist SILT, some	sand, trace gravel		
-				•			· ·
6							
					*		
			Few cobbles & bou	Iders below 7'0"			
8							
				-			
10							
10				-			
							[
		,	Defendant to the			10′7	"
			Refusal on bedrock	k at 10'7"			
12							
			Notes:				
			1. Sides vertical a				
			2. Dry on complet	10n idad by The Seer D			
14			5. Elevations prov	ided by The Sear-B	frown Group, Inc.		

Project No.	2-1407		Page <u>1</u>	_ of _1	Test Pit No.	L-6
Project Nan		.00p Industr	ial Park, Lot No. 38	, Emerson Stree	t, Rochester, New York	
Client	The Se	ar-Brown G	roup, 85 Metro Parl	, Rochester, Nev	w York	A
Elevation	<u>539.4</u>		Weather	Cloudy, 30°	Inspector	J. Net Dani
Date Starte	the second se		Completed		Operator	Tod
Backhoe Su	bcontractor	The N	lichols Team	Equipmen	t Kato 4D 700	
Depth		Depth		Soil and F	Rock Classifications	
Below	Sample	of				
Surface	Number	Sample			Remarks	
			TOPSOIL, trace	organic		0'3"
			Pirm black, orang	ge brown moist F	TLL - 80% cinders & a	sh, 20% glass,
			wood, scrap meta	ii, possible asbesi	los	
2						
-						
4						
-						
6						5'8"
			Firm over harm	maint OT TO		
			Firm grey brown	moist SiL1, som	e sand	
	1					
8						
Ŭ					-	
10						9′9″
				•		
			Refusal on bedroc	k at 9'9"		
		5		-		
10						
12						1
			Notes:			
			1. Sides near vert	ical		
			 Slight seepage 			
			2. Singitt scepage	al J 0' vided by The Car	r-Brown Group, Inc.	
14			5. Lievations prov	vided by The Sea	u-brown Group, Inc.	

Project No.	<u>2-1407</u>		Page 1	_ of	Test Pit No.	L-7	
Project Nan	ne <u>Outer I</u>	Loop Industr	ial Park, Lot No. 38	Emerson Street, I	Rochester, New Yor	k	
Client	The Se	<u>ar-Brown G</u>	roup, 85 Metro Park	, Rochester, New	York	······	
Elevation	<u>538.9</u>	·····	Weather	Cloudy, 30°	Inspector	J. New Dand	_
Date Started			Completed		Operator	Total A	
Backhoe Sul	bcontractor	The N	lichols Team	Equipment	Kato 4D 700		
Denth			T				
Depth Below	Sample	Depth of		Soil and Ro	ck Classifications		
Surface	Number	Sample					11 2
		Galillare	Firm orange brow	m black grey maig	emarks t FILL - 75% cinder		9 🖌
			brick glass scran	metal, rubber stra	rill = 75% cinger	s & asn, 25%	
			, 8, torup		ps, wood		
2							
							· ·
4							
						,	Ì
							· ·
6							
						•	
			Firm grey moist S	II.T. some sand		7'1"	
8			8-07	ior, some sand			
J					-		
10							1
10							
							1
				•			
			•				
							1
12							
-							
14							
14							

Project No.	<u>2-1407</u>	.1	Page <u>1</u>	_ of _1	Test Pit No.	L-8
Project Nai	me Outer I	Loop Industr	ial Park, Lot No. 38	B. Emerson Street	Rochester, New Yorl	<u>L-0</u>
Client	The Se	ar-Brown G	roup, 85 Metro Park	, Rochester, New	v York	· /
Elevation	<u>537.4</u>		Weather	Cloudy, 30°	Inspector	I Newband
Date Starte			Completed		Operator	TAA
Backhoe Su	ubcontractor	The N	lichols Team	Equipment		
						
Depth		Depth		Soil and R	ock Classifications	
Below	Sample	of				
Surface	Number	Sample			Remarks	
			ORGANIC MAT			0'2"
			Firm black orang	e brown moist FI	LL - 75% cinders & a	sh, 25% glass,
			scrap metal, rock	slabs, wood, pip	es, paint	
2						
4						
			7 . 11 1			5′6″
6			Firm yellow brow	n moist SILT, so	me sand	
						•
					•	
8						7'10"
						/ 10
			Refusal on bedroc	k at 7'10"		
10						
}					•	
			7			
12						
			Notes:			
			1. Sides sloughed	above 5'6"		
			2. Water flowing		lon/minute	
			Odor noted			
14				vided by The Sean	-Brown Group, Inc.	
		ł		, ,		1

Project No.			Page 1	_ of _1	Test Pit No.	L-9
Project Na		.oop Industr	rial Park, Lot No. 38	Emerson Street	Rochester, New Yor	k
Client	The Se	ar-Brown G	roup, 85 Metro Park	, Rochester, New	York	
Elevation	<u>538.9</u>		Weather	Cloudy, 30°	Inspector	J. Nazhand
Date Starte			Completed	4/6/95	Operator	Tids
Backhoe Su	bcontractor	The N	lichols Team	Equipment	Kato 4D 700	
Depth		Depth		Soil and R	ock Classifications	
Below	Sample	of			one one one of the one	A C
Surface	Number	Sample			Remarks	\ / ^ ^
			ORGANIC MAT			0'3"
			Firm grey damp	ASH, trace metal,	glass, ceramics, plas	tic 🗸
2						
	· ·					
4						
						· · · ·
1						4'8"
			Firm black wet FI	LL - ash, wood, c	obbles, boulders, glas	s, scrap metal
6						
						•
8						
10						
					•	
			Refusal on bedrock	c at 10/1"	,	10'1"
				- ut av 1		
12						
			Notoe			
			Notes: 1. Sides caved bel	ow 6'0"		
			2. Water level at 6			
	ľ				-Brown Group, Inc.	
14			PIO	- of the beat	-Diowii Oloup, Ilic.	

Project No.		.1	Page 1 of 1 Test Pit No. L-10
Project Nar		.oop Industr	rial Park, Lot No. 38, Emerson Street, Rochester, New York
Client	The Se	ar-Brown G	roup, 85 Metro Park, Rochester, New York
Elevation	<u>538.8</u>		Weather <u>Cloudy, 30°</u> Inspector Letrand
Date Starte			Completed 4/6/95 Operator Tool 31
Backhoe Su	bcontractor	The N	Nichols Team Equipment Kato 4D 700
Depth	1	Donth	
Below	Sample	Depth of	Soil and Rock Classifications
Surface	Number	Sample	Banada
			Remarks Firm brown CINDER & ASH FILL with glass
			the second se
2			
			۹ ا
			Firm grey ASH FILL 2'5"
			4'3"
			Firm black FILL - 40% wood, bottles, scrap metal, bed springs plastic
4			bag, blasted rock fragments, 60% ash & cinders
			4 1
í í			
6			
			· · · · · · · · · · · · · · · · · · ·
8			
			· · · · ·
10			
			9'10"
			Test pit terminated at 9'10"
12			
14			
			Notes:
			1. Sides caved below 4'3"
			2. Water level constant at 6'2"
		l	3. Elevations provided by The Sear-Brown Group, Inc.
14			

Ą.

Project No			Page <u>1</u>	_ of _1	Test Pit No.	<u>L-11</u>
Project Na		Loop Indust	rial Park, Lot No. 38	Emerson Street,	Rochecter Man Von	k
Client Elevation	The Se	<u>ar-Brown G</u>	roup, 85 Metro Park	<u>, Rochester, New </u>	York	
Date Start	ed <u>540.2</u>		Weather	Cloudy, 30°	Inspector	J. Netzband
	ubcontractor		Completed Nichols Team		Operator	Todd
		<u>Inc</u> I	actions realit	Equipment	Kato 4D 700	
Depth		Depth		Soil and Po	ck Classifications	
Below	Sample	of		Son and Ro	ck Classifications	
Surface	Number	Sample		R	emarks	
			ORGANIC MAT			
			Firm orange brow	n to black mottled	CINDERS & ASH	FILL with glass
			brick & plastic			
2						
						2'4"
			Firm black FILL -	50% ash & cinde	rs, 50% wood, bed s	prings, pipe, brick.
			scrap metal, glass	, cobbles, boulders		
4						
					,	
6						
Ì						
8						
10						
					•	
			Refusal on bedrock	at 10/8"		10'8″
			- WANDER OIL COULOUR	at 10 0		
12						
			Notes:			
			1. Sides caved belo			
			2. Water level cons	stant at 8'0"		
14			3. Elevations provi	ued by The Sear-E	srown Group, Inc.	

Project No.			Page 1	_ of _1	Test Pit No.	L-12
Project Nar		Joop Industr	rial Park, Lot No. 38	Emerson Street	Ochester New Yorl	, <u>L-12</u>
Client	<u>The Se</u>	ar-Brown G	roup, 85 Metro Park	Rochester, New Y	ork	
Elevation	<u>537,9</u>		Weather	Cloudy, 30°	Inspector	J. Netzband
Date Starte			Completed		Operator	Todd
Backhoe Su	bcontractor	The N	lichols Team	Equipment	Kato 4D 700	
Depth	1	Denth				
Below	Sample	Depth of		Soil and Roc	k Classifications	
Surface	Number	Sample		n		` I K
			Firm brown black	k and grey down A	marks SH & CINDER FIL	<
			trace brick, trace	scran metal	SH & CINDER FIL	L, trace glass,
				see an		
I .						
2						
			Firm black to gree	moist EILI 650/	ACIT & OD TOTO	3'0"
4			metal, glass, wood	1 1101St FILL - 05%	ASH & CINDERS,	35% scrap
-			, g-ubb, 11000	•		· ·
1						5'0"
			Firm black saturat	ed WOOD, (branch	nes & lumber), trace	tile pipe
6					<i>,,</i>	
					,	
8						
						-
10						10′0″
· · · · · · · · · · · · · · · · · · ·			Firm grey moist SI	TT come cond	-	
			T IIII grey moist Si	LI, Some Sand		
				3		
						11/0/
12			Test pit terminated	at 11'8"		11′8″
			-			
			Notes:			
		1	1. Sides caved bad	ly below 3'0"		l
			2. Odor noted from	n 3 to 5 feet; 0.2 pp	om on HNu meter	
14			3. Possible bedrock	k at bottom of hole.	too much water in 1	ole to be certain.
14			4. Elevations provi	ided by The Sear-Bi	rown Group, Inc.	
						1

Project No.			Page <u>1</u>	of _1	Test Pit No.	L-13
Project Nar		Loop Industr	rial Park, Lot No. 38,	Emerson Street, R	ochester New Vor	k A
Client	<u>Ine Se</u>	ar-Brown G	roup, 85 Metro Park,	Rochester, New Y	ork	A An
Elevation Date Starte	<u>539.5</u>			Cloudy, 30°	Inspector	J. Netzozati
	d <u>4/6/95</u> ibcontractor		Completed 4		Operator	Todd
DACKINC DU	inconti actor	<u>The N</u>	lichols Team	Equipment	Kato 4D 700	
Depth	T	Depth	1	Soll and Deal	<u> </u>	
Below	Sample	of		Soli and Koci	k Classifications	1
Surface	Number	Sample		Rei	marks	· · ·
			Firm orange brown	, black & grey mo	ttled FILL - 85% c	inders & ash
			15% glass, scrap m	etal & plastic		
2						
L						
			1			
	•					
<u>,</u>						
4	-					
					· · ·	
			Firm grey to black	wet FILL - 70% cit	nders & ash 30%	4'9"
			metal, wood, plastic	, rubber tires, bric	k	Slass, selap
6						
8						
10						10'0"
			Firm yellow brown	moist SILT, some	sand	
				3		
12		1				
			·····			12'7"
			Refusal on bedrock a	at 12'7"		
	ł		Notes:			
			1. Sides caved below			
			2. Water level at 8'4	" on completion		
14			3. Odor noted - Hnu	reading 0.9 ppm	from 5 to 10 feet	
<u>.</u>			4. Elevations provid	led by The Sear-Br	own Group Inc	

Project No.			Page <u>1</u> of <u>1</u>	Test Pit No. <u>L-14</u>
Project Na		Loop Indust	rial Park, Lot No. 38, Emerson Stree	L Rochester, New York
Client	The S	ear-Brown G	iroup, 85 Metro Park, Rochester, New	w York
Elevation Date Starte	<u>540.1</u>	,	Weather <u>Cloudy</u> , 30°	Inspector J. Jetzand
Backhoe Starte	All states and states		Completed <u>4/6/95</u>	Operator Solution
Dackilde Si	IDCONTRACTO	r <u>Iner</u>	Nichols Team Equipmen	t Kato 4D 700
Depth	_	Depth	Soil and I	Rock Classifications
Below	Sample	of		
Surface	Number	Sample		Remarks
			ORGANIC MAT	0'3"
			glass	& grey mottled ASH FILL - trace
·			6	
2				
			4	
4				4'0"
			Firm black moist FILL - 60% ash	& cinders, 40% wood, floor tile, pipe,
			scrap metal	
6				·
8				
				8'1"
			Firm grey moist SILT, some sand	
10				
10				
10			Refusal on bedrock at 11'1"	
12				
			Notes:	
			1. Sides vertical and not stable	
			2. Slight seepage at 8'1"	
			3. Elevations provided by The Sea	r-Brown Group, Inc.
14				P ,

Project No.			Page 1	of1	Test Pit No.	L-15
Project Nai	me <u>Outer l</u>	Loop Industr	rial Park, Lot No. 31	8. Emerson Street, R	ochester New York	
Client	<u>Ine Se</u>	ar-Brown G	roup, 85 Metro Parl	k, Rochester, New Y	ork	
Elevation	<u>538.7</u>		Weather	Cloudy, 30°	Inspector	. butzhand
Date Starte			Completed	4/6/95	Operator	Telde a
Backhoe Su	ibcontractor	<u>The N</u>	lichols Team	Equipment	Kato 4D 700	
Depth		Depth	T	Soil and Rock	k Classifications	
Below	Sample	of			a Classifications	
Surface	Number	Sample		Rei	marks	▼
			Firm ASH & CI	NDER FILL, trace w	ood, trace brick	
2						
			[
4						
		-				
			lumber pocket at	5/211		
6			runnoer poeket at	55		
						6′1″
			TOPSOIL with be	ent over brush		
						7'0"
8			Firm grey wet SII	.T, some sand, few c	xobbles & boulders	to 36" diameter
•						
10				· · · · · · · · · · · · · · · · · · ·		9'8"
			D.6	1		· ·
			Refusal on bedroc	k at 9'8"		
					•	1
12						
			Notes:			
			1. Sides vertical,	not stable		
			2. Slight seepage	at 6'1"		
14			3. Elevations prov	vided by The Sear-Bi	rown Group, Inc.	
14						

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Project No. Project Nar		.1	Page <u>1</u> of <u>1</u> rial Park, Lot No. 38, Emerson Street, R	Test Pit No.	<u>L-16</u>
Client	The Se	ar-Brown G	roup, 85 Metro Park, Rochester, New Y	ochester, New Yorl	<u>K</u>
Elevation	540.1		Weather <u>Cloudy</u> , 30°	Inspector	
Date Starte			Completed <u>4/6/95</u>	Operator	Neu Dane.
	bcontractor		Nichols Team Equipment	-	I Data Maria
			Equipment	Kato 4D 700	
Depth		Depth	Soil and Rock	k Classifications	
Below	Sample	of		a Classifications	
Surface	Number	Sample	Re	marks	
			Compact dark brown damp blasted R	OCK FRAGMENT	S
			-	··- -	-
2					
			· ·		
		:			2'7"
			Firm orange brown grey black mottle	d damp CINDER &	ASH FILL, trace
4			blasted rock fragments & glass		
					-
6					
				•	
8					
					8'9"
			Firm grey moist SILT, some sand		
10					
					,
12			Refusal on bedrock at 11'5"		11′5″
			Transar on ochock at 11 3"		
			Notes:		
			1. Sides caved below 5'0"		
			2. Water flowing at 8'9" about 25 to 5	0 milon/minute	
			3. Elevations provided by The Sear-Br	v ganouvininute	
14			provided by The Stat-Di	town Group, Inc.	
-					

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	Consul	ting Geo	otechnical	TER, NEW YORK L Engineers, geologists	TEST	PIT REPORT	FILE	NO. 7035	2-44
PROJE				STREET LANDFILL FILL V		st	LOCAT		treet
LOCAT CLIEN CONTR	ION:	ROCHEST CITY OF NOTHNAG	TER, NEW Y F ROCHESTE GLE DRILLI	YORK ER	LENT CATION/DELI		ELEVA	TION: MATION: MATION DATE: MEP.: M. Corr	9 Dec. 1
SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA		DESCRIPTION OF M	ATERIALS		REMAI	RKS
				Brown fine SAND, lit layer from 0.9 ft. t	tle silt, very f	ew cobbles, with	a gray clayey	No OVA or rad meter reading	
			1.1		-FILL-			background.	
			1.5	Same, trace plastic,	paper, wood, di -FILL-	spersed through t	fill.		
-2	-		2.0	Highly weathered, g	aray DOLOMITE.	-LOCKPORT FORMATI	ON -		
	-			Moderately weathered	d, gray, fine gra	ined DOLOMITE.			
-4					-LOCKPORT FORM	ATION-			
			4.5		ottom of Test Pit	at / 5 ft			
	4			Bo	CCOM OT LEST PIT	al 4.J Tl.			
-6 —									
-8 —									
	-								
-10 -									
-12	-								
	WATI	ER LEVEL	1	APPRO	XIMATE PIT DIMEN	SIONS AT SURFACE		SUMM	ARY
DAT	Έ	TIME*	DEPTH FT	LENGTH 6 fee	t	WIDTH 3	feet	DEPTH:	4.5 ft.
					BOULDE	PC	······································	JAR SAMPLES: BAG SAMPLES:	••••
				8" to 18" DIAM		= Vol.	cu ft	WATER LEVEL:	
		r comple	ted	Over 18" DIAM		= Vol.	cu ft	TEST PIT NO.	

	Consi	ulting Ge	otechnica	ER, NEW YORK Engineers, TEST PIT REPORT eologists	TEST FILE	PIT NO. TP-2 NO. 70352-44
	ION: T: ACTOR:	ROCHES CITY O	TER, NEW Y F ROCHESTI GLE DRILLI	R	ELEVA	TION: W. Street ATION: DRATION DATE: 9 Dec. 1992 REP.: M. Corrigan
SCALE IN FEET	SAMPLI NUMBEI		STRATA	DESCRIPTION OF MATERIALS		REMARKS
				Brown and black silty fine SAND, moist.		No OVA or radiation meter readings above
			1.0	-FILL-		background.
				Same, trace plastic, paper and metal (cans) from 1.0 ft. 2.0 ft. dispersed through fill.	to	
-2			2.0	-FILL-		
				Brown and black silty fine SAND, little gravel, trace gr moist.	ay clay,	
	-					
-6 —						
				-FILL OR DISTURBED NATURAL MATERIALS-		
-8			8.0 8.5	Highly weathered, gray DOLOMITELOCKPORT FORMATION-		Water level in test pit
				Apparent Top of Competent Bedrock and Bottom of Test Pit at 8.5 ft.		at 8.5 ft.*
-10 -						
- 12 —						
						* - See Note #3 on Subsurface Exploration Key.
	WA	TER LEVEL	<u>I.</u>	APPROXIMATE PIT DIMENSIONS AT SURFACE	<u> </u>	SUMMARY
DAT	E	TIME*	DEPTH FT	- LENGTH 8 feet WIDTH 3.5 fe	et	DEPTH: 8.5 ft. JAR SAMPLES:
			•	BOULDERS		BAG SAMPLES:
				8" to 18" DIAMETER: No. = Vol. c	u ft	WATER LEVEL: 8.5 ft.*
* H	rs aft	er comple	ted	Over 18" DIAMETER: No. = Vol. c	u ft	TEST PIT NO. TP-2

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	Consu	lting Ge	RK, ROCHES eotechnica and Hydro	TER, NEW YORK Engineers, geologists	TEST PIT REPOR	Т	T PIT NO. TP-3 E NO. 70352-44
	ION:	ROCHES CITY C NOTHNA	STER, NEW Y DF ROCHESTI AGLE DRILL:	YORK ER ING			ATION: W. Street VATION: LORATION DATE: 9 Dec. 199 REP.: M. Corrigan
SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA	D	ESCRIPTION OF MATERIALS		REMARKS
				Brown coarse to fine from 1.0 ft. to 1.5 f north end of the test	sandy GRAVEL, trace metal, t. Concrete slab at the pit.	, wood, and concret surface at the	 No OVA or radiation meter readings above background except as noted below.
2					-FILL-		
			3.0	Gray and black mottle	d silty CLAY, trace organi	c material.	 Water seeping in at ~ 3.0 ft.*
_4							OVA reading at ~ 4.5 ft to 5.0 ft. in clay with organic material = 25 ppm.
-6					R DISTURBED NATURAL MATERI	Al -	
<u> </u>			7.0	Apr	parent Top of Bedrock and	·	Water level in test pit at 7.0 ft.*
-8							
-10							
· _							
12 —							* - See Note #3 on Subsurface Exploration
							Key.
		R LEVEL		APPROXI	MATE PIT DIMENSIONS AT SUP	RFACE	SUMMARY
DATE		IME*	DEPTH FT	LENGTH 7 feet	WIDTH	3.5 feet	DEPTH: 7.0 ft. JAR SAMPLES:
					BOULDERS	· · · · · · · · · · · · · · · · · · ·	BAG SAMPLES:
			•	8" to 18" DIAMET	ER: No. = Vol.	cu ft	WATER LEVEL: 7.0 ft.*
* Нг	s after	comple	ted	Over 18" DIAMET	ER: No. = Vol.	cu ft	TEST PIT NO. TP-3

	Consu	lting Ge	otechnica	ER, NEW YORK Engineers, peologists	TEST PIT REPORT	FILE	PIT NO. TP-4 NO. 70352-44	
PROJE	CT:	FORMER	EMERSON	TREET LANDFILL FILL VERIFICATIO	W/DELIST		TION: W. Street	
	ACTOR:	CITY O	TER, NEW F ROCHEST GLE DRILL 1400B	R		EXPLO	ELEVATION: EXPLORATION DATE: 9 Dec. 1992 H&A REP.: M. Corrigan	
IN FEET	SAMPLE NUMBER		STRATA	DESCRIPTIC	N OF MATERIALS		REMARKS	
				Gray-brown coarse to fine sand	y GRAVEL, with roots.		No OVA or radiation meter readings above	
	-		1.5	-	FILL-		background.	
-2 —				Brown silty coarse to fine SAN	D, some gravel, damp.			
-4 —								
]							
·6 —								
. <u></u>				-GLAC	IAL TILL-			
8 —			7.5	Apparent 1 and Bottom of 1	Top of Bedrock Test Pit at 7.5 ft.			
4.0								
10 —								
-								
12 —								
		RLEVEL		APPROXIMATE PIT	DIMENSIONS AT SURFACE		SUMMARY	
DATE		IME*	DEPTH FT	LENGTH 7 feet	WIDTH 3	feet	DEPTH: 7.5 ft. JAR SAMPLES:	
				B	OULDERS		BAG SAMPLES:	
				8" to 18" DIAMETER: No.	= Vol.	cu ft	WATER LEVEL: Not Encountered	
* Hr	's after	complet	ed	Over 18" DIAMETER: No.	= Vol.	cu ft	TEST PIT NO. TP-4	

	Consu	ılting Ge	otechnica	TER, NEW YORK L Engineers, geologists	TES	ST PIT REPORT		PIT NO. TP-5
	ION: T: ACTOR:	ROCHES CITY O	TER, NEW Y F ROCHESTE GLE DRILLY	ER	ERIFICATION/DEL	_1ST	ELEV	ATION: W. Street (ATION: ORATION DATE: 9 Dec. 19 REP.: M. Corrigan
SCALE IN FEET	SAMPLE NUMBER		STRATA	1	DESCRIPTION OF	MATERIALS		REMARKS
				Gray-brown coarse to	fine sandy GRA	VEL.		No OVA or radiation
			1.0		-FILL-			meter readings above background.
-2				Brown silty coarse to	o fine SAND, so	ome gravel.		
• –								
-4 —								
-6			6.5		-GLACIAL T			- Water level in test pi
				Ap Bot	pparent Top of tom of Test Pi	Bedrock and t at 6.5 ft.		at 6.5 ft.*
-8								
-10 —								
12 —								* Coo Note #7 or
-								* - See Note #3 on Subsurface Explorati Key.
	WAT	ER LEVEL	<u> </u>	APPROX	IMATE PIT DIME	NSIONS AT SURF	ACE	SUMMARY
DATI	Ξ	TIME*	DEPTH FT	LENGTH 7 feet		WIDTH	3.5 feet	DEPTH: 6.5 ft. JAR SAMPLES:
					BOULDI	ERS	tin in Albin Innehormen	BAG SAMPLES:
				8" to 18" DIAME	TER: No.	= Vol.	cu ft	WATER LEVEL: 6.5 ft.
* Hi	rs afte	r comple	ted	Over 18" DIAME	TER: No.	= Vol.	cu ft	TEST PIT NO. TP-5

Geo	lting Geo logists a	otechnica	ER, NEW YORK Engineers, TEST PIT REPORT Jeologists	FILE	PIT NO. TP-6 NO. 70352-44
PROJECT: LOCATION: CLIENT: CONTRACTOR: EQUIPMENT US	ROCHES CITY OI NOTHNA	TER, NEW F ROCHEST	R	EXPLO	TION: W. Street ATION: DRATION DATE: 10 Dec. 199 REP.: M. Corrigan
SCALE IN SAMPLE FEET NUMBER			DESCRIPTION OF MATERIALS		REMARKS
			Dark brown organic SILT, little coarse to fine sand plastic and paper from 1.0 ft. to 1.5 ft.	l, with trace	No OVA or radiation meter readings above background.
-2			-FILL-		
		2.5 3.0	Dark brown organic SILT overlying yellow-brown mott gray clayey SILTBURIED SOIL-	led tan and	Water seeping into test
-4			Brown silty coarse to fine SAND, some gravel.		pit at 3.5 ft.*
-6 —			-GLACIAL TILL-		
		7.0	Apparent Top of Bedrock		
-8 —			and Bottom of Test Pit at 7.0 ft.		
- 10					
12 -					* - See Note #3 on Subsurface Exploration
-					Key.
WA1	ER LEVEL	<u>*</u>	APPROXIMATE PIT DIMENSIONS AT SURFACE		SUMMARY
DATE	TIME*	DEPTH FT	– LENGTH 5 feet WIDTH 3	3.5 feet	DEPTH: 7.0 ft. JAR SAMPLES:
			BOULDERS		BAG SAMPLES: WATER LEVEL: * Not
		ted	8" to 18" DIAMETER: No. = Vol. Over 18" DIAMETER: No. = Vol.	cu ft	Encountere

	Consi	ulting Ge	otechnica	TER, NEW YORK L Engineers, geologists	1	TEST PIT REPORT		TEST F	PIT NO. TP-7 NO. 70352-44
PROJEC LOCATI CLIENT CONTRA EQUIPM	ION: [: ACTOR:	ROCHES CITY O	TER, NEW F ROCHESTI GLE DRILL	R	VERIFICATION/E	DELIST		Recove ELEVAT EXPLOR	ION:Monroe Cty. Resource ery Facility, Emerson St FION: RATION DATE: 14 Dec. 199 EP.: M. Corrigan
	SAMPLE NUMBER		STRATA		DESCRIPTION C)F MATERIALS			REMARKS
			1.5	Red-brown silty coa	arse to fine SA	ND, little grav	elFILL	-	No UNU: on podiation
			1.5	Gray-black clayey S numerous boulders (ILT, with orga (rocky fill).	nic material, w	ood, roots, al		No HNu or radiation meter readings above background.
-2									
, –					-FIL	L-			Water seeping in at 3.5 ft.*
-4			4.0	Gray-brown mottled	red and brown	silty fine SAND.			
-6 —					-LACUSTRINE	/ALLUVIUM-			
			7.0						
-8 —			,	and	Apparent Top Bottom of Tes	of Bedrock t Pit at 7.0 ft.			
-									
· _									
10 —									
_									
12 —									* - See Note #3 on
_									Subsurface Exploration Key.
1	WA1	ER LEVEL	<u></u>	APPR	DXIMATE PIT DI	MENSIONS AT SURF	ACE		SUMMARY
DATE		TIME*	DEPTH FT	LENGTH 5 fee	et	WIDTH	3.5 feet		DEPTH: 7.0 ft. JAR SAMPLES:
					BOUI	LDERS			BAG SAMPLES:
				8" to 18" DIA	AETER: No.	= Vol.	cu ft	[WATER LEVEL: * Not Encountered
* Hr	s afte	r comple	ted	Over 18" DIAM	METER: No.	= Vol.	cu ft		TEST PIT NO. TP-7

	Consu	lting Geo	otechnical	TER, NEW YORK Engineers, geologists	1	EST PIT REPORT		TEST PIT FILE NO.	NO. TP-21 70352-44
	ION: T: ACTOR:	ROCHEST CITY OF	TER, NEW N ROCHESTE	R	VERIFICATION/D	DELIST			1455 Emerson St
CALE IN FEET	SAMPLE NUMBER		STRATA Change		DESCRIPTION C	OF MATERIALS			REMARKS
	- B1	1.0		Brown gravelly coa and plastic at ~ 1	rse to fine SAN 5 ft.	D, with brick, o	concrete, pape	fro No rea	reading = 2 to 9 pp m test pit soil. radiation meter dings above kground.
	- 51	3.0							
			6.0	Apparent Top of	-FIL Bedrock and B	L- ottom of Test Pi	t at 6.0 ft.		er level in test pit 6.0 ft.*
12 —								Si	See Note #3 on ubsurface Exploration ey.
	UATI	ER LEVEL		ADD		ENSIONS AT SURF			CINHADY
DATE		TIME*	DEPTH FT	LENGTH 7 fe		WIDTH	ACE 3.5 feet	DEP JAR	SUMMARY TH: 6.0 ft. SAMPLES: 1
					BOUI	DERS		BAG	SAMPLES: 1
				8" to 18" DIA		= Vol.	cu ft		ER LEVEL: 6.0 ft.*
* Hr	rs after	r complet	ed	Over 18" DIA	METER: No.	= Vol.	cu ft	TES	T PIT NO. TP-21

	Consul	ting Ge	otechnical	TER, NEW YORK Engineers, geologists	1	EST PIT REPORT		TEST PIT	NO. TP-22	
	ION: T: ACTOR:	ROCHES CITY O	TER, NEW Y F ROCHESTE GLE DRILLI	R	VERIFICATION/	DELIST			1455 DN:	al Stamping Emerson St. 1 Dec. 1992 gan
SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE			DESCRIPTION C	F MATERIALS			REMAR	KS
				Brown coarse to fin (rocky fill), trace	e sandy GRAVEL silt and clay	, common cobbl , trace brick f	es and boulder ragments.	or re	OVA readir radiation adings abov ckground.	meter
-2										
			5.0		-FILL or DISTU			Wa	ter level i	n test pit
-6				B	Apparent Top o ottom of Test	f Bedrock and Pit at 5.0 ft.		at	5.0 ft.*	
-8										
- 1										
-12 —									- See Note a Subsurface I	
							t		(ey.	
	WATE	R LEVEL	<u></u>	APPRO	XIMATE PIT DIN	ENSIONS AT SURF	ACE		SUMMAI	۲
DATE	T	IME*	DEPTH FT	– LENGTH 6 fee		WIDTH	3.5 feet		PTH: R SAMPLES:	5.0 ft.
						DERS		BAC	G SAMPLES:	
* 11-			od	8" to 18" DIAM		= Vol.	cu ft		TER LEVEL:	5.0 ft.*
- 41	sarter	complet	.ea	Over 18" DIAM	ETER: No.	= Vol.	cu ft	TES	ST PIT NO.	TP-22

	Cons	ulting G	RK, ROCHES eotechnica and Hydro	TER, NEW YORK L Engineers, TEST PIT REPORT geologists		PIT NO. TP-23
PROJEC LOCATI CLIENI CONTRA EQUIPA	ION: T: ACTOR:	ROCHE	STER, NEW OF ROCHEST AGLE DRILL	ER	ELEV EXPL	TION: Federal Stampin 1455 Emerson St ATION: ORATION DATE: 10 Dec. 199 REP.: M. Corrigan
SCALE IN FEET	SAMPL Numbe		H STRATA	DESCRIPTION OF MATERIALS		REMARKS
	B1	2.5		Gray-black gravel and cobble size rock fragments (rocky Petroleum odor, and staining (sheen) along sides of pit water at bottom of pit. Sheen also seen on gravel. -FILL or DISTURBED BEDROCK-	fill). and in	OVA readings = 0 to 20 ppm above background. No radiation meter readings above background.
-4			4.0	Apparent Top of Bedrock and Bottom of Test Pit at 4.0 ft.		Water level in test pit at 3.5 ft.*
· · ·						
10 — —						
12 — —						* - See Note #3 on Subsurface Exploration Key.
	WAT	ER LEVEL		APPROXIMATE PIT DIMENSIONS AT SURFACE		SUMMARY
DATE		TIME*	DEPTH FT	LENGTH 6 feet WIDTH 3.5	feet	DEPTH: 4.0 ft. JAR SAMPLES:
				BOULDERS		BAG SAMPLES: 1
				8" to 18" DIAMETER: No. = Vol. c	u ft	WATER LEVEL: 3.5 ft.*
* Hrs	s afte	r comple	ted	Over 18" DIAMETER: No. = Vol. c	uft .	TEST PIT NO. TP-23

1.

		ELLZ sociates, F			Subsurface Investigation FESL	BORING LA SHEET JOB # 7	1 OF Z		
	300 STATE STREET, R ENVIRONMENTAL ENGI				City of Rochester, New York	0173			
CONTRACTO DRILLER: LABELLA REI	R: Nothnagle Dr EVM / To PRESENTATIVE: K	m			BORING LOCATION: E Side of Vangu GROUND SURFACE ELEVATION START DATE: 9/27/10 END DATE:	DATUM			
AUGER SIZE . OVERBURDE	LL RIG: CME AND TYPE: 4.25 -IN N SAMPLING METH	ich ID Hollow-s IOD: Standard	tem 2" ID Split-s	poons	WATER LEVEL DATE TIME WATER		REMARKS		
D	NG METHOD:	HQ Water Rot	ary Coring				1		
E P		prebgs		DEPTH (Feet)	SAMPLE DESCRIPTION		PID C READINGS T		
T BLOWS H /6"	NO. DEPTH (FEET)	RQD(%)	RECOVERY (FEET)	DEPT	grass/topsol ater fle gra	rel a	F S		
1 <u>5</u> 1 10 2 12	5-1 0-2		1.7	0.7	grass/topso/ atep fle grav med br. to It. br. c SAT w/ fle grave #	layen GU	10-15 5 MR/hr		
8	5-2 2-4		1.4'	3.5	grayish br. claying Sat	20.11	0.1 PPms 15-20 MI		
$\begin{array}{c} 4 \\ 3 \\ 5 \\ 4 \\ 5 \\ 3 \\ 4 \\ 4 \\ 4 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7$			brownish gray Clay tr.	sAt	0.1 pm				
	\$-3 4-0 → →	×	1.5	×	very plastic		15-20 S Deak 22		
6 <u>50/(a</u> 7	5-4 0-0-7 0001		spoon/anger returned of	fragments	0:1 ppm 15-20 15-20 peak 2				
8	sur	cash	~ 12	:30	9/27 - begin cor 6.5 86	9/29			
9	2-1 8.5- 13.5	133	60" 5' 100 %	fun 1 14. to med gray Dolostome small (12") quartz intrusion ar calcine dy 10w & frac Q 1" 450 fract from 1.5" to 6" 10w & frac Q 9:5" 1; horiz fracs Q: 12", 15.5					
	* 2	2497	~		22.5", 31.5", 38.5", 41.5" (7.5", 48", 56"	Cinfilled up	silt in)		
13	(43	9826			No coving water lost in k	un I	((,,,,,,))		
14	2-2 13.5-				Run 2 lost ~ 15gd corn possible water bearing fract	A7 C 20:5	6'		
16				NOTES	(see paget	15.5", 19"	/ - /		
M - MAC	LEGEND SPOON SOIL SAMI ROCORE SOIL SAM CORE SAMPLE			10-1	5 MR/hr. Ludlum mehr	PIP (Lats (Ashtend)	Lite		
	TIFICATION LINES				NDARY BETWEEN SOIL TYPES, TRANSITIONS MAY B AND UNDER CONDITIONS STATED, FLUCTUATIONS OI		1		

IABELIA	Subsurface Investigation BORING LAB 10
Associates, P.C.	FESL SHEET 2-t- OF 2
300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	City of Rochester, New York JOB # 210173 CHKD. BY:
CONTRACTOR: Nothnagle Drilling Co.	BORING LOCATION: Vanguard PKWy
DRILLER:	GROUND SURFACE ELEVATION DATUM
LABELLA REPRESENTATIVE: K R Miller	START DATE: 9 29/10 END DATE: WATER LEVEL DATA
TYPE OF DRILL RIG: ATV CME tracked	DATE TIME WATER CASING REMARKS
AUGER SIZE AND TYPE: 4.25 - Inch ID Hollow-stem	
OVERBURDEN SAMPLING METHOD: Standard 2" ID Split-spoor ROCK DRILLING METHOD: NX & HQ Water Rotary Coring	S
D	N
	SAMPLE DESCRIPTION PID 0 READINGS T
T BLOWS NO. DEPTH -N-VALUE- RECOVERY H /6" (FEET) /RQD(%) (FEET)	SAMPLE DESCRIPTION PID O READINGS T E Calcure depus A @ 18.5' Calcure depus A @ 18.5' Calcure depus A @ 18.5'
53.75 58.75	Run 2 (conta)
17 R-2 13.5 500 98%	horiz. Fracs Q 33", 35,5", 38" 52" C many the several horiz + vert. Fracs from 45" to 49" but likely caused by dr.M.
18 18.5 902 98%	many the several horiz + vert. Aracs
19	trom 15 10 11
20 3-3 18.5' 58" 62"	Vack similar to above although sho hole
21 R 23.5' 942 1002	derker gray (med to dk gray har) Dolos rome
22	questa/calcula deposit Q 1.5" to 2"
23	quirtz/calcula deposit C 1.5" to 2" horiz fracs Q: 2", 4" (vart 2 horiz fracs 4" to 6" but appear voluced to do Miny)
24	10.25", 36", 47", 54.5" (quartz/calcita in 4" frac
19	
10	EOB @ 23.5' BG
12	
15	
LEGEND	DTES: 1055 A n75 gal corch, water
S - SPLIT SPOON SOIL SAMPLE M - MACROCORE SOIL SAMPLE	
C - ROCK CORE SAMPLE	Kevih says "Nile samp" e., he feels 16' water hearing zone with since
	e., he feels 16' water bearing zone with give
1) STRATIFICATION LINES REPRESENT APPROXIMATE	BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. Walk
MAY OCCUR DUE TO OTHER FACTORS THAN THOS	E PRESENT AT THE TIME MEASUREMENTS WERE MADE.
	BORING #

1575 Emerica Log of Well No. LAB-PROJECT: MMC ELEVATION AND DATUM: **BORING LOCATION:** DRILLING CONTRACTOR: DATE STARTED: DATE FINISHED: G, DRILLING METHOD: TOTAL DEPTH: 4 SCREEN INTERVAL: DEPTH TO FIRST WATER: DRILLING EQUIPMENT: COMPL 83 CASING: SAMPLING METHOD: 4 LOGGED BY: 201-5 Ø AAA HAMMER WEIGHT: **RESPONSIBLE PROFESSIONAL** DROP: 140 REG. NO. SAMPLES OVM Reading (ppm) DESCRIPTION DEPTH (feet) NAME (USCS Symbol): color, moist, % by weight, plast, Sample No. WELL CONSTRUCTION DETAILS Sample Blowe/ consistency, siructure, cementation, react, wHCL geo, inter. AND/OR DRILLING REMARKS Surface Elevation: 約 (10425/4 8-0.5' burgers Mrsac (ML) w/ time the said. Day, loose * collat VOC 2 e.u 0.5-1.0' - AA ~/ weathand shale //s ground 1.0 - 1.3' - wriste Stack, coul, Marker, brick, scople from 5. J-b. 0' 600 8-4 2-0.5 AA Ash national plastic, this, By In 12:01 Ø 6 1.0-1.5 1042 the sill of some Sampi 8 Ø being int 0 ~ 6.340 $l_{()}$ *Advance officiality to grap Install 4"" h, enf 17 20 34 21 J. W-1 (12/95) Project No. **Geomatrix Consultants** Figure

W-1 (Blank)

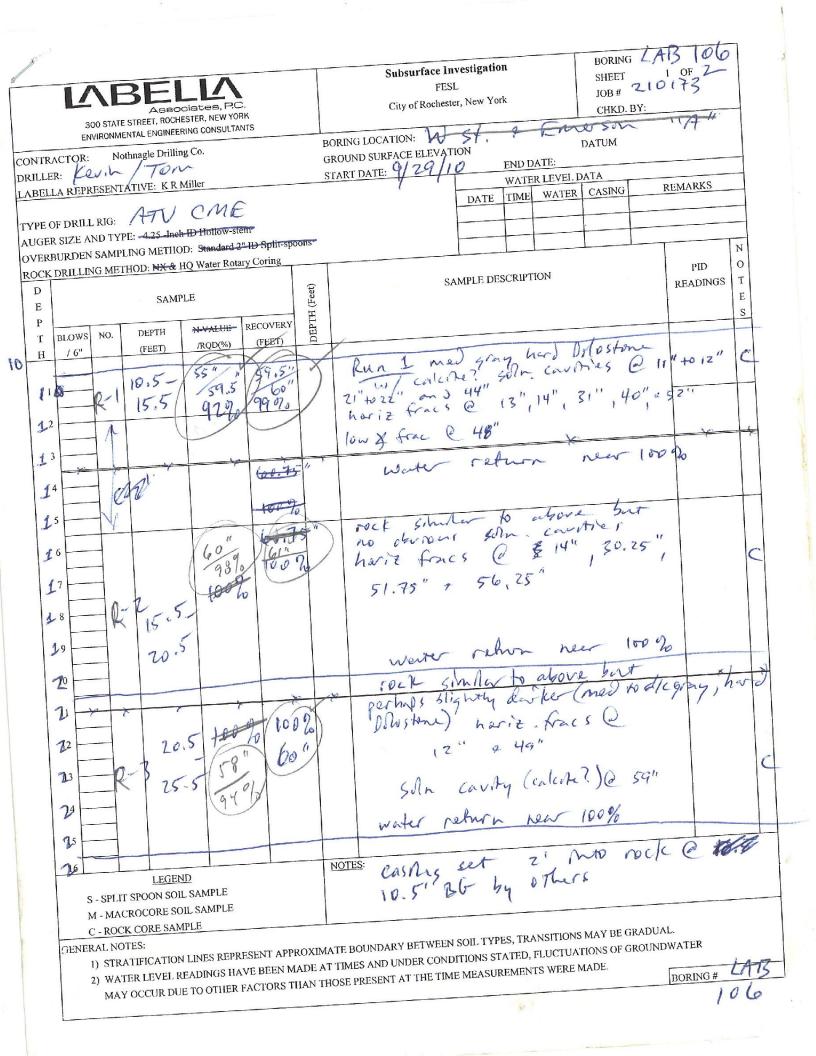
1575 Emerson CABIOR Subsurface Investigation BORING FESL. SHEET 1 OF Associates. City of Rochester, New York JOB # 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS CHKD. BY BORING LOCATION: Side Emerson CONTRACTOR: Nothnagle Drilling Co. Kevin / tom GROUND SURFACE ELEVATION DRILLER: DATUM START DATE: 9 28 9 LABELLA REPRESENTATIVE: K R Miller 10 END DATE: WATER LEVEL DATA tracke TYPE OF DRILL RIG: ATV CME DATE TIME WATER CASING REMARKS AUGER SIZE AND TYPE: 4.25 -Inch ID Hollow-stem OVERBURDEN SAMPLING METHOD: Standard 2" ID Split-spoons. ROCK DRILLING METHOD: NX & HQ Water Rotary Coring D N E SAMPLE DEPTH (Feet) SAMPLE DESCRIPTION PID 0 P READINGS Т BLOWS E Т NO. DEPTH N-VALUE RECOVERY H 16' (FEET) /RQD(%) (FEET) S hard men to It. gray Run #1 9 0" 10.0 9.4 10.1 330/0 1.5", 3" 0% 6.25 8,25" 91 \$10.54 C whent. 0-875 Run #2 same pock as above Run #2 highly frac 2.25" to 3", horiz Fracs: 4.75", 5.5" 7", 8.5" 10", 13.5" Kighly Frac, 15.5" - 17" horiz. Frac @: 19 12 18.15 49 10,1 C 1021 1402 13 23" 26" 29" ~] 46.5" 14 Run # 3 same rock as above 57/60" Kur 5 vert./horie fracs from 1" 106" horiz fracs: 9" 13.5* 16", 19" 70", 22" 26.5", 28", 30.5", 40", 144", 46", 49.5" 54", 58", 59" w/ 45° frac from 54" to 55.5 60" 15 19.1 100% 16 6220 17 (8 9 Run 4 perhaps med to dk gray 43:19 \$9.0" 70 19.1 horiz fracs: 2", 4", 5,5", 13", 13.75" 18.75", 19.5", 200 31 [w/ 10w] frac @ 18.5"), 36", 39", 43", 51.5" 12% 21 712 #57" 13 14 EOB @ 24' BG total of ~ 10gal of coring 15 16 NOTES: 4" casing (steel) Set @ 9'BG Run 1 cut short to & coring tell bit from "Surficial" to "impregnated" LEGEND S - SPLIT SPOON SOIL SAMPLE M - MACROCORE SOIL SAMPLE C - ROCK CORE SAMPLE GENERAL NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING #

1684 Emersor PROJECT: LOCATION "B" Log of Well No. AR-INUSTIAN 17704 ELEVATION AND DATUM: BORING LOCATION: DRILLING CONTRACTOR: DATE STARTED: DATE FINISHED: NOTHNAGLE TOTAL DEPTH: 44600 **DRILLING METHOD:** SCREEN INTERVAL HSA DEPTH TO FIRST DRILLING EQUIPMENT: COMPL CASING: (MT 550 WATER: LOGGED BY: SAMPLING METHOD: Hi MAR 404 RESPONSIBLE PROFESSIONAL: HAMMER WEIGHT: DROP: REG. NO. RN. SAMPLES DEPTH (feet) Semple No. Semple OVM Reading (ppm) DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast., WELL CONSTRUCTION DETAILS Blows/ Foot consistency, structure, cementation, react, withCL geo, inter AND/OR DRILLING REMARKS Surface Elevation: C-211- Biours (1042 ty) topsoll, day, loose -011-205- waste/fill. byww. silt (one) on/ NA 7 fine said, three way Side, glass is all clinka real endos. Moist-floorighest three time would gread. 4 0-61, 44 NA 8 0-61-10- 5m shole / 25 Bachade frequents 1.0-1.5. Saturatud i Ad (61-10) in / 60000 aith mytip. Toose throughost-ML fine said not sill, sold, saturated northed while dark great to light thing mous - slight sight alor. No ist softon 2.5' of sample-8 3 NAR (0)50 * have visited Sitty Ja sampter refusil. No sample 12.0 [12.24/0] * advance official it's permanent strail ref PAL 14. solf" voller bit th zapulas hef 16 PEN casing to 1914 ge Byin How Ros @ 14/4 * Duill vote (8 9/25/10 -2 2 min. /ft * AND witter LOREHOLE Run # 1 14-24 λ Rez: 40-40' (119' - 99'). ROD: 32440' (12' - 35% * HALE Flucher ∇ with ostable where Littl: Lack port fotomter? 王之 to remove drill HARD Gray Linestone " of shale intertrop whip, well pupped 24 frequent incoloranical privales along shate bod dry & allowed to throughout the smill 1-2 min ungs throughout recour. all vent. fratis - open horizontal firstons prevalent where In usue are media borrent shale interheds domainste. No ves antin. W-1 (12/95) Project No. **Geomatrix Consultants** Figure W-1 (Blank)

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769 Emasser PROJECT: LOCATION "A" Log of Well No. LAB-LOL SVI 16477 DA ELEVATION AND DATUM: SIA **BORING LOCATION:** C Enere DATE STARTED: DRILLING CONTRACTOR: DATE FINISHED: 9125 DRILLING METHOD: TOTAL DEPTH: SCREEN INTERVAL: DEPTH TO FIRST **DRILLING EQUIPMENT:** COMPL CASING: WATER: LOGGED BY: SAMPLING METHOD: 4 E. 140 **RESPONSIBLE PROFESSIONAL** HAMMER WEIGHT: DROP: REG. NO. SAMPLES OVM Reading (ppm) DESCRIPTION DEPTH (feet) NAME (USCS Symbol): color, moist, % by weight, plast., WELL CONSTRUCTION DETAILS Sample No. Sample Blows/ consistency, structure, cementation, react. witiCi. geo. Inter. AND/OR DRILLING REMARKS Surface Elevation: RA 0-1.01) brown sitt if the lower, day (typeril). (DYRS/4 (ML) Ŋ .Wegd 2 1.0-2.21 Fill binus for w/ si H, trave bide pieces coarse cyster Linestone/sh. To Augur Hungh Jeand, house, duy-4 b * install 4"8 porn casing & 1055/20 F * 10 AVALYTICAL Ŵ SAMPLE CALECTED 12 14 4 F 20 ي 24-26 W-1 (12/95) Project No. **Geomatrix Consultants** Figure



LABELLA	Subsurface Investigation FESL	BORING LAB 106 SHEET 70F 7
Associates, P.C. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	City of Rochester, New York	JOB # 210173 CHKD. BY:
CONTRACTOR: Nothnagle Drilling Co. DRILLER: Lev. L	BORING LOCATION: A S./ J. F. GROUND SURFACE ELEVATION START DATE: 9/29/10 END DATE: 9	DATUM
LABELLA RÉPRESENTATIVE: K R Miller) WATER LEVEL D	ATA
TYPE OF DRILL RIG: ATV CME Trad AUGER SIZE AND TYPE: 4.25 Inch ID Hollow-stem	DATE TIME WATER	CASING REMARKS
OVERBURDEN SAMPLING METHOD: Standard 2" ID Split-spoons ROCK DRILLING METHOD: NX & HQ Water Rotary Coring		
D E SAMPLE	SAMPLE DESCRIPTION	PID O
P T BLOWS NO. DEPTH NVALUE RECOVERY H /6" (FEET) /RQD(%) (FEET)		READINGS T E S
22 R-4 25.5 58.0" 1002	Run 4 13 horiz. Frac @ 3.5" (horiz Frac @ 15", 41'	above
28 30.5 94%	horiz Frac @ 15", 41'	, a 51"
29 x x x x x x	<u> </u>	
30	1055 of 10-15 gal 2	water
31	detering run of	
6	EOR @ 30.5 'B	'G-
7 To Arl	aust - it stale - u	iel
8 Well	: developed using ris	pump
9 Perelopmen	the athra:	35t gal
10	extracted: Fairly	classing the
	extracted; fairly a post in Aral developm	that was a
12	1.2	
13		
14		
15		
16 LEGEND NOTE	ç.	
LEGEND NOTE S - SPLIT SPOON SOIL SAMPLE	-	
M - MACROCORE SOIL SAMPLE		
C - ROCK CORE SAMPLE GENERAL NOTES:		
1) STRATIFICATION LINES REPRESENT APPROXIMATE BO	UNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE C	FRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES	AND UNDER CONDITIONS STATED, FLUCTUATIONS OF G	
MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PR	ESENT AT THE TIME MEASUREMENTS WERE MADE.	BORING #

D	at	a	by	

Sheet of	ļ
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SUBSURFACE EXPLORATION - TEST BORING LOG

Boring No. <u>P-Z</u> Project No. <u>576-005</u>

Project Name ENERSON STREET

MSNODGARSS

Client <u>NYSDEC</u>

Driller AMERICAN AUGER

Monitoring Instrument(s) HNUL. MISA, Cal, DosiMerry

SAMPLE HAMMER

Weight ____ Ib

Fall____ in.

Date <u>8/3/8</u>	39			
		~	finish	will.
Boring Location	YELLOW	INEIGH	17	
Total Depth	23.5	1. States	1	100
Depth to Water	13.9	1		
Hole Diameter -	.7'-	.3'	155.6	
Ground Surface	Elevation	546	.4	

Depth			IS C		Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL f - fine and - 35-50% m - medium some - 20-35%	Remarks
Ğ	0" to 6"	6" to 12"	12" to 18"	18" to 24"	Reta	(fe	Sa	Instr Re	δÑ	Strati Co	c - coarse little - 10-20% trace - 0-10%	Rer
									DRY Moist DRY Wer WET Moist 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	0 2 4 6 10 11 13 5 5 15.5 16.5 19.5 20.5 19.5 20.5	SANDS SOME GRAVEL ? COBBLES ANGLLAR GRAVEL / COBBLES (FILL) LIGHT BROWN SAND, SILT, GRAVEL ? COBBLES	HNU-30PM Contesive HNU = 3. PP

LAWLER, MATUSKY & SKELLY ENGINEERS

Sheet 4 of

Boringt No. $\frac{P-2}{576-005}$

Depth					Retained Sample	Recovery (feet)	(feet) Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL f - fine and - 35-50% m - medium some - 20-35%	Remarks
G	0" to 6"	6° to 12°	12" to 18"	18" to 24"	Reta	Heta Sar Sar (fe N N Rec Rec Rec Mo	ůÃ	Strati Co	c - coarse little - 10-20% trace - 0-10%	Веп		
									3.6 3.0 2.5	21.3 22.5 23.5	SET 2" DUL SLHED 40 MONITORING WELL @ 23.5 10' SLOTTED SLREEN,010 SAND #2 TO 11.5' 3'B BENTONITE PELLETS TO 10.5 BENTONITE GROWT TO 4' PORTLAND LEMIENT TO SWEFACE STEEL PROTECTIVE SLEEVE	
									-			

LAWLER, MATUSKY & SKELLY ENGINEERS

the figure set of the product of the

Data by JPM

Sheet / of

Boring No. <u>P-3</u> Project No. <u>576-005</u>

SUBSURFACE EXPLORATION - TEST BORING LOG

Project Name EMENSON STREET

Client <u>NYSDEC</u>

Driller AMERICAN AUGER

Monitoring Instrument(s) +/NU, CLI. MSA, DOSIMETER_

SAMPLE HAMMER

Weight _____ lb Fall _____ in.

-

Date <u>7/3//89</u> start	finish
Boring Location Section	DUTH-BEHIND TRUCKING YARD
Total Depth	30.5'
Depth to Water	17.26 BG
Hole Diameter	.1'3'
Ground Surface El	evation = 542.6

Depth		/S C LEF 12" to 18"	Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
							Menso Mar 1.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2	.2 1 3.5 12 15 17 16 17 16 17 16 17 16 17 18 5 19 5 21 5 22 5 24 5 24 5 25 5 25 5 25 25 25 25 25 2	DARE BROWN SILTY SANDY SOIL SIMILAR TO (TOPSOIL-LOAM) LOBBLES-ROLKS-BRICKS MIXED SOIL, SAWD, GRADEL DRILLING BECAME EASIER- LESS DENSE DARE BROWN-GREV SILT MIXED W/GLASS REFUSAL ON AUGER USED HO CORE FROM 15 15-15.5 VERY LOSE MUDDY CUTTINGS REMOVED .5' CONCLETE CORE PUMPED HOLE - NO WATER ENTERED DOLOMITE - GREY FEW FRACTURES - VERY COMPETER PUMPED HOLE - 2FEET OF RECOVERY	Corlesi ue

LAWLER, MATUSKY & SKELLY ENGINEERS

Boringt No. <u>P.3</u> Project No. <u>576-005</u>

Sheet 2_ of ___

A	BL	LOWS	10 8	N	ed ed	ery (e	nent ing	ure	aphic nn	CLASSIFICATION OF MATERIAL f - fine and - 35-50%	ş
3.00		6" 1 to t	ER	18" to 24"	Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
									Z.0 Z.3 Z.0 Z.2	26.5 27.5 28.5 29.5 30.5	GREY Dolomite CLAY-SILT At BOTTOM LITILE F.C. SAND MIXED IN CLAY SATURATED ZOCK HAS A MILD SULDHUR ODOR - PUMPED ODT HOLE BET 2" PVC MONITON WELL @ 30.5' 10' SLOTED SHED 40 SCREEN PVC RISER TO SURFACE # 2 SAND PACK TO 13' 96" BENTONITE PELLETS 13-12.4 BENTONITE SULREN TO 4' PORTLAND CEMENT TO SURFACE STEEL PROTECTICE CASING	

LAWLER, MATUSKY & SKELLY ENGINEERS

-	1000	X	PM
Data	hy	1	1 14
Luna	wy		

SUBSURFACE EXPLORATION - TEST BORING LOG

Boring No. <u>7-4</u> Project No. <u>576-605</u>

Sheet / of

Project Name EMERSON STREET

Driller AMERICAN AUGER

Monitoring Instrument(s) HNW. CEI, DOSIMETER_, MSA

SAMPLE HAMMER

Weight ____ Ib

Fall _____ in.

Date <u>8/2/89</u> start	<u>8/2/89</u> finish
Boring Location Lewra	AL AQEA - FEDERAL STAMPINE
Total Depth	
Depth to Water	8.41'BG.
Hole Diameter7-	.3'
Ground Surface Eleva	tion 533.5

Depth	-OW MP 6" 10 12"		Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	
							Moist NIN 3.25 3.5 2.0 3.25 2.75 2.5 3.6 2.0 3.5 2.0	14. 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 16.0	NO SPLIT SPLON SAMPLES RED. ALLGERED THROUGH BROWN SANDY, SILTY LOUER MATERIAL ROOTS, GLASS, WEEDS ON SORFACE DARE BROWN-GREY SILTY SAND W/ANGULAR GRAVEL FEW INTERMITTENT COBBLY RONES REFUSAL Q 6.0' - H D CORING GREY DOLOSTONE - INTERMITTENT FRACTURE W/SOME CLAY INFILLINGS * THE MONITON WELL INSTALLED 2 SAND TO S' ID' R' PUL WELL SCREEN 38' BENTONITE PELLET SEAL TO 3' PORTLAND CEMEENT TO SURFACE PROTECTIVE STEEL CASING	UE

LAWLER, MATUSKY & SKELLY ENGINEERS

		ELLZ sociates, l			Subsurface Investigation FESL	BORING LF SHEET	1 OF 2	
	300 STATE STREET, R NVIRONMENTAL ENGI				City of Rochester, New York	CHKD. BY:	10173	
CONTRACTOR: DRILLER:	Nothnagle Dr WM / To RESENTATIVE: K	m			BORING LOCATION: E Side of Vangu GROUND SURFACE ELEVATION START DATE: 9/27/10 END DATE:	DATUM		1
AUGER SIZE AI OVERBURDEN	RIG: CME ND TYPE: 4.25 -II SAMPLING METH	nch ID Hollow- HOD: Standard	stem 2" ID Split-s	spoons	DATE TIME WATER		REMARKS	
D	G METHOD: 🧰	HQ Water Ro	tary Coring	1				N
E		IPLES95	1	DEPTH (Feet)	SAMPLE DESCRIPTION		PID READINGS	O T
T BLOWS H /6"	NO. DEPTH (FEET)	RQD(%)	RECOVERY (FEET)	DEPT	grass/ topsort atter fle grav	al a	107-00	E S
1 5 5 10 2 12	-1 0-2		1.7	0.7	grass/topso/ atep fle grav med, br. to It. br. c SAT w/ fle grave to	layen GU	10-15 MR/hr	5
4	-2 2-4		1.4'	3.5	grayish br. claying Sat	Rishbr.	0.1 PPm 15-201	SIL
4 3	-3 4-6		1.5'		brownish gray Clay, tr.	sAt	0+1 ppm 15-20	5
6 4	* *	*		×	viry plastic	44	plak 22	1
7 50/10 5	-4 6-6.4		Peor 20.5		similar to above and rock	Fraghers	0.1 ppm 15-20 peak	21
8	sur	cash	~ 12	:30	9/27 - by 12 cor. 1, 8.5 86	2/29		
9 10	1 8.5-	1.1.1.1	60" 5' 100 %	5	Kun I 14. to mid gray small(12") quertz intruson or low & frac @ 1" : 450 fract fro low & frac @ 9:5"]; horiz fracs	Doloston - Calcite m 1.5" to 6" @: 12", 15	Jeposot .5" 20"	CC
11 2	* 2	")49" "	4	~~~~	22.5", 31.5", 38.5", 41.5" [7.5", 48", 56"	Confilled wy	silf up)	
13	(47	0.826			No coving water lost in R	caused by	goming)	
14 15 R	2 13.5-				Run 2 lost ~ 15gal corm possible water bearing fract rock similar to above cau	Ay C 20:5	16'	-
16				NOTES	(see page)	15.5", 19"	/ - /	P
M - MACR	LEGEND POON SOIL SAM OCORE SOIL SAM CORE SAMPLE			<u>NOTES</u>	5 MR/hr. Ludhum mehr	PIP (Lat (Ashtend	Lite	4
	FICATION LINES				NDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE AND UNDER CONDITIONS STATED, FLUCTUATIONS OF			

IABELIA	Subsurface Investigation BORING LABIO
Associates, P.C.	FESL SHEET 2-F OF Z
300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	City of Rochester, New York JOB # 210173 CHKD. BY:
CONTRACTOR: Nothnagle Drilling Co.	BORING LOCATION: Vanguard FKWy
DRILLER:	GROUND SURFACE ELEVATION DATUM
LABELLA REPRESENTATIVE: K R Miller	START DATE: 929/10 END DATE: WATER LEVEL DATA
TYPE OF DRILL RIG: ATV CME tracked	DATE TIME WATER CASING REMARKS
AUGER SIZE AND TYPE: 4-25 -Inch ID Hollow-stem	
OVERBURDEN SAMPLING METHOD: Standard 2" ID Split-spoons ROCK DRILLING METHOD: NX & HQ Water Rotary Coring	
D	N
	SAMPLE DESCRIPTION PID 0 READINGS T
E SAMPLE P T BLOWS NO. DEPTH N-VALUE, RECOVERY H /6" (FEET) /RQD(%) (FEET) Q	calcite deposit @ 18.5'
53.75 58.75	Run 2 (conta)
17 R-2 13.5 500 60 00%	horiz. Fracs Q 33", 38,5", 38" 52" C many hos several horiz + vert. Fracs from 45" to 49" but likely caused by drill
18 18.5 902 98%	ming the several horiz + vert. fracs
19	trom 45 to 11
20 3-3 18,5'- 58" 62"	verk similar to above although ships
21 R 23.5' 942 1002	derker gray (med to dk gray har) Dolos rome
22	queste/calcula deposit @ 1.5" to 2"
23	quirtz/calcula deposit @ 1.5" to 2" horiz fracs @: 2", 4" (vart & horiz fracs 4" to 6" but appear voluced to der Ming)
24	10.25", 36", 47", 54.5" (quart 2/ caldita in 4" frac
19	
10	EOB @ 23.5' BG
LEGEND NOT	ES: 1 0 1
S - SPLIT SPOON SOIL SAMPLE	Kevih Says "Nile samp" , he feels 16' water Learing Zone with give
M - MACROCORE SOIL SAMPLE	Veral Const Veral Const
C - ROCK CORE SAMPLE	perin says Nice samp
	OUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
	ES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
MAY OCCUR DUE TO OTHER FACTORS THAN THOSE I	PRESENT AT THE TIME MEASUREMENTS WERE MADE. BORING #

	Emerson Street Landfill- er, New York	SVI Investigation	L	og of Well N	o. LAB-101
BORING LOCATION	East Side of Vangua	rd Pkwy	TOP OF RISE fmsl	ER ELEVATION:	DATUM:
DRILLING CONTRAC	CTOR: Nothnagle Drilli	ng	DATE STAR1 9/27/10	TED:	DATE FINISHED: 9/28/10
DRILLING METHOD:	4 1/4" Diameter HSA		TOTAL DEPT 23.5 fbgs	ſH:	SCREEN INTERVAL 8.5-23.5 fbgs
DRILLING EQUIPME	NT: CME 55 ATV		DEPTH TO WATER:	FIRST COMPL.	CASING: 4" steel
SAMPLING METHO): 2" dia. Split Spoons		LOGGED BY	:	
HAMMER WEIGHT:	140 DRC	DP: 30"		LE PROFESSIONAL	: REG. NO.
DE PTH (feet) No. No. Blows/ foot	NAME (US	DESCRIPTION CS Symbol): color, moist, % by weight, cementation, react. w/HCl, geo. intr	, plast., structure,		TRUCTION DETAILS RILLING REMARKS
DEPT (feet Sample No. Sample Blows/ foot	<u>ر</u> ق	Surface Elevation: fm			ush-mount surface casing
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.1 0.1 0.1 0.1 0.1 Sampler and a Advanced 57 Begin HQ Cor Run #1 Depth: 8.5-13 Rec: 60" (100 RQD: 28" (42° Run #2 Depth: 13.5-1: Rec: 58.75" (9 RQD: 53.75" (9 RQD: 53.75" (9 RQD: 53.75" (9 RQD: 58" (94° Lithology: LC (Penfield Dolc Light to mediu moderately ha occassional st and vugs are gypsum) infilli common. Rock coring d *Rough high-a *Low angle joi *Vertical joint *Low angle joi	%) %) 8.5 'bgs 88%) 90%) 3.5 'bgs %) OCKPORT FORMATION In gray, fine-grained, med ard to hard, siliceous Dolos o frequent argillaceous par hale interbeds. Zones of co present. Secondary crysta ng of bedding planes, joint etails: angle joints at 8.6 -9.1' ints at 9.2, 10.1' 10.4-10.9' (tight)	lium-bedded stone, with tings and pccassional pits illization (calcite or		 —4" permanent steel casing to 8.5' bgs —Cement/bentonite grout Bedrock —Open Bedrock Corehole (3 7/8")
37 - 38 -					
39 40					WELL LOOD & 2010 CT 111
Project No.		Geon Geon	natrix Consultant		WELL LOGS 9-2010.GPJ (11/10) Page 1 of 1

1575 Emerica Log of Well No. LAB-PROJECT: MMC ELEVATION AND DATUM: **BORING LOCATION:** DRILLING CONTRACTOR: DATE STARTED: DATE FINISHED: G. DRILLING METHOD: TOTAL DEPTH: 4 SCREEN INTERVAL: DEPTH TO FIRST WATER: DRILLING EQUIPMENT: COMPL 83 CASING: SAMPLING METHOD: 4 LOGGED BY: 201-5 Ø AAA HAMMER WEIGHT: **RESPONSIBLE PROFESSIONAL** DROP: 140 REG. NO. SAMPLES OVM Reading (ppm) DESCRIPTION DEPTH (feet) NAME (USCS Symbol): color, moist, % by weight, plast, Sample No. WELL CONSTRUCTION DETAILS Sample Blowe/ consistency, siructure, cementation, react, wHCL geo, inter. AND/OR DRILLING REMARKS Surface Elevation: 約 (10425/4 8-0.5' burger Mrsac (ML) w/ time the said. Day, loose * collat VOC 2 e.u 0.5-1.0' - AA ~/ weathand shale //s ground 1.0 - 1.3' - wriste Stack, coul, Marker, brick, scople from 5. J-b. 0' 600 8-4 2-0.5 AA Ash national plastic, this, By In 12:01 Ø 6 1.0-1.5 1042 the sill of some Sampi 8 Ø being int 0 ~ 6.340 $l_{()}$ *Advance officiality to grap Install 4"" h, enf 17 20 34 21 J. W-1 (12/95) Project No. **Geomatrix Consultants** Figure

W-1 (Blank)

1575 Emerson CABIOR Subsurface Investigation BORING FESL. SHEET 1 OF Associates. City of Rochester, New York JOB # 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS CHKD. BY BORING LOCATION: Side Emerson CONTRACTOR: Nothnagle Drilling Co. Kevin / tom GROUND SURFACE ELEVATION DRILLER: DATUM START DATE: 9 28 9 LABELLA REPRESENTATIVE: K R Miller 10 END DATE: WATER LEVEL DATA tracke TYPE OF DRILL RIG: ATV CME DATE TIME WATER CASING REMARKS AUGER SIZE AND TYPE: 4.25 -Inch ID Hollow-stem OVERBURDEN SAMPLING METHOD: Standard 2" ID Split-spoons. ROCK DRILLING METHOD: NX & HQ Water Rotary Coring D N E SAMPLE DEPTH (Feet) SAMPLE DESCRIPTION PID 0 P READINGS Т BLOWS E Т NO. DEPTH N-VALUE RECOVERY H 16' (FEET) /RQD(%) (FEET) S hard men to It. gray Run #1 9 0" 10.0 9.4 10.1 330/0 1.5", 3" 0% 6.25 8,25" 91 \$10.54 C whent. 0-875 Run #2 same pock as above Run #2 highly frac 2.25" to 3", horiz Fracs: 4.75", 5.5" 7", 8.5" 10", 13.5" Kighly Frac, 15.5" - 17" horiz. Frac @: 19 12 18.15 49 10,1 C 1021 1402 13 23" 26" 29" ~] 46.5" 14 Run # 3 same rock as above 57/60" Kur 5 vert./horie fracs from 1" 106" horiz fracs: 9" 13.5* 16", 19" 70", 22" 26.5", 28", 30.5", 40", 144", 46", 49.5" 54", 58", 59" w/ 45° frac from 54" to 55.5 60" 15 19.1 100% 16 6220 17 (8 9 Run 4 perhaps med to dk gray 43:19 \$9.0" 70 19.1 horiz fracs: 2", 4", 5,5", 13", 13.75" 18.75", 19.5", 200 31 [w/ 10w] frac @ 18.5"), 36", 39", 43", 51.5" 12% 21 712 #57" 13 14 EOB @ 24' BG total of ~ 10gal of coring 15 16 NOTES: 4" casing (steel) Set @ 9'BG Run 1 cut short to & coring tell bit from "Surficial" to "impregnated" LEGEND S - SPLIT SPOON SOIL SAMPLE M - MACROCORE SOIL SAMPLE C - ROCK CORE SAMPLE GENERAL NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING #

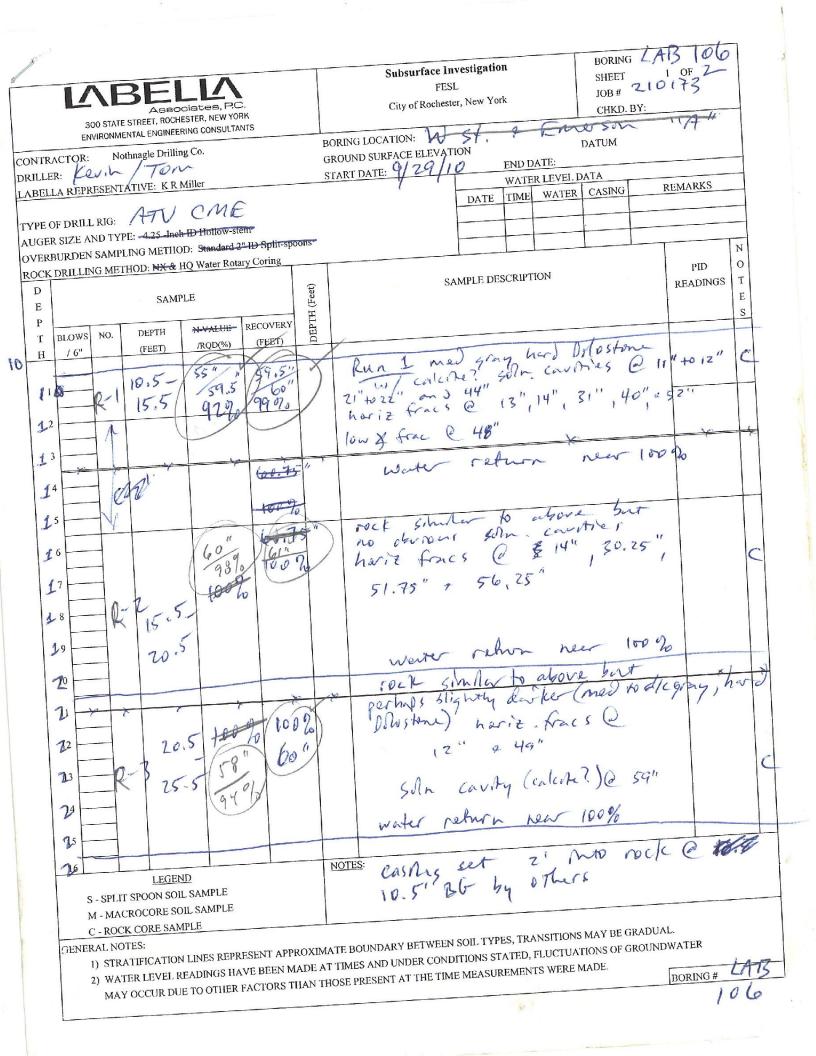
	Emerson Sister, New Yo	treet Landfill- SVI Investigation rk	Lo	og of V	Well N	o. LAB-103
BORING LOCATION			TOP OF RISER ELEVATION: DATUM: fmsl			DATUM:
ORILLING CONTRA	CTOR: No	thnagle Drilling	DATE START	ED:		DATE FINISHED: 9/28/10
ORILLING METHOD): 4 1/4" Dia	ameter HSA	TOTAL DEPTI	H:		SCREEN INTERVAL
	ENT: CME	55 ATV		FIRST	COMPL.	9.1-24.0 fbgs CASING:
SAMPLING METHC	D [.] 2" dia 9	Solit Spoons	WATER: LOGGED BY:			4" steel
		DROP: 30"	MAC/KRM RESPONSIBL	E PROFI	ESSIONAL	.: REG. NO.
SAMPLES		DESCRIPTION	RM			TRUCTION DETAILS
DEPTH (feet) No. Sample Blows/ foot	(mqq)	NAME (USCS Symbol): color, moist, % by weight, cementation, react. w/HCl, geo. inte			AND/OR DF	RILLING REMARKS
		Surface Elevation: fms	sl		fl	ush-mount surface casing
1 - 1 NA 3 - 4 - 5 - 1 NA 5 - 1 NA 6 - 7 - 8 - 9 - 1 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 10		ill- (FESL Ash) Ash, black coal pieces, lastic, glass ATIVE brown silt (ML) and some fine seconing saturated at 6.3' bgs. ampler refusal at 6.5' bgs. Advance 4 1/4" HSA to 9.1' bgs. segin HQ Core run at 9.1' bgs. (20): 0" (0%) (20): 0" (0%) (20): 0" (0%) (20): 21" (43%)	` clinker, brick 		•	 ——4" permanent stee casing to 9.1' bgs ——Cement/bentonite grout ——Bedrock
18 19 20 21 22 23 24 25		Run #3 Pepth: 14.1-19.1 'bgs Rec: 60" (100%) RQD: 37" (62%) Run #4 Pepth: 19.1-24.0 'bgs Rec: 59" (99%) RQD: 43" (72%)			•	Open Bedrock Corehole (reamed to 3 7/8")
23 26 27 28 29 30 31 32 33 34 35 	(I L n o a g c R *(ithology: LOCKPORT FORMATION Penfield Dolostone Member) ight to medium gray, fine-grained, med noderately hard to hard, siliceous Dolos ccassional to frequent argillaceous par ccassional shale interbeds. Zones of c nd vugs are present. Secondary crysta ypsum) infilling of bedding planes, joint ommon. Rock coring details: closely spaced partings 9.1-12' bgs	stone, with tings and pccassional pits Ilization (calcite or			
35 36 37 38 39 40	*:	rubbly seam at 10.0' severely weathered seams at 10.3-10.8 short vertical joint at 11.5' rough vertical joints at 14.1-14.5', 14.8- short irregular vertical joint at 18.7-18.8 rough low angle joint at 21.7'	15.2'	- - - - - - - -		
				WE	ELL_OVM FESL	WELL LOGS 9-2010.GPJ (11/10

1684 Emersor PROJECT: LOCATION "B" Log of Well No. AR-INUSTIAN 17704 ELEVATION AND DATUM: BORING LOCATION: DRILLING CONTRACTOR: DATE STARTED: DATE FINISHED: NOTHNAGLE TOTAL DEPTH: 44600 **DRILLING METHOD:** SCREEN INTERVAL HSA DEPTH TO FIRST DRILLING EQUIPMENT: COMPL CASING: (MT 550 WATER: LOGGED BY: SAMPLING METHOD: Hi MAR 404 RESPONSIBLE PROFESSIONAL: HAMMER WEIGHT: DROP: REG. NO. RN. SAMPLES DEPTH (feet) Semple No. Semple OVM Reading (ppm) DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, plast., WELL CONSTRUCTION DETAILS Blows/ Foot consistency, structure, cementation, react, withCL geo, inter AND/OR DRILLING REMARKS Surface Elevation: C-211- Biours (1042 ty) topsoll, day, loose -011-205- waste/fill. byww. silt (one) on/ NA 7 fine said, three way Side, glass is all clinka real endos. Moist-floorighest three time would gread. 4 0-61, 44 NA 8 0-61-10- 5m shole / 25 Bachade frequents 1.0-1.5. Saturatud i Ad (61-10) in / 60000 aith mytip. Toose throughost-ML fine said not sill, sold, saturated northed while dark great to light thing mous - slight sight alor. No ist softon 2.5' of sample-8 3 NAR (0)50 * have visited Sitty Ja sampter refusil. No sample 12.0 [12.24/0] * advance official it's permanent strail ref PAL 14. solf" voller bit th zapulas hef 16 PEN casing to 1914 ge Byin How Ros @ 14/4 * Duill vote (8 9/25/10 -2 2 min. /ft * AND witter LOREHOLE Run # 1 14-24 λ Rez: 40-40' (119' - 99'). ROD: 32440' (12' - 35% * HALE Flucher ∇ with ostable where Littl: Lack, port fotomter? 王公 to remove drill HARD Gray Linestone " of shale intertrop whip, well pupped 24 frequent incoloranical privales along shate bod dry & allowed to throughout the smill 1-2 min ungs throughout recour. all vent. fratis - open horizontal firstons prevalent where In usue are media borrent shale interheds domainste. No ves antin. W-1 (12/95) Project No. **Geomatrix Consultants** Figure W-1 (Blank)

-

BORING LOCATION: 1684 Emerson Street DRILLING CONTRACTOR: Nothnagle Drilling DRILLING METHOD: 4 1/4" Diameter HSA DRILLING EQUIPMENT: CME 850 GAMPLING METHOD: 4' Macrocore Sampler HAMMER WEIGHT: 140 DROP: 30" Samples Sourdiant for the state of the stat	fmsl DATE STAR 9/27/10 TOTAL DEP 24.0 fbgs DEPTH TO WATER: LOGGED BY MAC RESPONSIB RM	TH: FIRST COI LE PROFESSI	MPL.	DATUM: DATE FINISHED: 9/28/10 SCREEN INTERVAL 14.0-24.0 fbgs CASING: 4" steel REG. NO.
ORILLING METHOD: 4 1/4" Diameter HSA ORILLING EQUIPMENT: CME 850 SAMPLING METHOD: 4' Macrocore Sampler HAMMER WEIGHT: 140 DROP: 30" HAME (USCS Symbol): color, moist, % by weight, pla cementation, react. w/HCl, geo. inter.	DATE STAR 9/27/10 TOTAL DEP 24.0 fbgs DEPTH TO WATER: LOGGED BY MAC RESPONSIB RM	TH: FIRST COI LE PROFESSI	ONAL:	9/28/10 SCREEN INTERVAL 14.0-24.0 fbgs CASING: 4" steel
ORILLING EQUIPMENT: CME 850 GAMPLING METHOD: 4' Macrocore Sampler HAMMER WEIGHT: 140 DROP: 30" Image: Samples of the second sec	TOTAL DEPT 24.0 fbgs DEPTH TO WATER: LOGGED BY MAC RESPONSIB RM	FIRST COL	ONAL:	SCREEN INTERVAL 14.0-24.0 fbgs CASING: 4" steel
SAMPLING METHOD: 4' Macrocore Sampler HAMMER WEIGHT: 140 DROP: 30" SAMPLES DESCRIPTION Image: Sample in the second sec	DEPTH TO WATER: LOGGED BY MAC RESPONSIB RM	LE PROFESSI	ONAL:	CASING: 4" steel
SAMPLES DESCRIPTION Image: Second s	LOGGED BY MAC RESPONSIB RM	LE PROFESSI		
SAMPLES DESCRIPTION Image: Second s	RESPONSIB RM	WELL		REG. NO.
SAMPLES DESCRIPTION Liping and big			CONOT	
Image: Big State Image: Big State <td< td=""><td></td><td>,</td><td></td><td>L RUCTION DETAILS LLING REMARKS</td></td<>		,		L RUCTION DETAILS LLING REMARKS
			flue	h mount ourfood again
Topsoil (ML) brown silt and fine sand, loos	e dry /			sh-mount surface casing
1 NA 0 Iopsoil (ML) brown silt and fine sand, loos 2 1 NA 0 Fill: brown silt with fine sand (ML), trace as coal clinker, coal clinders. Trace fine round Moist throughout. 4 - - - - 5 - - - - 6 - 2 NA 0 Fill. as above. Saturated	sh, brick, glass,	•		
8 9 10 3 NA 0 NATIVE dark grey to light tan-brown find sa (ML), soft, saturated top 6", slight septic oc 12 4 NA 0 sampler refusal at 12.2' bgs. 13 14 15 Advanced roller bit to 14.0' bgs.	and with silt dor.			Cement/bentonite grout
16 Begin NX bedrock core at 14.0' bgs. 17 Run #1 18 Depth: 14.0-24.0 'bgs 19 Rec: 119" (99%) 20 Lithology: LOCKPORT FORMATION 21 Lithology: LOCKPORT FORMATION 22 Light to medium gray, fine-grained, mediur 23 moderately hard to hard, siliceous Dolostor 24 Creation occassional to frequent argillaceous parting	ne, with gs and		•	 Bedrock Open Bedrock Corehole (reamed to 3 7/8")
24- occassional shale interbeds. Zones of occashing view of and vugs are present. Secondary crystalliz gypsum) infilling of bedding planes, joints a common. 26- gypsum) infilling of bedding planes, joints a common. 28- Rock coring details: 29- *moderately closely spaced partings throug 30- *vertical joint at 17.8-18.0' bgs 31- *rough high angle joint at 18.3-18.6' 32- *vug with secondary gypsym at 21.7' 33- 22.4-22.5' 35- *rough vertical joint at 21.7-22.0' 36- 37-	ration (calcite or and vugs is ghout			
38 <u>-</u> 39 <u>-</u>				
40		WELL_0	M FESL W	/ELL LOGS 9-2010.GPJ (11/10

769 Emasser PROJECT: LOCATION "A" Log of Well No. LAB-LOL SVI 16477 DA ELEVATION AND DATUM: SIA **BORING LOCATION:** C Enere DATE STARTED: DRILLING CONTRACTOR: DATE FINISHED: 9125 DRILLING METHOD: TOTAL DEPTH: SCREEN INTERVAL: DEPTH TO FIRST **DRILLING EQUIPMENT:** COMPL CASING: WATER: LOGGED BY: SAMPLING METHOD: 4 E. 140 **RESPONSIBLE PROFESSIONAL** HAMMER WEIGHT: DROP: REG. NO. SAMPLES OVM Reading (ppm) DESCRIPTION DEPTH (feet) NAME (USCS Symbol): color, moist, % by weight, plast., WELL CONSTRUCTION DETAILS Sample No. Sample Blows/ consistency, structure, cementation, react. witiCi. geo. Inter. AND/OR DRILLING REMARKS Surface Elevation: RAC 0-1.01) brown sitt if the lower, day (typeril). (DYRS/4 (ML) Ŋ .Wegd 2 1.0-2.21 Fill binus for w/ si H, trave bide pieces coarse cyster Linestone/sh. To Augur Hungh Jeand, house, duy-4 b * install 4"8 porn casing & 1055/20 F * ND AVALYTICAL Ŵ SAMPLE CALECTED 12 14 4 F 20 ي 24-26 W-1 (12/95) Project No. **Geomatrix Consultants** Figure



LABELIA	Subsurface Investigation FESL	BORING LAB 106 SHEET 70F 7
Associates, P.C. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	City of Rochester, New York	JOB # 210173 CHKD. BY:
CONTRACTOR: Nothnagle Drilling Co. DRILLER: Levin	BORING LOCATION: A S./ J. F. GROUND SURFACE ELEVATION START DATE: 9/29/10 END DATE: 9	DATUM
LABELLA RÉPRESENTATIVE: K R Miller) WATER LEVEL D	ATA
TYPE OF DRILL RIG: ATV CME Track AUGER SIZE AND TYPE: 4.25 Inch ID Hollow-stem	DATE TIME WATER	CASING REMARKS
OVERBURDEN SAMPLING METHOD: Standard 2" ID Split-spoons ROCK DRILLING METHOD: NX-& HQ Water Rotary Coring		
D E SAMPLE	SAMPLE DESCRIPTION	PID O
P T BLOWS NO. DEPTH -N-VALUE RECOVERY H / 6" (FEET) /RQD(%) (FEET)		READINGS T E S
27 R-4 25.5 58.0" 1002	Run 4 19 horiz. Frac @ 3.5" (horiz Frac @ 15", 41'	above 2)
28 30.3 94%	horiz Frac @ 15", 41'	, a 51"
29 x x x x y y	<u> </u>	
3@	1055 of 10-15 gal 2	water
31	detering run of	
6	EOR @ 30.5 'B	'G-
7 Ta Arl	aust - it stale - u	iel
8 Well	: developed using ris	pump
9 Perelojmen	the athra:	35t gal
10	extracted: Fairly	classing the
	extracted; fairly a post in Aral developm	that was a
12	1.2	
13		
14		
15		
16 LEGEND NOTE:	ç.	
LEGEND NOTE S - SPLIT SPOON SOIL SAMPLE	-	
M - MACROCORE SOIL SAMPLE		
C - ROCK CORE SAMPLE GENERAL NOTES:		
1) STRATIFICATION LINES REPRESENT APPROXIMATE BO	UNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE C	FRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES	AND UNDER CONDITIONS STATED, FLUCTUATIONS OF G	
MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PR	ESENT AT THE TIME MEASUREMENTS WERE MADE.	BORING #

RRLLING EQUIPMENT: CME 850 DEPTH TO FIRST COMPL CASING: AMPLING METHOD: 4' Macrocore Sampler LOG COMPL CASING: 4' steel AMMER WEIGHT: 140 DROP: 30' RESCRIPTION RESCRIPTION RESCRIPTION AMMER WEIGHT: 140 DROP: 30' RESCRIPTION WELLCONSTRUCTION DETAILS AMMER WEIGHT: 140 DROP: 30' Topsail (ML) brown sill and fine sand, loose, dry. Auger through obstacle between 4.0 and 5.0' bgs. 141 Topsail (ML) brown sill and fine sand, loose, dry. Advance 4.14' HAS to 10.5' bgs. Begin HQ Core run at 10.5' bgs. 122 Num #1 Depth: 15.5 b ggs. Advance 4.14' HSA to 10.5' bgs. Bedrock 124 Rec. 60' (100%) RQD: 55' (25%) Bedrock Common topsoing with grow grows and topsoing with grows and topsoing with grows and topsoin	ROJECT: Former Roches		on Street Landfill- SVI Investigation w York	Log	of Well N	o. LAB-106
RILLING CONTRACTOR: Nothingle Drilling DATE STARTED: 922/10 DATE STARTED: 922/10 DATE STARTED: 922/10 DATE STARTED: 922/10 RILLING METHOD: 4 14" Diameter HSA TOTAL DEPTH: SCREEN INTERVI- 10.5-30.5 fbgs RILLING EQUIPMENT: CME 860 DEPTH TO IFIES COMPL. AMPLING METHOD: 4 14" date CASING: AMPLING METHOD: 4 14" steel CASING: AMMER WEIGHT: 140 DROP: 30" RESPONSIBLE PROFESSIONAL: Tage SAMPLES Maccare Clevation: Transition and file stand. loose, dry. Tage Tagesoli (ML) brown silt and fine sand, loose, dry. FILL brown fine sand with silt trace brick pieces, angular Tage Tagesoli (ML) brown silt and fine sand, loose, dry. FILL brown fine sand with silt trace brick pieces, angular Tage Tagesoli (ML) brown silt and fine sand, loose, dry. FILL brown fine sand with silt trace brick pieces, angular Tage Tagesoli (ML) brown silt and fine sand, loose, dry. FILL brown fine sand with silt trace brick pieces, angular Tage Tagesoli (ML) brown silt and fine sand, loose, dry. General brick pieces, angular Tage Tagesoli (ML) brown silt and fine sand, loose, dry. General brick pieces, angular Tage Tagesoli (ML) brown silt and fine sand, loose, dry. General brick pieces, angular Tage	ORING LOCATION	N: 176	69 Emerson Street		DATUM:	
RILLING METHOD: 4 1/4" Diameter HSA IDTAL DEPTH: SCREEN INTERVAL RILLING EQUIPMENT: CME 850 DEPTH TO FIRST COMPL. CASING: AMPLING METHOD: 4' Macrocore Sampler LOGGED BY; CASING: AMPLING METHOD: 4' Macrocore Sampler LOGGED BY; CASING: AMMER WEIGHT: 140 DROP. 30" RESPONSIBLE PROFESSIONAL: REG. NO. Edge State Commention: first MADOR DRULING REMARKS AMOOR DRULING REMARKS AMDOR DRULING REMARKS Macrocore Sampler Commention: first WELL CONSTRUCTION DETAILS 1 Image: State Topsoil (ML) brown silt and fine sand, loose, dry. FILL- brown fine samd with silt, trace brick pieces, angular Fill-brown fine samd with silt, trace brick pieces, angular Image: State pieces, Sta	RILLING CONTRA	CTOR:	Nothnagle Drilling	DATE STARTED:		
RILLING EQUIPMENT: CME 850 DEPTH TO FIRST COMPL CASING: AMPLING METHOD: CASING: 4' steel AMPLING METHOD: 4' Macrocore Sampler LOGGED BY; MACKRM Number of the steel of the ste	RILLING METHOD	D: 4 1/4	4" Diameter HSA	TOTAL DEPTH:		SCREEN INTERVAL
AMPLING METHOD: 4' Macrocore Sampler LOGGED FY: MACKRM AMMER WEIGHT: 140 DROP: 30° RESPONSIBLE PROFESSIONAL: REG. NO. RM The second	RILLING EQUIPM	ENT: (CME 850	DEPTH TO FIRS	T COMPL.	CASING:
AMMER WEIGHT: 140 DROP: 30° RESPONSIBLE PROFESSIONAL: REG. NO. RM 1 AMMPLES 0 DESCRIPTION (ML) forward, which gas network, commentance, network, gas networ	SAMPLING METHO	D: 4'1	Macrocore Sampler	LOGGED BY:		
SAMPLES Bit of the state is	AMMER WEIGHT:	140	DROP: 30"	RESPONSIBLE PR	OFESSIONAL	REG. NO.
1 1	E o T	MV (mq	NAME (USCS Symbol): color, moist, % by weight, pla			
1 Image: Construction of the second with silt, trace brick pieces, angular limestone shale gravel, loose, dry. 3	(fe Samp No. Blow	0 g		Г	flu	ush-mount surface casing
Image: Sampler refusal at 8.5' bgs. Cement/bentonite grout 9 Advance 4 1/4" HSA to 10.5' bgs. 10 Begin HQ Core run at 10.5' bgs. 11 Begin HQ Core run at 10.5' bgs. 12 Run #1 13 Depth: 10.5-15.5' bgs 14 Rec: 50.5' (92%) 15 ROD: 55' (92%) 16 Run #2 17 Depth: 15.5-20.5' bgs 18 Rec: 61'' (100%) 19 RDD: 50'' (98%) 20 Run #3 21 Depth: 20.5-25.5' bgs 22 Rec: 61'' (100%) 23 ROD: 58'' (94%) 24 Run #4 25 Depth: 2530.5' bgs 26 Rec: 61'' (100%) 27 RoD: 58'' (94%) 28 Lithology: LOCKPORT FORMATION (Penfield Dolostone Member) Lithology: LOCKPORT perfamed, medium-bedded moderately hard to hard, siliceous Dolostone, with occassional shale interbeds. Zones of occassional pits 31 occassional shale interbeds. Zones of occassional pits 33 gypsum) infling of bedding planes, joints and vugs is 34 common. 35 "vertical joint at 12.8-13'	2 1 NA 3 4 5 6 5		FILL- brown fine sand with silt, trace brick limestone shale gravel, loose, dry.	pieces, angular	•	
12 Run #1 Depth: 10.5-15.5 'bgs Bedrock 13 Depth: 10.5-15.5 'bgs Rec: 59.5' (99%) Bedrock 15 RDD: 55' (92%) Image: 100% Image: 100% Bedrock 16 Run #2 Depth: 15.5-20.5 'bgs Image: 100% Image: 100% Image: 100% 19 ROD: 60' (98%) Image: 100% Image: 100% Image: 100% Image: 100% 20 Run #3 Depth: 20.5-25.5 'bgs Image: 100% Image: 100% Image: 100% 21 Depth: 20.5-25.5 'bgs Rec: 60' (100%) Image: 100% Image: 100% Image: 100% 22 Rc: 60' (100%) ROD: 53' (94%) Image: 100%	8 9 10	0	Sampler refusal at 8.5' bgs. Advance 4 1/4" HSA to 10.5' bgs.			Cement/bentonite grout
18 Rec: 61" (100%) 19 RQD: 60" (98%) 20 Run #3 21 Depth: 20.5-25.5 'bgs 22 RcC: 60" (100%) 23 RQD: 58" (94%) 24 Run #4 25 Depth: 25.5-30.5 'bgs 26 RcC: 61" (100%) 27 RQD: 58" (94%) 28 Lithology: LOCKPORT FORMATION (Penfield Dolostone Member) Light to medium gray, fine-grained, medium-bedded 30 moderately hard to hard, siliceous Dolostone, with 31 occassional shale interbeds. Zones of occassional pits 33 and vugs are present. Secondary crystallization (calcite or gypsum) infilling of bedding planes, joints and vugs is common. 34 common. 35 Rock coring details: *cavities (0.1' dia.) at 11.1' and 12.2' bgs *vertical joint at 12.8-13'	12 13 14 15 16		Run #1 Depth: 10.5-15.5 'bgs Rec: 59.5" (99%) RQD: 55" (92%)		•	Bedrock
25 Depth: 25.5-30.5 'bgs 26 Rec: 61" (100%) 27 Example 28 Lithology: LOCKPORT FORMATION 29 Lithology: LOCKPORT FORMATION 29 Light to medium gray, fine-grained, medium-bedded 30 moderately hard to hard, siliceous Dolostone, with 31 occassional to frequent argillaceous partings and 32 occassional shale interbeds. Zones of occassional pits 33 gypsum) infilling of bedding planes, joints and vugs is 34 common. 35 Rock coring details: *cavities (0.1' dia.) at 11.1' and 12.2' bgs *vertical joint at 12.8-13'	18 19 20 21 22		Rec: 61" (100%) RQD: 60" (98%) Run #3 Depth: 20.5-25.5 'bgs Rec: 60" (100%)		•	Corehole (reamed
Light to medium gray, fine-grained, medium-bedded moderately hard to hard, siliceous Dolostone, with occassional to frequent argillaceous partings and occassional shale interbeds. Zones of occassional pits and vugs are present. Secondary crystallization (calcite or gypsum) infilling of bedding planes, joints and vugs is common. Rock coring details: *cavities (0.1' dia.) at 11.1' and 12.2' bgs *vertical joint at 12.8-13' WELL_OVM FESL WELL LOGS 9-2010.GPJ (11/1	25 26 27		Depth: 25.5-30.5 'bgs Rec: 61" (100%) RQD: 58" (94%) Lithology: LOCKPORT FORMATION			
36 Rock coring details: 37 *cavities (0.1' dia.) at 11.1' and 12.2' bgs 38 *vertical joint at 12.8-13' 39 WELL_OVM FESL WELL LOGS 9-2010.GPJ (11/1)	30 31 32 33 33 34		Light to medium gray, fine-grained, medium moderately hard to hard, siliceous Dolosto occassional to frequent argillaceous partin occassional shale interbeds. Zones of occ and vugs are present. Secondary crystalliz gypsum) infilling of bedding planes, joints	ne, with gs and cassional pits zation (calcite or		
WELL_OVM FESL WELL LOGS 9-2010.GPJ (11/1	36 37 38 39		*cavities (0.1' dia.) at 11.1' and 12.2' bgs			
Project No. Page 1 of 1	40 – Project No.			trix Consultants	WELL_OVM FESL	



Project No.	2599.0	Page 1	of	Test Pit No.	KS-1
Project Name	Klein Steel Facility				
Client	Day Environmenta	l, Inc. 40 Comm	ercial Street, Roche	ester, New York	
Elevation	533.5	Weather	Overcast, 40°	Inspector	E. Ashley
Date Started	10-24-02	Completed	10-24-02	Operator	John
Backhoe Subco	ontractor Arrow (Contracting, Inc.		Equipment	CAT 315B excavator

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
Surrace		~~~~~	TOPSOIL, little roots, 1-4 foot diameter boulder
			1'2" Compact red-brown damp SILT, some fine sand, some gravel, little cobbles,
2			few boulders (Probable fill)
4			
			4'5"
			Compact to dense red-brown moist SILT, some fine sand, little gravel, few cobbles, few boulders
6			
			7'8"
8			Refusal at 7'8"
10			
10			
12			Notes:
			 Sides vertical. Dry on completion.
			3. Survey elevation referenced from storm manhole rim elevation 535.37 on the north side of the site.
14			



Project No.	2599.0	Page 1	of	Test Pit No.	KS-2	
Project Name		ity, Emerson Street				
Client	Day Environmer	ital, Inc. 40 Comme	ercial Street, Roch	ester, New York		
Elevation	529.5	Weather	Overcast, 40°	Inspector	E. Ashley	
Date Started	10-24-02	Completed	10-24-02	Operator	John	
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator						

Depth Below	Sample	Depth of	Soil and Rock Classifications
Surface	Number	Sample	Remarks
2			TOPSOIL, trace asphalt
			2'6" Compact to dense brown mottled damp SILT, some fine sand, little gravel, few cobbles, few boulders
4			
			4'6"'4'6"'4'6"'4'6"'4'6"'4'6"'4'6"'4'6"'_6"'_6''6"'_6''6"'_6''_6''6"'_6''6"'_6''_6'
6			
8			
10			
12			
14			 Notes: Sides vertical. Dry on completion. Survey elevation referenced from storm manhole rim elevation 535.37 on the north side of the site.



Project No.	2599.0	Page 1	of _1	Test Pit No.	KS-3		
Project Name	Klein Steel Facilit						
Client	Day Environment	al, Inc. 40 Commo	ercial Street, Roche	ester, New York			
Elevation	530.1	Weather	Overcast, 40°	Inspector	E. Ashley		
Date Started	10-24-02	Completed	10-24-02	Operator	John		
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator							

Depth		Depth	Soil and Rock Classifications
Below	Sample	of	
Surface	Number	Sample	Remarks
			TOPSOIL, little roots 1'1" Compact to dense red-brown mottled damp SILT, some fine sand, little
2			gravel, few cobbles, few boulders
4			3'0"3'0"
6			
8			
10			
12			
14			 Notes: Sides vertical. Dry on completion. Survey elevation referenced from storm manhole rim elevation 535.37 on the north side of the site.



Project No.	2599.0	Page 1	of _1	Test Pit No.	KS-4		
Project Name	Klein Steel Facility	y, Emerson Stree	t, Rochester, New	York			
Client	Day Environmenta	l, Inc. 40 Comm	ercial Street, Roch	ester, New York	14614		
Elevation	532.8	Weather	Overcast, 40°	Inspector	E. Ashley		
Date Started	10-24-02	Completed	10-24-02	Operator	John		
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator							

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Depth Below	Sample	Depth of	Soil and Rock Classifications
Surface	Number	Sample	Remarks
2			TOPSOIL, little roots <u>Compact to dense red-brown mottled damp SILT, some fine sand, little</u> gravel, few cobbles, few boulders
4	S-1	3'6"	Hard digging below 4'
6			
8			8'0"
10			Refusal on bedrock at 8'0"
12			
14			 Notes: Sides vertical. Dry on completion. Survey elevation referenced from storm manhole rim elevation 535.37 on the north side of the site.



Project No.	2599.0	Page 1	of 1	Test Pit No.	KS-5		
Project Name	Klein Steel Facilit						
Client	Day Environment	al, Inc. 40 Commo	ercial Street, Rocl	nester, New York	14614		
Elevation	535.1	Weather	Overcast, 40°	Inspector	E. Ashley		
Date Started	10-24-02	Completed	10-24-02	Operator	John		
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator							

Depth	Samula	Depth of	Soil and Rock Classifications
Below Surface	Sample Number	Sample	Remarks
			TOPSOIL, little roots
			1'0"
			Compact to dense red-brown mottled damp SILT, some fine sand, little
2			gravel, few cobbles, few boulders
			Grades to dense below 4'
4			
6			
8			
			Refusal at 8'0"
10			
12			
14			Notes:
			1. Sides vertical.
			 Dry on completion. Survey elevation referenced from storm manhole rim elevation 535.37
			on the north side of the site.
14			



Project No.	2599.0	Page 1	of	Test Pit No.	KS-6
Project Name	Klein Steel Facilit	y, Emerson Stree	t, Rochester, New	York	
Client	Day Environment	al, Inc. 40 Comm	ercial Street, Roch	ester, New York	14614
Elevation	529.9	Weather	Overcast, 40°	Inspector	E. Ashley
Date Started	10-24-02	Completed	10-24-02	Operator	John
Backhoe Subc	ontractor Arrow	Contracting, Inc.		Equipment	CAT 315B excavator

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
Juilace	1 (unitori		TOPSOIL, little roots
			1'0"
			Compact to dense red-brown mottled damp SILT, some fine sand, little
2			gravel, few cobbles, few boulders
<u> </u>			
	,		
			4'0"
4			Refusal at 4'0"
6	1		
8	<u> </u>	<u> </u>	
10	<u></u>		4
12		L	4
			Notes: 1. Sides vertical.
			2. Dry on completion.
			 Survey elevation referenced from storm manhole rim elevation 535.37 on the north side of the site.
14			



Project No.	2599.0	Page 1	of _1	_ Test Pit No.	KS-7		
Project Name	Klein Steel Facility	, Emerson Street	t, Rochester, Nev	v York			
Client	Day Environmental	, Inc. 40 Comm	ercial Street, Roc	hester, New York	14614		
Elevation	532.1	Weather	Overcast, 40°	Inspector	E. Ashley		
Date Started	10-23-02	Completed	10-23-02	Operator	John		
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator							

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
Survee			TOPSOIL, little roots, few cobbles, few boulders (surface)
			0'8"
			Compact to dense red-brown mottled damp SILT, some fine sand, little
			gravel, few cobbles, few boulders
2			
4			
			4'9"
			Refusal on bedrock at 4'9"
6			
8			
10			
12			
			Notes:
			 Sides vertical. Dry on completion.
			3. Survey elevation referenced from storm manhole rim elevation 535.37
			on the north side of the site.
14			



Project No.	2599.0	Page 1	of 1	Test Pit No.	KS-8	
Project Name	Klein Steel Facility					
Client	Day Environmenta	l, Inc. 40 Comm	ercial Street, Roch	ester, New York		
Elevation	532.8	Weather	Overcast, 40°	Inspector	E. Ashley	
Date Started	10-23-02	Completed	10-23-02	Operator	John	
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator						

Depth	Comple	Depth of	Soil and Rock Classifications	
Below Surface	Sample Number	oi Sample	Remarks	
			TOPSOIL, little roots, few cobbles, few boulders (surface)	
				1'0"
			Firm grey damp SILT, trace sand	
2			Compact to dense red-brown mottled moist SILT, little fine sand, little	_1'9"
4			gravel, few cobbles	
	S-1	3'0"		
4				
			Hard digging below 5'	
6				
				7'0"
			Refusal on bedrock at 7'0"	
8				
10				
10	1		4	
12				
			Notes: 1. Sides vertical.	
			2. Dry on completion.	5 27
			3. Survey elevation referenced from storm manhole rim elevation 53: on the north side of the site.	5.57
14				



Project No.	2599.0	Page 1	of <u>1</u>	Test Pit No.	KS-9	
Project Name	Klein Steel Facility	y, Emerson Street	t, Rochester, New	York		
Client	Day Environmenta	l, Inc. 40 Comm	ercial Street, Roche		14614	
Elevation	533.4	Weather	Overcast, 40°	Inspector	E. Ashley	
Date Started	10-23-02	Completed	10-23-02	Operator	John	
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator						

Below Surface Sample of Sample Remarks TOPSOIL, little roots, few cobbles (surface) TOPSOIL, little roots, few cobbles (surface) Compact tan damp SILT, some fine sand, little gravel, the boulders	1'1"
TOPSOIL, little roots, few cobbles (surface) Compact tan damp SILT, some fine sand, little gravel, to	
	few cobbles, few
2	
4 S-1 4'0" Grades to dense, moist below 4'	
4 S-1 4'0" Grades to dense, moist below 4	
Hard digging below 5'	
6	
Refusal at 6'5"	6'5"
8	
10	
12	
Notes:	
1.Sides vertical.2.Dry on completion.	
3. Survey elevation referenced from storm manhole	rim elevation 535.37
on the north side of the site.	



Project No.	2599.0	Page <u>1</u>	of	Test Pit No.	KS-10
Project Name	Klein Steel Facility	, Emerson Stree	t, Rochester, New	York	14/14
Client	Day Environmenta	l, Inc. 40 Comm	ercial Street, Roche	ester, New York	14014
Elevation	536.9	Weather	Overcast, 40°	Inspector	E. Ashley
Date Started	10-23-02	Completed	10-23-02	Operator	John
Backhoe Subc	ontractor Arrow	Contracting, Inc.		Equipment	CAT 315B excavator

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Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
Builace	1 (uniber		BLASTED ROCK FRAGMENTS, trace concrete baluster, trace tire
2			<u>TOPSOIL, little roots</u> <u>1'0" to 2'0"</u> <u>1'9"</u> Firm brown moist TOPSOIL FILL, little roots, trace plastic, few cobbles
4			3'0" Compact to dense red-brown damp SILT, some fine sand, little gravel few cobbles, few boulders Hard digging below 4'
	S-1	4'6"	
6			Grades to little cobbles below 6'
8			
			8'10" Refusal at 8'10"
10			
12			
14			 Notes: Sides vertical. Dry on completion. Survey elevation referenced from storm sewer rim elevation 530.67 on the south side of the site.



Project No.	2599.0	Page 1	of 2	Test Pit No.	KS-11
Project Name	Klein Steel Facility	, Emerson Stree	t, Rochester, New Y	York	
Client	Day Environmenta	l, Inc. 40 Comm	ercial Street, Roche	ster, New York	14614
Elevation	541.0	Weather	Overcast, 40°	Inspector	E. Ashley
Date Started	10-24-02	Completed	10-24-02	Operator	John
Backhoe Subc	ontractor Arrow (Contracting, Inc.		Equipment	CAT 315B excavator

Depth	~ -	Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
			TOPSOIL
			1'2"
			Compact brown moist SILT, little gravel, little shot rock, trace sand, trace
2			concrete, plastic, wood, brick, metal (FILL)
4			3'8"
			Firm black moist TOPSOIL, little organic, little wood, trace glass, few boulders to 36 inches in diameter (FILL)
6	S-1	6'0"	
8			
10			4
			10'6"
			Firm brown moist SILT, little gravel, trace sand, few cobbles, few boulders
12	S-2	12'0"	4
			· · · · · · · · · · · · · · · · · · ·
			14'0"
14			I+0



Project No.	2599.0	Page 2	of 2	Test Pit No.	KS-11	
Project Name	Klein Steel Facility					
Client	Day Environmenta	l, Inc. 40 Comm	ercial Street, Roc	nester, New York		
Elevation	541.0	Weather	Overcast, 40°	Inspector	E. Ashley	
Date Started	10-24-02	Completed	10-24-02	Operator	John	
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator						

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Depth	6	Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
16			Test pit terminated at 14'0"
18			
20			
22			
24			
26			 Notes: 1. Sides vertical. 2. Dry on completion. 3. Survey elevation referenced from storm manhole rim elevation 535.37 on the north side of the site.



Project No.	2599.0	Page 1	of	Test Pit No.	KS-12	
Project Name	Klein Steel Facilit	y, Emerson Stree	t, Rochester, New `	York		
Client	Day Environmenta	al, Inc. 40 Comm	ercial Street, Roche	ester, New York		
Elevation	536.4	Weather	Overcast, 40°	Inspector	E. Ashley	
Date Started	10-23-02	Completed	10-23-02	Operator	John	
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator						

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
2		Sumpro	Firm black moist TOPSOIL, little ash, glass, plastic, bottles, trace tire, one rusted/decomposed 50 gallon drum (slight odor noted, no detectable reading on the Mini-Rae) (FILL)
4			
6	S-1	5'6"	4'10" Firm tan moist SILT, trace clay, trace sand, trace gravel, few cobbles
8			8'0"
10			Refusal at 8'0"
12			
14			 Notes: Sides vertical. Dry on completion. Survey elevation referenced from storm manhole rim elevation 535.37 on the north side of the site.



Project No.	2599.0	Page 1	of	Test Pit No.	KS-13
Project Name	Klein Steel Facilit				
Client	Day Environmenta	al, Inc. 40 Comm	ercial Street, Roch	ester, New York	14614
Elevation	547.3	Weather	Overcast, 40°	Inspector	E. Ashley
Date Started	10-23-02	Completed	10-23-02	Operator	John
Backhoe Subco	ontractor Arrow	Contracting, Inc.		Equipment	CAT 315B excavator

Depth	Comments	Depth of	Soil and Rock Classifications
Below Surface	Sample Number	oi Sample	Remarks
2			Firm brown moist SAND, some gravel, trace silt (FILL)
4			1'0" to 3'0" Firm black moist TOPSOIL, little organic, wood, plastic, concrete pieces, asphalt, cobbles (FILL)
6			
8			
10			
12			
14			



Project No.	2599.0	Page 2	of	Test Pit No.	KS-13	
Project Name	Klein Steel Facilit	y, Emerson Stree	t, Rochester, Ne	w York		
Client	Day Environment	al, Inc. 40 Comm	ercial Street, Ro	chester, New York	14614	
Elevation	547.3	Weather	Overcast, 40°	Inspector	E. Ashley	
Date Started	10-23-02	Completed	10-23-02	Operator	John	
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator						

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
Guriace	Tumber	Sample	Test pit terminated at 14'0" in fill
16			
			· · ·
18			
20			
	-		
22			
24			
26			
			Notes: 1. Sides vertical.
			 Dry on completion. Survey elevation referenced from storm sewer rim elevation 530.67 on
			the south side of the site.
28			



Project No.	2599.0	Page 1	of	1	_ Test Pit No.	KS-14
Project Name	Klein Stee	el Facility, Emerson Street	t, Roches	ter, New	/ York	
Client	Day Envi	ronmental, Inc. 40 Comme	ercial Str	eet, Roc	hester, New York	14614
Elevation	543.5	Weather	Overca	st, 40°	Inspector	E. Ashley
Date Started	10-23-02	Completed	10-23-0)2	Operator	John
Backhoe Subcontractor		Arrow Contracting, Inc.			Equipment	CAT 315B excavator

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
Burlace	Tumber	Sample	Firm brown moist SAND, little gravel, trace silt, few cobbles (FILL)
2			Firm black moist TOPSOIL, some gravel, little roots, little organic, asphalt, concrete pieces, brick, wire, blasted rock fragments (FILL)
4			
6			
8			
10			
12			11'9"11'9"
			 Notes: Sides caved below 9'. Dry on completion. Survey elevation referenced from storm sewer rim elevation 530.67 on the south side of the site.
14			



Project No.	2599.0	Page 1	of	Test Pit No.	KS-15	
Project Name	Klein Steel Facilit	y, Emerson Stree	t, Rochester, Nev	v York		
Client	Day Environment	al, Inc. 40 Comm	ercial Street, Roc		14614	
Elevation	544.2	Weather	Overcast, 40°	_ Inspector	E. Ashley	
Date Started	10-23-02	Completed	10-23-02	_ Operator	John	
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator						

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Depth		Depth	Soil and Rock Classifications	
Below Surface	Sample Number	of Sample	Remarks	
2	INUMBER	Sample	 FILL: Firm brown to grey mottled moist to wet 80% silt, sand, gravel 20% rock fragments, logs, concrete fragments, carpet, brick 3' diameter topsoil pocket noted at 3' 	
4				
6				5'9"
8			BLASTED ROCK FRAGMENTS	
10			TOPSOIL	9'10"
12			Compact red-brown moist SILT, some fine sand, little gravel	10'6"
14				14'0"



Project No.	2599.0	Page 2	of	2	Test Pit No.	KS-15
Project Name	Klein Steel Facilit	y, Emerson Street	t, Rochest	er, New Y	/ork	
Client	Day Environment	al, Inc. 40 Comme	ercial Stre	et, Roche	ster, New York	<u>14614</u>
Elevation	544.2	Weather	Overcas	t, 40°	Inspector	E. Ashley
Date Started	10-23-02	Completed	10-23-0	2	Operator	John
Backhoe Subcontractor Arrow Contracting, Inc. Equipment CAT 315B excavator						

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Depth		Depth	Soil and Rock Classifications
Below	Sample Number	of Sample	Remarks
Surface	INUITIDEI	Sample	Test pit terminated at 14'0"
16			
18			
20	<u> </u>		
22			
24			
4 **		<u> </u>	
26			
			Notes: 1. Sides raveled continuously between 5 feet and 10 feet while digging.
			2 Dry on completion
			 Bry on completion. Survey elevation referenced from storm sewer rim elevation 530.67 on the south side of the site.
28			



Project No.	2599.0	Page _1	of	Test Pit No.	KS-16
Project Name	Klein Steel Facilit	y, Emerson Stree	t, Rochester,	New York	
Client	Day Environmenta	al, Inc. 40 Comm	ercial Street,	Rochester, New York	14614
Elevation	544.8	Weather	Overcast, 4	<u>0°</u> Inspector	E. Ashley
Date Started	10-23-02	Completed	10-23-02	Operator	John
Backhoe Subco	ontractor Arrow	Contracting, Inc.		Equipment	CAT 315B excavator

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
		Sumpro	Firm black moist TOPSOIL, little organic, trace to little wood, wire, tires, brick, concrete pieces to 3'x3'x2', plastic, glass, asphalt, metal pipe, 1 metal C-channel (FILL)
2			
4	S-1	4'0"	
6			
8			
10			
12			Little to some blasted rock fragments below 11'0"
			14'0"
14			<u>[40]</u>



Project No.	2599.0	Page 2	of	Test Pit No.	KS-16
Project Name	Klein Steel Facility	, Emerson Stree	t, Rochester, New	York	
Client	Day Environmenta	l, Inc. 40 Comm	ercial Street, Rocl		
Elevation	544.8	Weather	Overcast, 40°	Inspector	E. Ashley
Date Started	10-23-02	Completed	10-23-02	Operator Equipment	John
Backhoe Subc	CAT 315B excavator				

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	Depth	Soil and Rock Classifications
Sample	of	Remarks
Number	Sample	Test pit terminated in the fill at 14'0"
		Test pit terminatet in the first at Tro
*		
1		
		Notes: 1. Sides sloughed from surface while excavating.
		2 Dry on completion
		 Bry on completion. Survey elevation referenced from storm sewer rim elevation 530.67 on the south side of the site.
		me south side of the site.
	Sample Number	Sample of

	H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists					TEST BORING REPORT	BORING NO. B123	
CLIENT:	PROJECT: FORMER EMERSON STREET LANDFILL MODIFIED REMEDIAL INVESTIGATION CLIENT: CITY OF ROCHESTER CONTRACTOR: NOTHNAGLE DRILLING							
			CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	CEDURES	(See Pla ELEVATION:
TYPE INSIDE DIAMETER (IN) HAMMER WEIGHT (LB) HAMMER FALL (IN)			Auger 4-1/4 	S 1-3/8 140 30		RIG TYPE: CME-75, Truck-Mo BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers t while standard sa	uck-Mounted DATUM: I.D. H.S. Augers START: 14 May FINISH: 14 May gers to 8 ft. DRILLER: S. Lor	
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	ND REMARKS
 		5 3 2 2	S1 20"/24"	3.0		Loose brown iron-stained A sand-size particles, with		
		5 55 100/.3	-\$2 12"/18"	8.0 9.3	8.8 9.3	Same, except with brick, s Hard, highly weathered, g wetLOCKPORT Bottom of	ray-brown, f	ine-grained, DOLOST
 - 15 						 Notes: Backfilled borehole to OVA readings from sample S1 = 10 ppm methane in mative materials No OVA readings above in the overlass of the overlass ov	le screening fill materia background i ioactivity m screening o te) and port	noted as follows: I and non-detect in In the breathing zonu Heter readings above In the breathing ; ion of S2 was submit
25	W	ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
	DEPTH (FT) TO:					OVEDBUDDEN		
DATE	TIME ELAPSED TIME (HR)	TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	O Open End Rod T Thin Wall Tube ROCK CO U Undisturbed Sample		(LIN FT): 9.3 (LIN FT):
						S Split Spoon	SAMPLES:	2\$

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists				·s,		TEST BORING REPORT	BORING NO. B124		
PROJECT: CLIENT: CONTRACT	FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: Yellow Freight (See Plan)								
ITEM CAS			CASING	DRIVE CASING SAMPLER I		DRILLING EQUIPMENT & PROD	ELEVATION:		
TYPE INSIDE DIAMETER (IN) HAMMER WEIGHT (LB) HAMMER FALL (IN)		S 1-3/8 140 30		 	RIG TYPE: CME-75, Truck-Mo BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers	I.S. Augers START: 14 May 1993 FINISH: 14 May 1993			
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSI	FICATION AND REMARKS		
 		4 3 2 2	\$1 14"/24"	3.0		Loose brown to black ASH, w slag, trace twigs and roots	with glass and fine gravel-size , dry. -FILL-		
 - 10		5 6 100/.5	· s2 11"/24"	8.0	9.2	Loose brown to black ASH, with wood and brick, dampFILL- Hard, highly weathered, gray-brown, fine grained, DOLOSTONE. -LOCKPORT FORMATION- Bottom of Boring at 10.0 ft.			
 - 15 -						 OVA readings from samp S1 = 2 ppm methane S2 = 6.5 ppm methane No OVA readings above No explosiometer or rational structure 	ground surface with soil cuttings. ole screening noted as follows: background in breathing zone. dioactivity meter readings above screening or in the breathing zone.		
	1	WATER LEVEL	DATA			SAMPLE IDENTIFICATION	SUMMARY		
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	OVERBURDEN (LIN FT): 10.0 ROCK CORED (LIN FT): SAMPLES: 2S		
							BORING NO. B124		

Co	nsulting	YORK, ROCH Geotechnic Sts and Hydr	cal Enginee	rs,		TEST BORING REPORT		BORING NO. B125
CLIENT: CITY OF ROCHESTER								FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: DeCarolis
			DRIVE	CORE	DRILLING EQUIPMENT & PRO	ICEDURES	Trucking (See Plan)	
IYPE INSIDE DIAMETER (IN) HAMMER WEIGHT (LB) HAMMER FALL (IN)		S 1-3/8 140 30		RIG TYPE:Diedrich D-50, Tr BIT TYPE: 2-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers	ATUM: TART: 16 May 1993 INISH: 16 May 1993 RILLER: R. Bauer &A REP: M. Corrigan			
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	IFICATION AN	D REMARKS
 		50 40 8 8	S1 5"/24"	3.0	6.5	Dense black and light gray trace cinders, moist.	ASH, iron s -FILL-	tained, with glass,
 - 10		1 1 2 1	.\$2 10"/24"	8.0		Soft brown to black clayey material, wet. -MAN	SILT, with RSH DEPOSIT-	wood and other organic
 - 15		50/.2	\$3 2"/3"	13.0 13.2	11.5 13.0		ered, medium KPORT FORMATI Boring at 13	[ON-
-20						Notes: 1. Backfilled borehole to 2. OVA readings from sampl S1 = ppm S2 = 20 ppm metha S3 = 25 ppm metha 500 ppm methane inside background in the brea 3. No explosimeter or radi background from sample	le screening ane e borehole. athing zone. ioactivity me	noted as follows: No OVA readings above
WATER LEVEL DATA						SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED TIME (HR)	DEPTI BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	OVERBURDEN ROCK CORED SAMPLES:	

Co	nsulting	YORK, ROCHE Geotechnic sts and Hydr	al Enginee:	rs,		TEST BORING REPORT	BORING NO	D. B126
PROJECT: CLIENT: CONTRACT	CII	MER EMERSON Y OF ROCHES	STER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION	SHEET NO.	: DeCarolis
I	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	CEDURES ELEVATION	Trucking (See Plan) I:
TYPE INSIDE D HAMMER W HAMMER F.	EIGHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30		RIG TYPE: CME-75, Truck-Mc BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to while standard sam	I.S. Augers START: FINISH: 8.0 ft. DRILLER:	S. Spring
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AND REMARKS	
		4 3 3 2 2 1 100/.5	S1 20"/24" ·\$2 10"/24"	3.0 5.0 8.0 10.0	9.2	Loose black ASH with glass Mottled brown fine SAND, o weathered, gray-brown, (f -RESIDUAL SOIL /	FILL- , piece of rubber. -FILL- verlying hard, highly ine-grained DOLOSTONE) ABOVE LOCKPORT FORMATI Boring at 10.0 ft. ground surface with s	to completely ON- oil cuttings.
-20						 S2 = 3 ppm methane from 0 ppm in SAND No OVA readings above b 3. No explosimeter or radinground from sample screet 4. S1 submitted for full 1 	background in the brea ioactivity meter readi eening or in the breat ICLP analyses.	ngs above back-
	W	ATER LEVEL	DATA	· · · · · · · · · · · · · · · · · · ·		SAMPLE IDENTIFICATION	SUMMARY	
	IME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN (LIN FT): ROCK CORED (LIN FT):	10.0
-						S Split Spoon	SAMPLES: BORING NO.	2S B-126

Co	nsulting	YORK, ROCH g Geotechni sts and Hyd	cal Enginee	rs,		TEST BORING REPORT		BORING NO. B127		
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSO IY OF ROCHE INNAGLE DRI	STER	NDFILL MOD	IFIED REM	IED REMEDIAL INVESTIGATION FILE NO. 703 SHEET NO. 1 OI LOCATION: Abrasive To				
1	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	CEDURES	Abrasive Tool (See Plan) ELEVATION:		
TYPE INSIDE D HAMMER W HAMMER F	EIGHT	(IN) (LB) (IN)		S 1-3/8 140 30		RIG TYPE: CME-75, Truck-Mo CASING TYPE:4-1/4 in. I.D. DRILL MUD: OTHER: Advanced augers	H.S. Auger	DATUM: START: 17 May 1993 FINISH: 17 May 1993 DRILLER: S. Loranty H&A REP: J. Marschner		
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	IFICATION AN	D REMARKS		
		3 3 100/.1	2"/2"	3.0 5.0 8.0 8.1	6.5 8.1	Bottom of Notes: 1. Borehole backfilled to 2. No OVA, explosimeter, o	-FILL- ray-brown, f PORT FORMATI Boring at 8 ground surf	ine-grained DOLOSTONE. ON- .1 ft. ace with soil cuttings.		
		WATER LEVEL	DATA		*	SAMPLE IDENTIFICATION		SUMMARY		
			DEPT	H (FT) TO:			OVERBURDEN			
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	ROCK CORED			
							BORING NO.	23 B127		

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INSIDE DIAMETER (IN) 1-3/8 0 OTHER: Advanced augers to 11.2 ft. FINISM: 16 May TOR MAMMER KALL (IN) 140 0 OTHER: Advanced augers to 11.2 ft. FINISM: 16 May TOR DEPTH CASING SAMPLER SAMPLE NUMBER & SAMPLE SAMPLE EXECUTEY STRITA STRITA VISUAL CLASSIFICATION AND REMARKS (FT) DEPTH CASING SAMPLE FR T SAMPLE EXECUTEY STRITA User String Stri										
CLIENT: CITY OF ROCKESTER SMPLER CORE CORE SMPLER DEFINITION LOCATION: LOCATION: <td< td=""><td>Co</td><td>nsulting</td><td>g Geotechni</td><td>cal Enginee</td><td>rs,</td><td></td><td>TEST BORING REPORT</td><td></td><td>BORING NO. B128</td></td<>	Co	nsulting	g Geotechni	cal Enginee	rs,		TEST BORING REPORT		BORING NO. B128	
ITEM CASING DRIVE SAMPLER CORE SAMPLER CORE SAMPLER CORE SAMPLER CORE SAMPLER CORE SULLING EQUIPMENT & PROCEDURES Yellow Freight DATUR:	CLIENT:	CI	TY OF ROCHE	STER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION	SHEET NO. 1 OF 1 LOCATION:		
TYPE	I	TEM		CASING		CORE DRILLING EQUIPMENT & PROCEDURES Yellow Freigh R BARREL ELEVATION:				
ELONS ELONS DEPTH CHANGE VISUAL CLASSIFICATION AND REMARKS (FT) PER 6 IN RECOVERY (FT) CHANGE VISUAL CLASSIFICATION AND REMARKS	INSIDE D HAMMER W	EIGHT	(LB)		s 1-3/8 140	 	BIT TYPE: 2-1/4 in. I.D. H DRILL MUD:	.S. Augers	DATUM: START: 16 May 1993 FINISH: 16 May 1993	
 - 5 - 5 - 5 - 6 - 7 - 7		BLOWS	BLOWS	NUMBER &	DEPTH	CHANGE	VISUAL CLASS	IFICATION AN	D REMARKS	
10 4 Auger Refusal at 11.2 ft. Bottom of Boring at 11.2 ft. 15 15 20 20 20 20 21 220 23 24 25			5 5 2 1	4"/24" 	5.0		(with air bubbles), wet.	-FILL- e glass and		
Notes: Notes: Notes: Backfilled borehole to ground surface with soil cutting 20 - 20					10.0			fusal at 11.2		
 Backfilled borehole to ground surface with soil cutting OVA readings from sample screening noted as follows: S1 = 35 ppm methane S2 = 70 ppm methane 1000 + ppm methane in borehole No OVA readings above background in the breathing zone. No explosimeter or radioactivity meter readings above background from sample screening or in the breathing zone 	 									
 20	-						Notes:			
background from sample screening or in the breathing zo	20 20 						 OVA readings from sampl S1 = 35 ppm methane S2 = 70 ppm methane 1000 + ppm methane i No OVA readings above b 	le screening in borehole background in	noted as follows:	
	 						 No explosimeter or radi background from sample 	oactivity me screening or	eter readings above in the breathing zone.	
WATER LEVEL DATA SAMPLE IDENTIFICATION SUMMARY			WATER LEVEL	DATA						
					H (FT) TO:		SARIE IDENTIFICATION			
DATE TIME ELAPSED TIME (HR) BOTTOM BOTTOM WATER 0 Open End Rod TIME (HR) OF CASING OF HOLE 0 Undisturbed Sample S Split Spoon SAMPLES: 2S	DATE	TIME		BOTTOM	BOTTOM	WATER	T Thin Wall Tube U Undisturbed Sample	ROCK CORED	(LIN FT):	
BORING NO. B128									······································	

							and the design of the second	and a second
H& C	onsultin	YORK, ROCH g Geotechnic sts and Hyd	cal Enginee	rs,		TEST BORING REPORT		BORING NO. B129
PROJECT CLIENT: CONTRAC	CI	RMER EMERSON TY OF ROCHES THNAGLE DRII	STER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: DeCarolis
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	CEDURES	Trucking (See Plan) ELEVATION:
TYPE INSIDE HAMMER HAMMER		(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30		- RIG TYPE: CME-75, Truck-Mo BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to while standard sam	.S. Augers	DATUM: START: 17 May 1993 FINISH: 17 May 1993 DRILLER: S. Loranty H&A REP: J. Marschner
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	IFICATION AN	D REMARKS
 		5 5 3 10	S1 12"/24"	3.0	-	Loose black ASH with glass paper, damp.	, brick, woo -FILL-	d, white cinders and
		2		8.0	о <u>г</u>	Same, except wet.	-FILL-	
	1	2 2	·s2 18"/24"	10.0	8.5 9.6	Loose gray fine SAND, wet -LACUSTRII	NE/FLUVIAL-	
10 -]	100/.5			1	Moderately hard, highly n DOLOSTONE, wetLO	weathered, g CKPORT FORMA	
						Bottom of	Boring at 1	0.0 ft.
	-					Notes:		
	1					1. Backfilled borehole to	ground surfa	ace with soil cuttings.
— 15 —						2. OVA readings from sampl S1 = 8 ppm methane S2 = 5 ppm methane No OVA readings above b	-	
				Ň		3. No explosimeter or radi	ioactivity m	
						4. Sample S1 was submitted	d for TCLP m	etals and hazardous
<u> </u>						characteristics analyse 3 in. split spoon sampl	es. Sample S ler.	Si was taken with a
_								
		WATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED	DEPT	H (FT) TO:		0 Open End Rod	OVERBURDEN	(LIN FT): 10.0
		TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	T Thin Wall Tube U Undisturbed Sample	ROCK CORED	(LIN FT):
						S Split Spoon	SAMPLES:	2S
						1	BORING NO.	B-129

					1				
Co	nsulting	YORK, ROCHE Geotechnic ts and Hydr	al Enginee	rs,		TEST BORING REPORT		BORING NO. B130	
PROJECT: CLIENT: CONTRACT	CIT	MER EMERSON Y OF ROCHES HNAGLE DRIL	TER	NDFILL MODI	FIED REM	EDIAL INVESTIGATION	FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: City of		
I	TEM		CASING	DRIVE	CORE BARREL	DRILLING EQUIPMENT & PROD	EDURES	Rochester Ferrano St. R.O.W. (See Plan) ELEVATION:	
TYPE INSIDE D HAMMER W HAMMER F	IAMETER EIGHT	(IN) (LB) (IN)	Auger 4-1/4	S 1-3/8 140 30		RIG TYPE: CME-75, Truck-Mount BIT TYPE: 4-1/4 in. I.D. H.S. Augers DRILL MUD: OTHER: Advanced augers to 5.0 ft. while standard sampling. H&A REP: M. Corriga			
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSI			
		⁵ 10 12 12	S1 24"/24"	3.0		Bottom of Notes: 1. Backfilled borehole to 2. No OVA, explosimeter or	st. FLUVIAL- Boring at 5 ground surf	.0 ft. ace with soil cuttings.	
<u> 25 </u>							r	CIMMADY	
		WATER LEVEL		H (FT) TO:		SAMPLE IDENTIFICATION	OVERBURDEN	SUMMARY (LIN FT): 5.0	
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	ROCK CORED	(LIN FT):	
						S Split Spoon	SAMPLES: BORING NO.	1s B-130	
				1			1		

Co	onsulting	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	rs,		TEST BORING REPORT BORING NO. B13			
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSON TY OF ROCHES THNAGLE DRIL	TER	NDFILL MODI	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: Printing Methods, Inc.	
	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROD	CEDURES	(See Plan) ELEVATION:	
TYPE INSIDE D HAMMER W HAMMER F	ÆIGHT	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30	 	RIG TYPE: CME-75, Truck-Mounted DATUM: BIT TYPE: 4-1/4 in. I.D. H.S. Augers START: 14 Ma DRILL MUD: FINISH: 14 Ma OTHER: Advanced augers to 8.0 ft. DRILLER: S. Lo			
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSI	IFICATION AN	D REMARKS	
 		5 3 2 2	\$1 5"/24"	3.0		Loose black ASH with glass organic material, wet. -	and cinders FILL-	, trace wood and other	
		5	· \$2	8.0	8.3	Same.	-FILL-		
 - 10 -		70 100/.4	16"/18"	9.4	9.4	Moderately hard, highly to fine grained DOLOSTONE, c -LOCKPC	completely damp. DRT FORMATIO		
						 Notes: Borehole backfilled to OVA readings from sampl S1 = 32 ppm methane S2 = 12 ppm methane No OVA readings above to No explosimeter or radi background from sample 	e screening background in bactivity m	ace with soil cuttings. noted as follows: n the breathing zone. eter readings above r in the breathing zone.	
		WATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY	
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample S Split Spoon	OVERBURDEN ROCK CORED SAMPLES:		
							BORING NO.	B131	

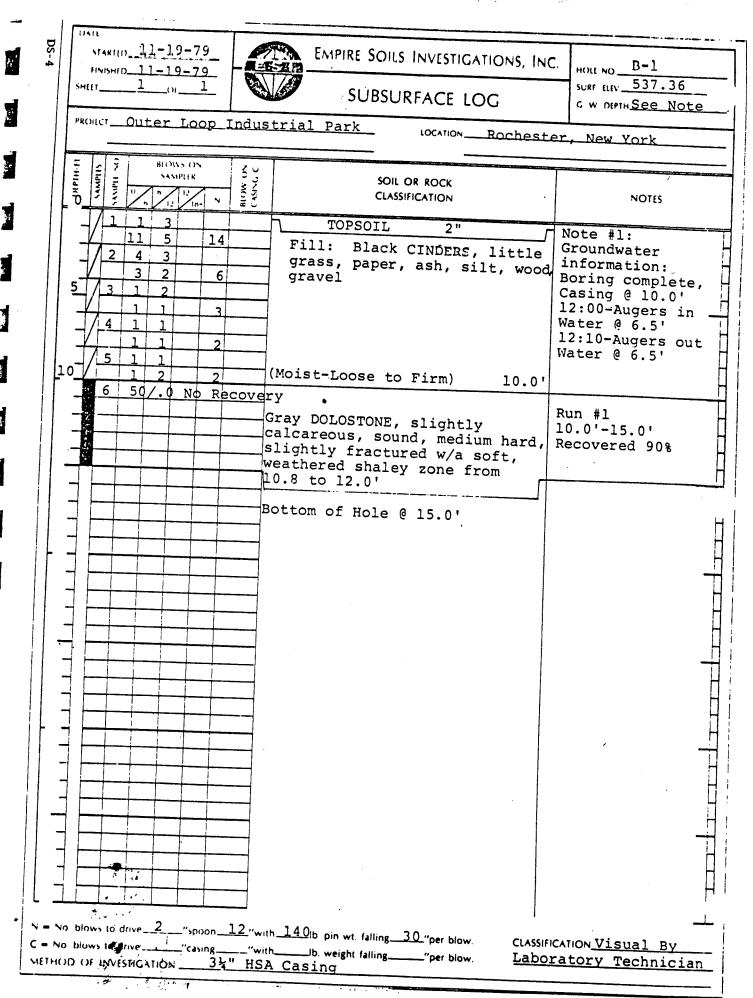
	onsultin	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	rs,		TEST BORING REPORT		BORING NO. B132
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSON TY OF ROCHES THNAGLE DRIL	STER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION	FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: DeCarolis	
	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	CEDURES	Trucking (See Plan) ELEVATION:
TYPE INSIDE D HAMMER H HAMMER F	ÆIGHT	(IN) (LB) (IN)	Auger 2-1/4 	S 1-3/8 140 30		- RIG TYPE:Diedrich D-50, Tr BIT TYPE: 2-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers t while standard sa	.S. Augers o 10.0 ft.	DATUM: START: 17 May 1993 FINISH: 17 May 1993 DRILLER: R. Bauer H&A REP: M. Corrigan
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	D REMARKS
						No readings from radiation	meter or ex	plosimeter.
						* 1000 ppm methane in bore	hole.	
		11 14	s1 15"/24"	3.0	-	Medium dense gray-black si little gravel, with ash, t	lty fine SAN race glass, i	D, some coarse sand, moist to wet.
5		8		5.0	-		-FILL-	
					6.5			
 		9 12	·s2	8.0		Medium dense gray-brown si wet.	lty fine SANI), trace coarse sand,
10		13 19	12"/24"	10.0		-LACUSTR	INE/FLUVIAL-	
L _						Bottom of	Boring at 10	0.0 ft.
L _						Notes:		
						1. Backfilled borehole to	ground surfa	ace with soil cuttings.
						2. OVA readings from sampl S1 = 100 ppm methane S2 = 100 ppm methane OVA reading was 1000+ p		noted as follows: in the borehole. No OVA
┣ -						readings above backgrou	und in the bi	reathing zone.
							screening or	r in the breathing zone.
$\begin{bmatrix} 1 \end{bmatrix}$								
20								
\vdash								· · · ·
\vdash								
25								
		ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED	DEPT	H (FT) TO:		0 Open End Rod	OVERBURDEN	(LIN FT): 10.0
		TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	T Thin Wall Tube U Undisturbed Sample	ROCK CORED	
						S Split Spoon	SAMPLES:	2\$
							BORING NO.	B-132

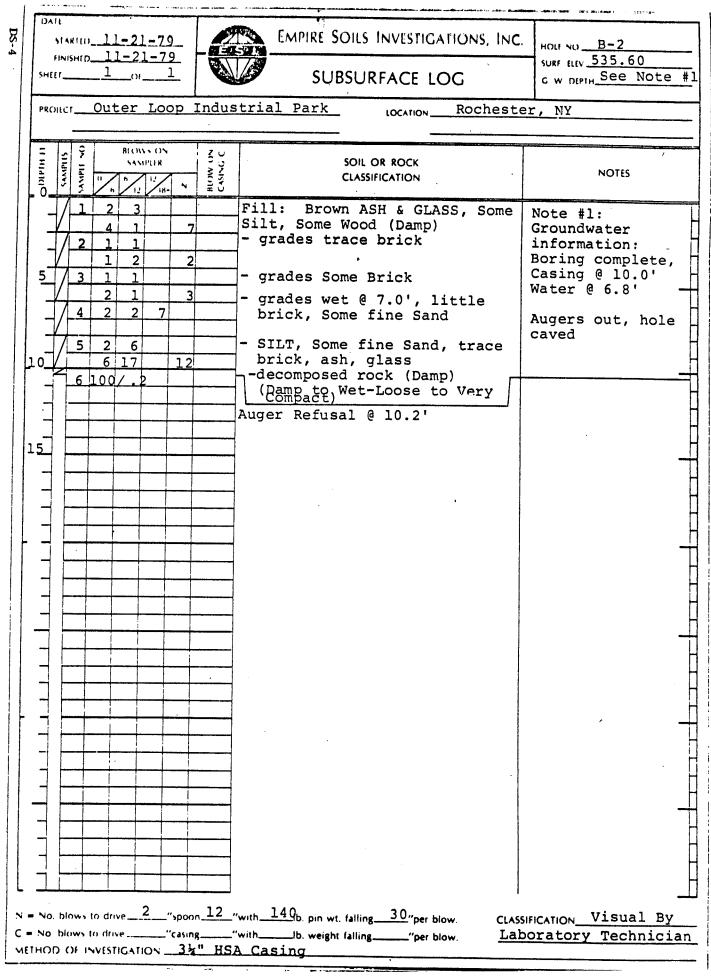
	onsulting	YORK, ROCH g Geotechnic sts and Hyd	cal Enginee	rs,		TEST BORING REPORT		BORING NO. E	133	
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSON TY OF ROCHES THNAGLE DRII	STER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		SHEET NO. 1 LOCATION: De	352-46 OF 1 Carolis Inc.	
1	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROCEDURES (See Plan) ELEVATION:				
TYPE INSIDE D HAMMER W HAMMER F	ÆIGHT	(IN) (LB) (IN)	 	S 1-3/8 140 30	 	RIG TYPE: Truck Mounted, BIT TYPE: 4-1/4 in. I.D. DRILL MUD: OTHER:		FINISH: 17 DRILLER: S.	- ' May 1993 ' May 1993 Loranty Marschner	
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	IFICATION AN	ID REMARKS		
 		3 2 2 3 4	\$2	3.0 5.0 8.0	8.4	Same. Very dense gray-brown mott	e cardboard FILL-	or drý wall.		
10		3 100/.3	16"/21"	9.8		sand, wetGLAC	IAL TILL (SU Boring at 9	BSOIL)-		
 _ 15 						 Borehole backfilled to OVA readings from samp S1 = 0 ppm S2 = 2 ppm (methane) No OVA readings above I No explosimeter or rad background from sample 	le screening background i ioactivity m	noted as foll n breathing zo meter readings	ows: ne. above	
20 										
		WATER LEVEL				SAMPLE IDENTIFICATION	1			
		WAILN LEVEL		H (FT) TO:		SAMPLE IDENTIFICATION	OVERBURDEN	SUMMARY	9.8 ft.	
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	ROCK CORED			
						S Split Spoon	SAMPLES:		25	
							BORING NO.		B133	

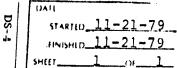
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H&A Co	onsulting	YORK, ROCH Geotechnic sts and Hyd	cal Enginee	ers,		TEST BORING REPORT		BORING NO. B134
PROJECT: CLIENT: CONTRACT	CII	RMER EMERSON TY OF ROCHES THNAGLE DRII	STER	NDFILL MOD	IFIED REM	NEDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION:
1	TEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	CEDURES	Browning-Ferris Ind. (See Plan) ELEVATION:
TYPE INSIDE D HAMMER W HAMMER F	DIAMETER ÆIGHT	(IN) (LB) (IN)		S 1-3/8 140 30		RIG TYPE: CME-75, Truck-M BIT TYPE: 4-1/4 in. I.D. DRILL MUD: OTHER:	ounted H.S. Augers	DATUM: START: 18 May 1993 FINISH: 18 May 1993 DRILLER: S. Loranty H&A REP: M. Corrigan
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	IFICATION AN	D REMARKS
		11 11 7	s1 15"/24"	3.0		Medium dense black ASH or moist, uniform fine sand s		
					6.5			
		3 4	S2	8.0		Loose gray-brown fine SAND,	, trace coars	se to medium sand, wet.
10		5	18"/24"	10.0	4		STRINE/FLUVI/	
┝ -						Bottom of	Boring at 10	0.0 ft.
						Notes:		
						1. Borehole backfilled to	ground surfa	ace with soil cuttings.
						2. OVA readings from sampl S1 = 25 ppm (methane) S2 = 0 ppm	le screening	noted as follows:
						 No explosimeter or radi background from sample 	ioactivity me screening on	eter readings above r in the breathing zone.
20								
<u> 25 </u>								
		ATER LEVEL	DATA		1	SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME		DEPT	H (FT) TO:			OVERBURDEN	(LIN FT): 10.0 ft.
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	ROCK CORED	(LIN FT):
						S Split Spoon	SAMPLES:	2s
							BORING NO.	B134

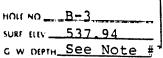






EMPIRE SOILS INVESTIGATIONS, INC. **[] - 本**- 方 []

SUBSURFACE LOG



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PRONCT_Outer_Loop_Industrial_Park__

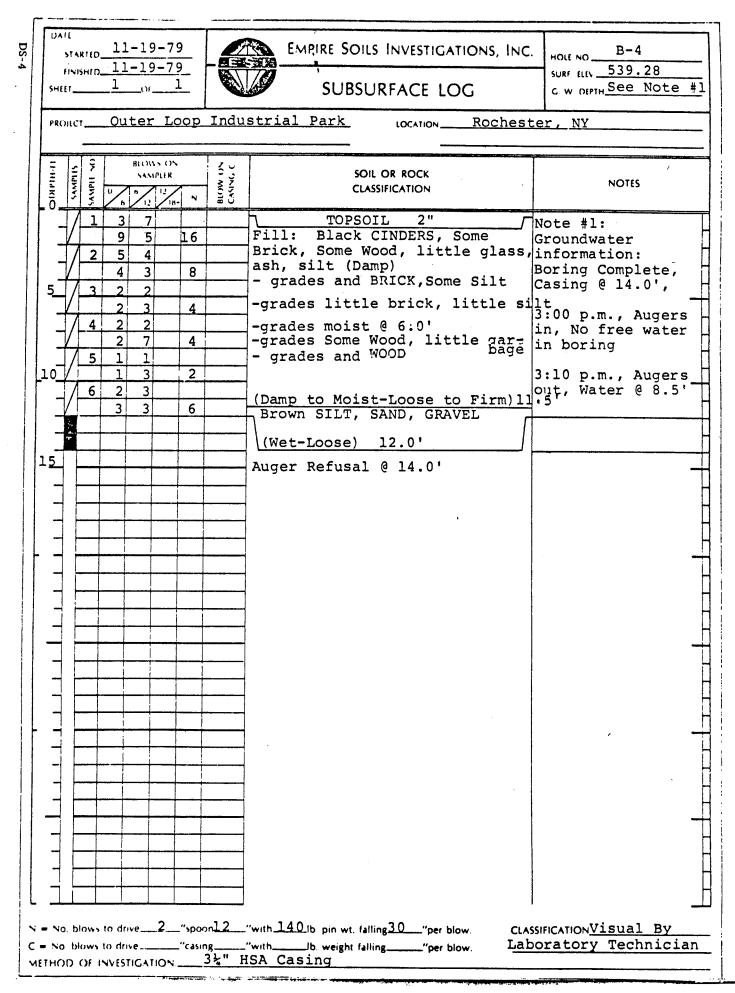
LOCATION ____ Rochester, NY

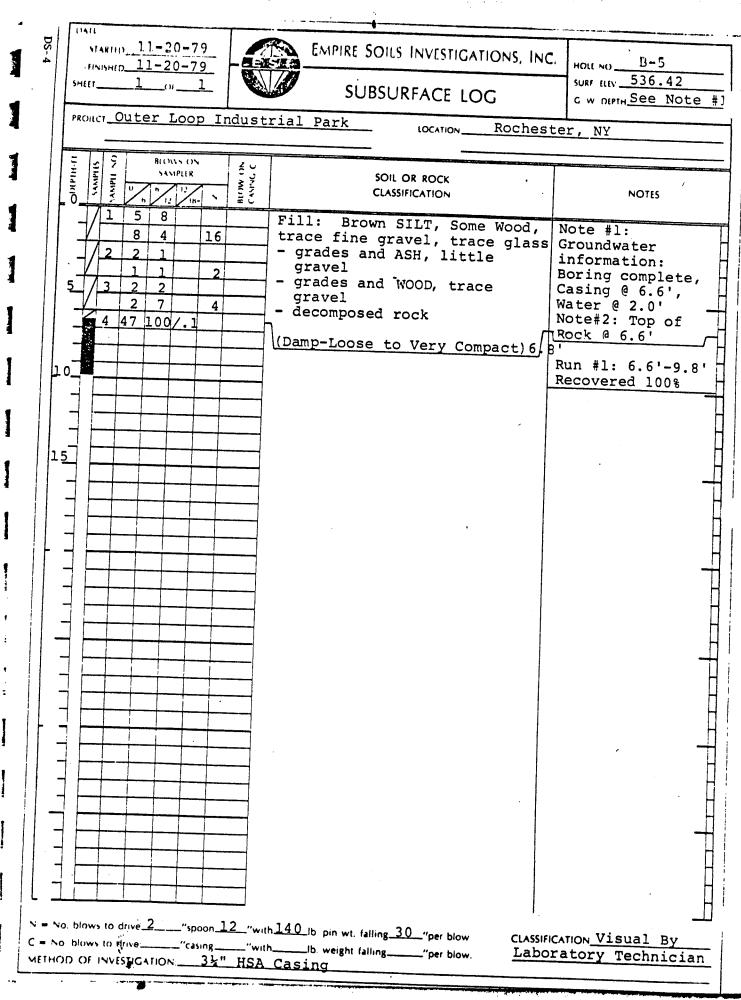
UN Hawes	REOWS ON SAMPLER	Z BLOW DN CASING C	SOIL OR ROCK CLASSIFICATION	NOTES /
2	2 6 8 8 6 6 3 4 6 6 3 2	14 9 9	Fill: Brown ASH & GLASS, Some Silt, Some fine Sand -grades Some Glass, trace wood -grades little wood	Groundwater
	7 24 7 25	4 25 51	-grades wet, SILT & fine SAND, Some Ash (Damp to wet-Loose to Firm) ⁹ Brown SILT & fine SAND, trace embedded fine gravel -grades little fine to medium gravel, little medium to coarse	* No Recovery
	12/.5		sand (TILL) (Damp-Very Compact) Auger Refusal @ 15.5'	
20				_
				-
				-
-				_
= No. blows to = Nb. blows to o IETHOD OF INVI	drive" drive" ESTIGATION	spoon <u>12</u> " casing" <u>3¼" HS</u> .		NFICATION Visual By oratory Technician

SC-60

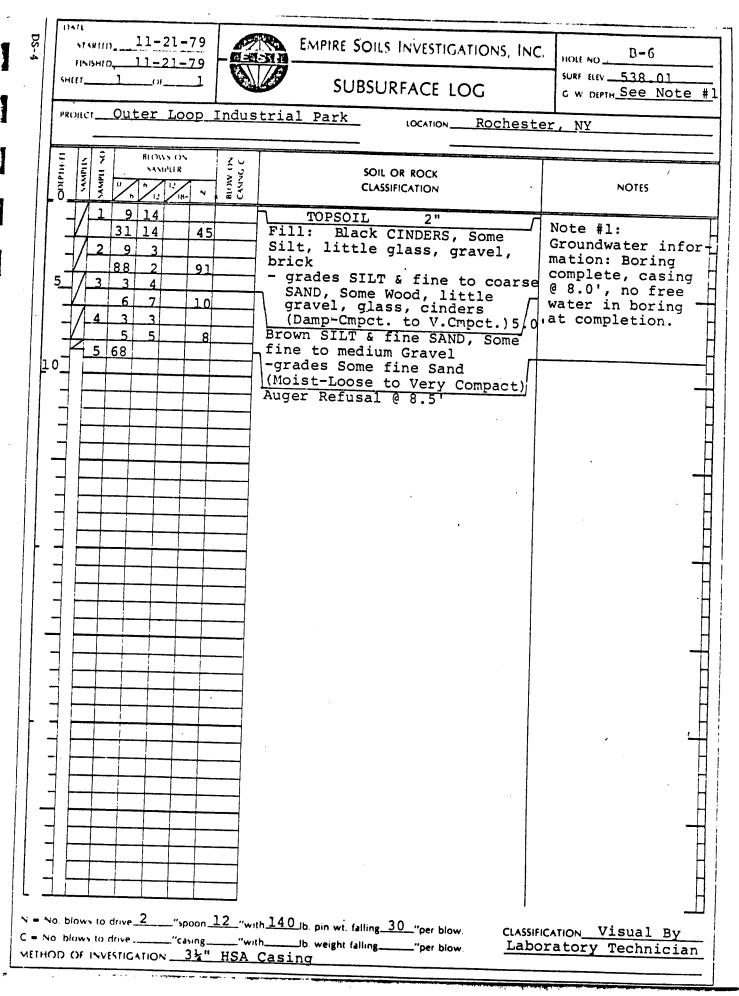
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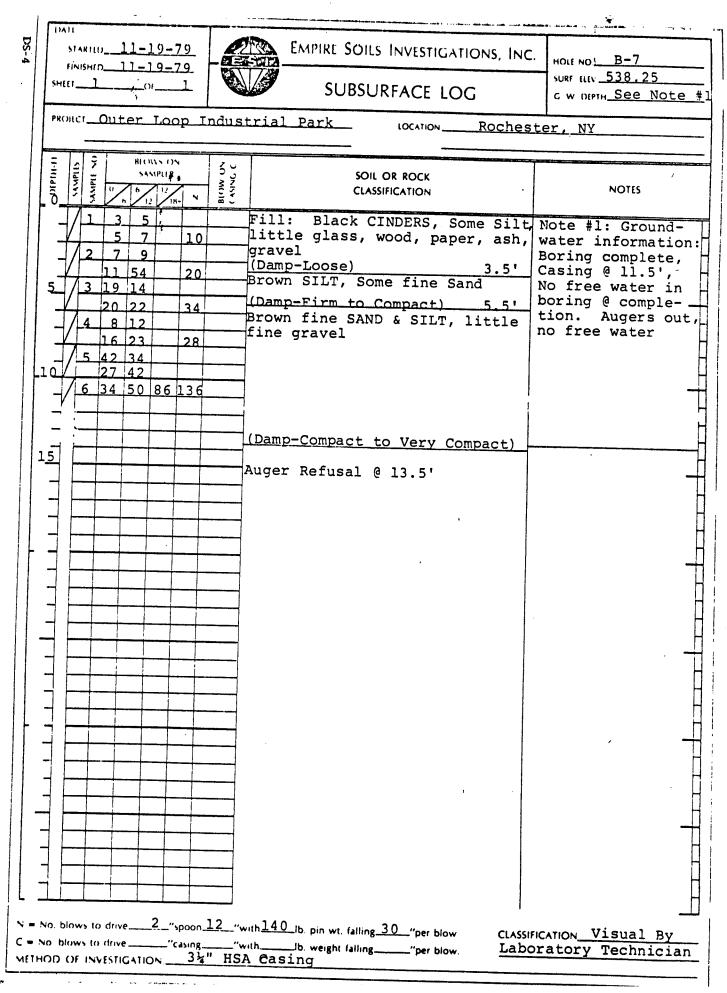
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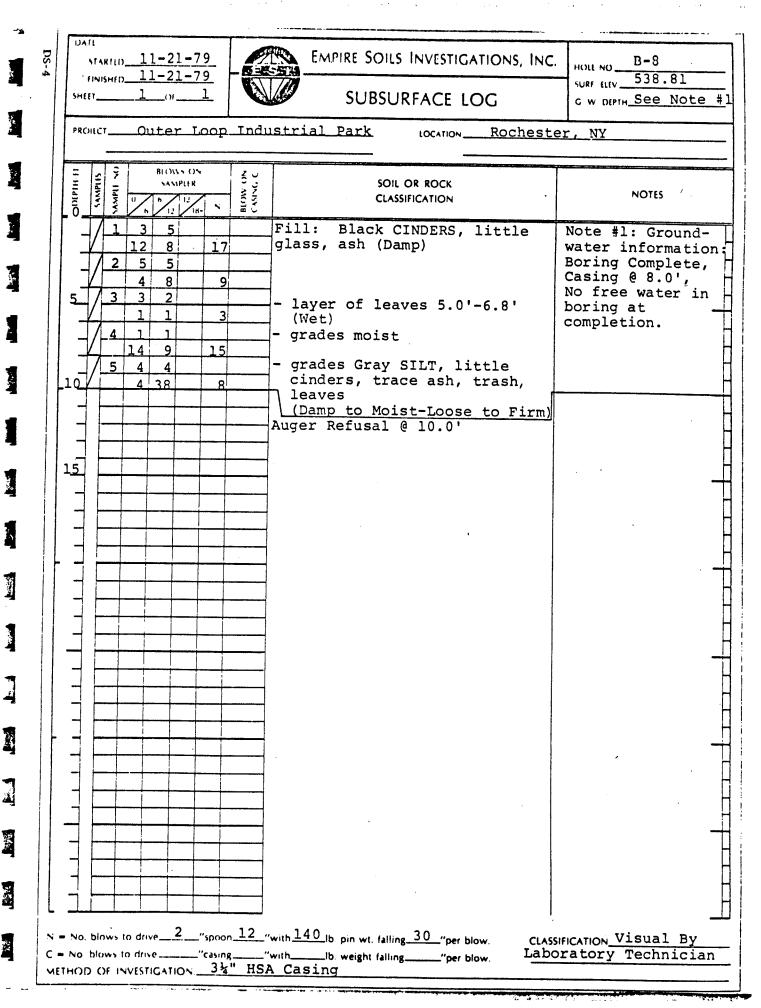


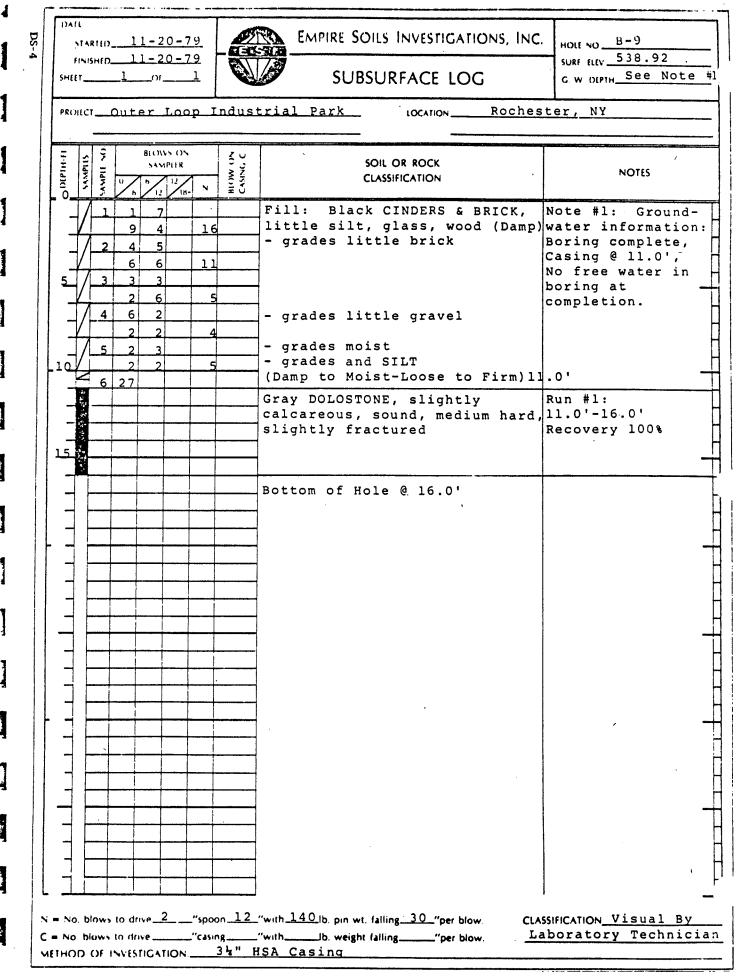


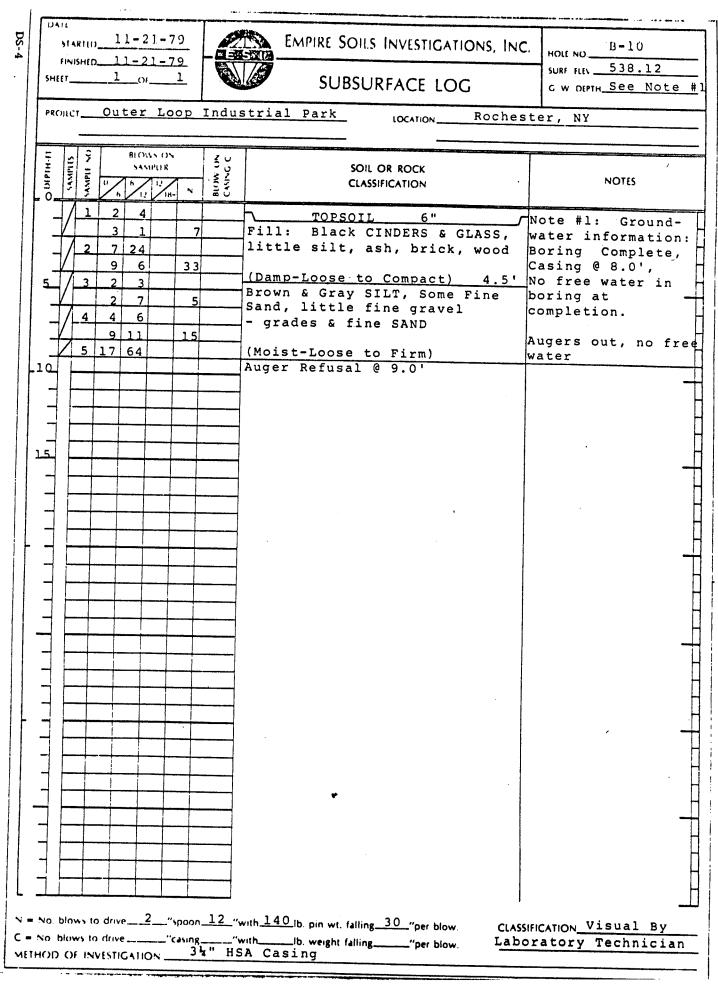
SC-62











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R	STARTED_	11-20-79
	INNIT_	11-20-79
	SHEET	<u>1_0f_1</u>

EMPIRE SOILS INVESTIGATIONS, INC.

· SUBSURFACE LOG

B-11 HOLE NO . SURF ELEV. 538.66

G W DEPTH See Note #

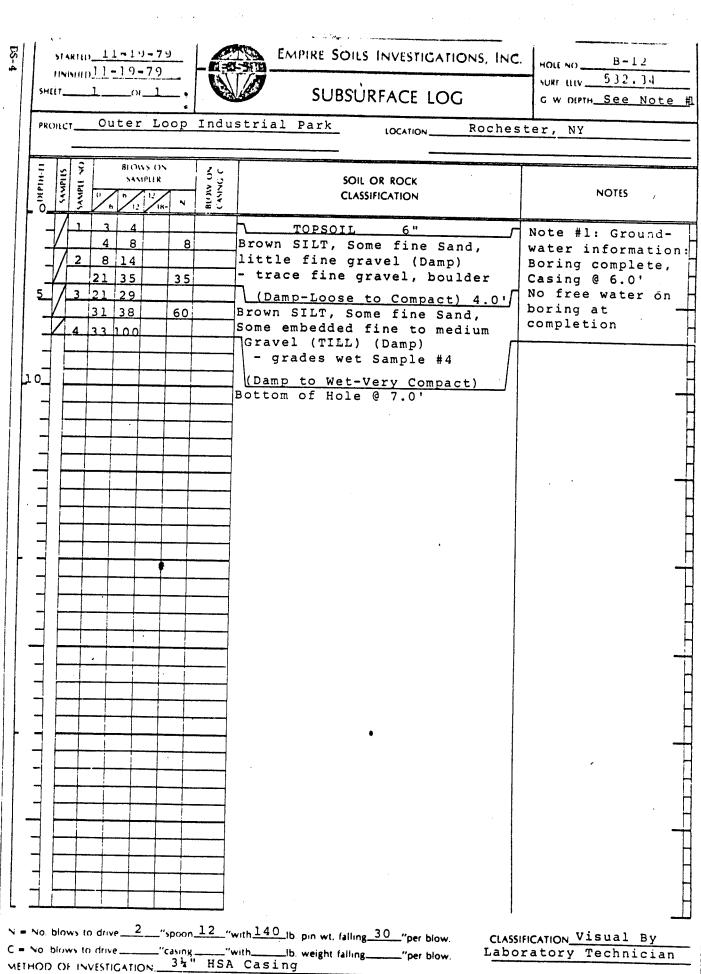
PROMET_OUTER LOOP Industrial Park

LOCATION ____ Rochester, NY

BLOWS ON ş BLOW UN CASING C J-HIAIOO STIMMES SAMPLER SOIL OR ROCK INNA 12 **CLASSIFICATION** NOTES N 12 18-Fill: Black CINDERS, little Note #1: Groundglass, ash, brick, paper, wood 1 3 2 water information: Q 3 (Dry-Loose) Boring complete, 1.5 * Brown Fine SAND & SILT 6 17 29 Casing @ 9.5', 15 Water @ 1.0' Augers out, 1 9 24 34 Water @ 1.0' 12 14 - grades trace fine gravel 17 27 31 5 22 34 68 102 (Damp-Firm to Very Compact)9.5 0 Gray DOLOSTONE, slightly Run #1: calcareous, sound, medium hard, 9.5'-14.5' slightly fractured Recovered 100% 15 Bottom of Hole @ 14.5' N = No. blows to drive $\frac{2}{2}$ "spoon $\frac{12}{2}$ "with $\frac{140}{16}$ lb. pin wt. falling $\frac{30}{2}$ "per blow C = No. blows to drive______"casing_____"with_____lb, weight falling. CLASSIFICATION Visual By Laboratory Technician __'per blow. METHOD OF INVESTIGATION 34" HSA Casing : 0

SC-68

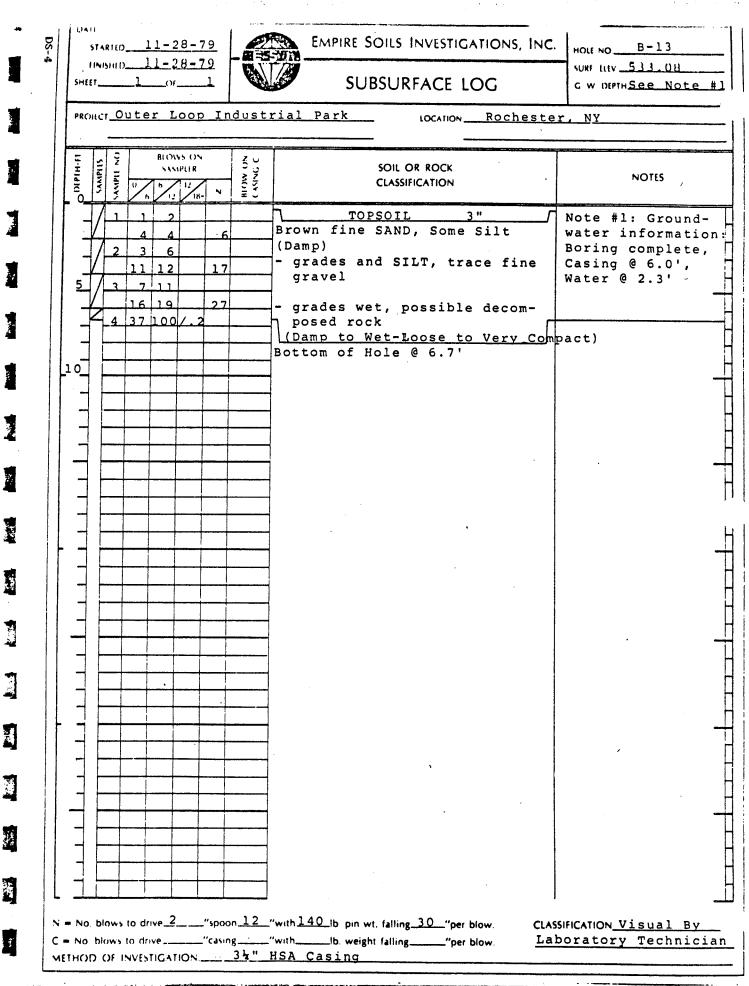
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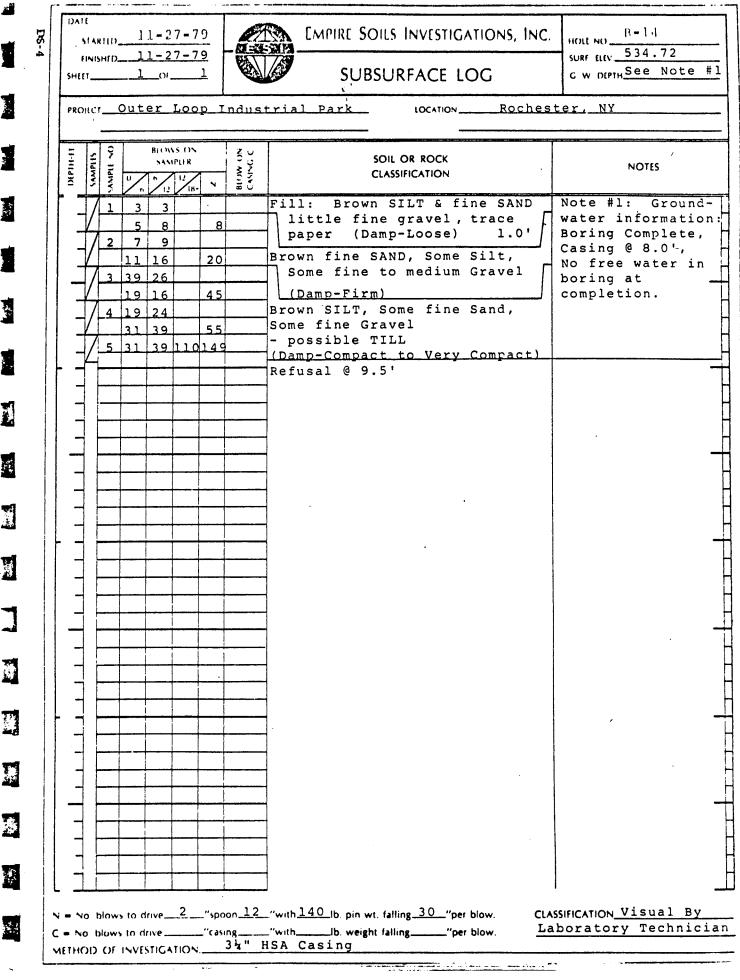


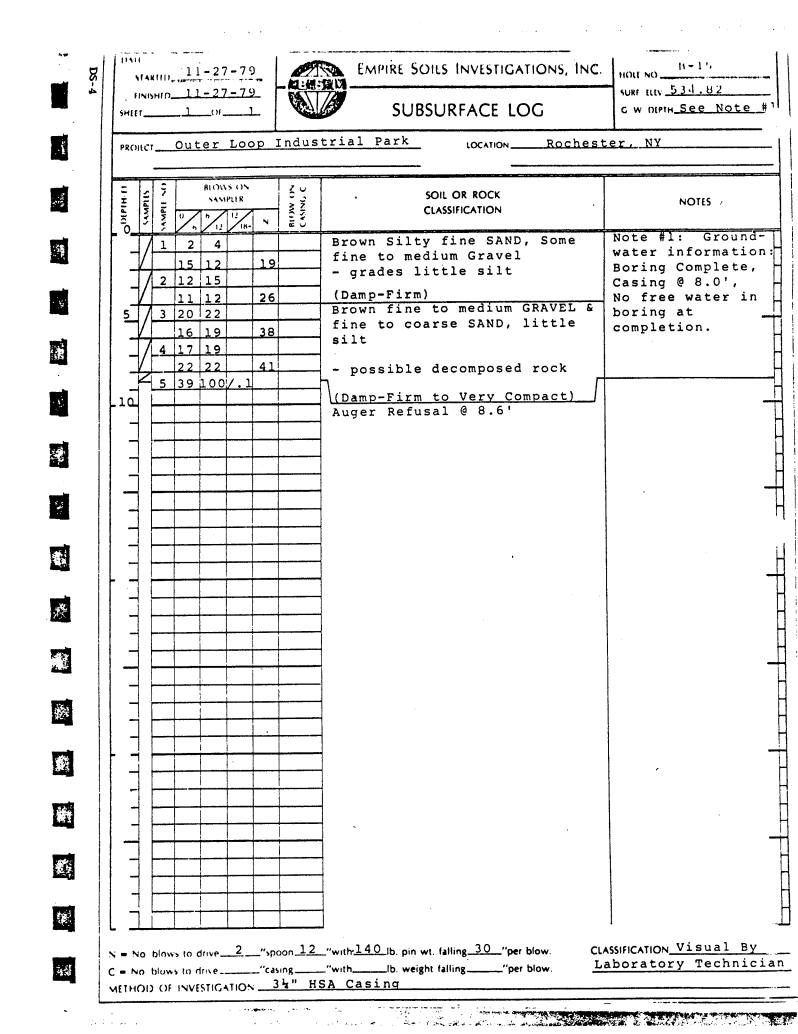
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SC-69

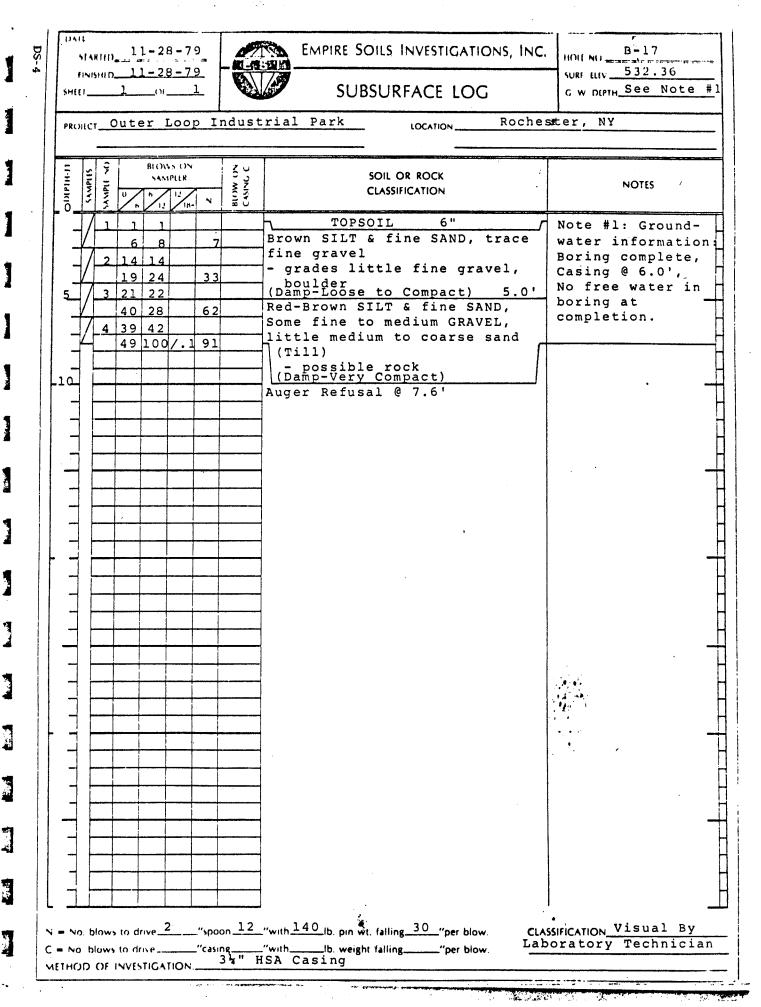
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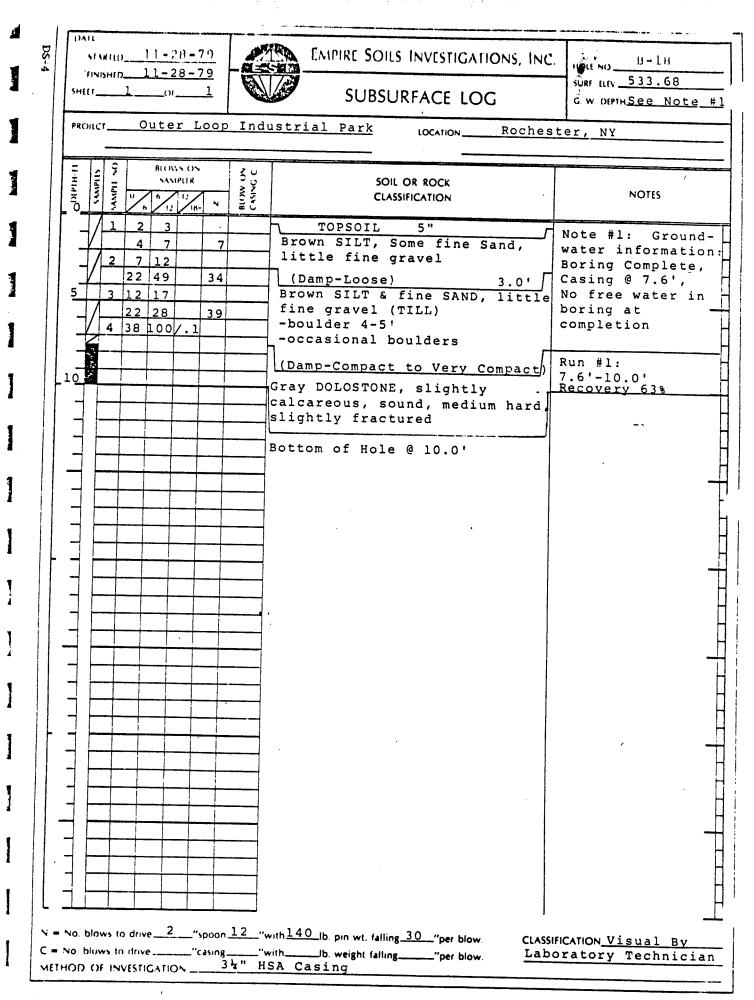


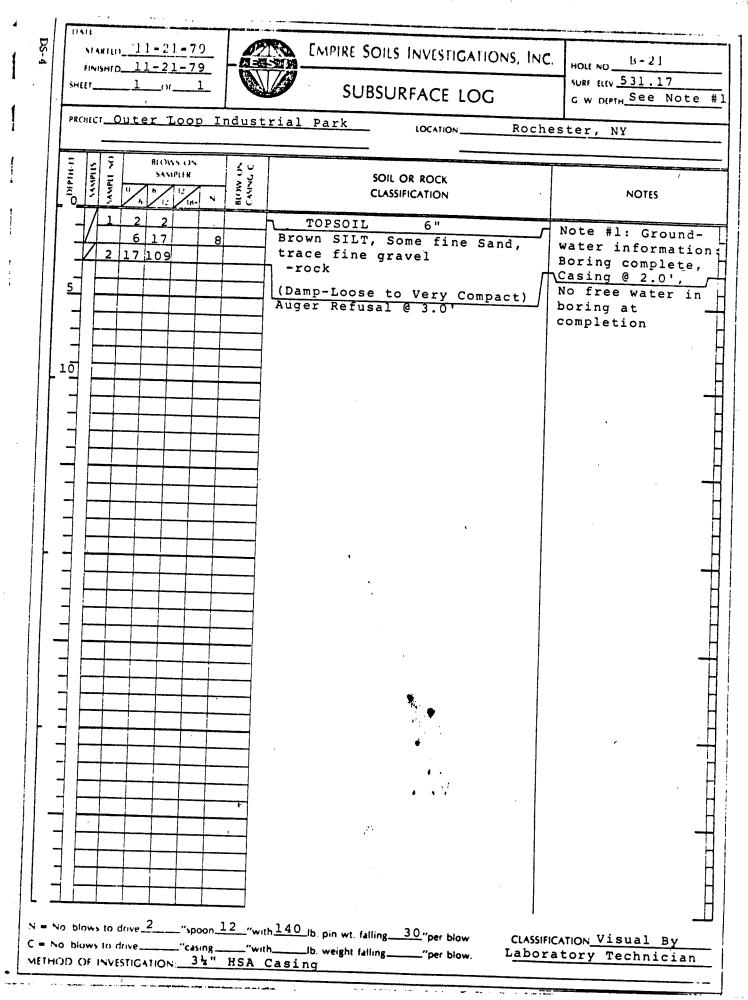


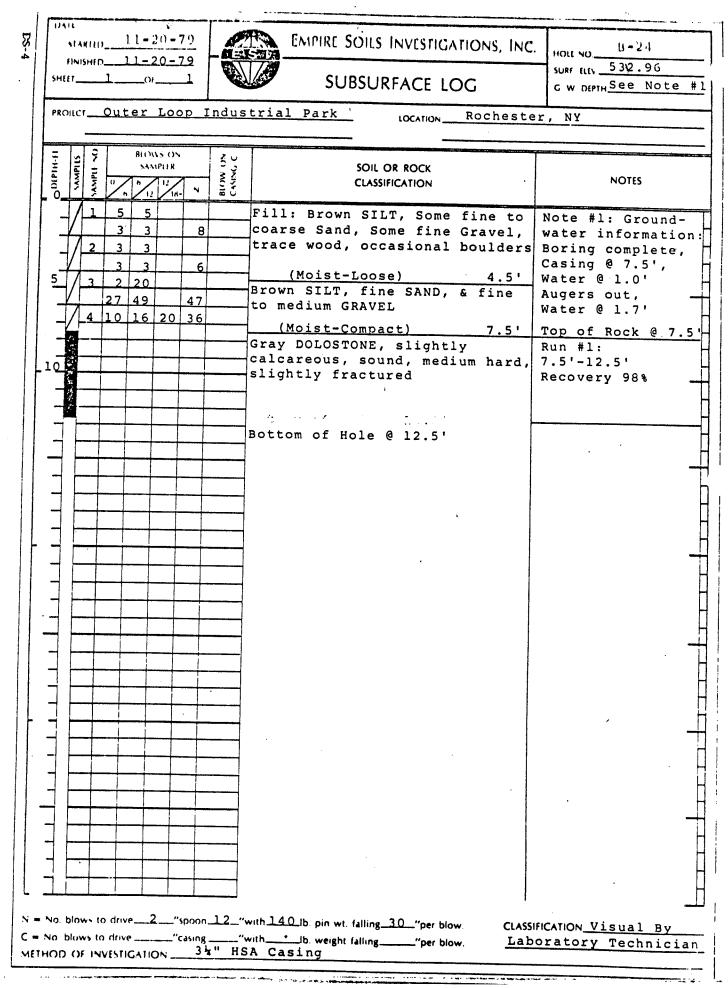


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DATE	STARTED		3/30	/88	RECRA ENVIRONMENTAL, INC.	HOLE NO. <u>GW-8D</u> SURFACE ELEV. <u>96.5</u>
SHEE	FINISHED <u>9/1/88</u> SHEET <u>1</u> OF <u>1</u>				SUBSURFACE LOG	G.W. ELEV. <u>92.25</u>
Pf		IYSDE		IASE II INVES		STREET LANDFILL
DEPTH-FT	RECOVERY	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 12 18 18	DESCRIPTION	NOTES
	1.7'	SB	1	2 9 28 50/.		Boring advanced with 4 - 1/4 in. I.D. HSA, truck mounted CME-55 drill rig. Driller - Lee Penrod
5	1.3'	SB	2	18 33 23 22		Assistant - Shawn Penrod HNU = 0 ppm Geiger Counter = 0 mr/hr.
 10	REC 93% RQD 24%	NX	1		Gray, fine textured dolomite, many horizontal fractures. Rust staining on fractures at 8.5 ft. Some vertical fractures to 14 ft.	Micro R Meter = 6-8 micro-rem/hr. Explosimeter = 0% LEL Auger drilling refusal at 7.0 ft. NX core run 1 and 2 drilled
	REC 100% RGD 73% REC	NX	2		Few small vugs present. Rock becomes less fractured and moderately hard with depth.	on 8/31/88. NX core run 3 and 4 drilled on 9/1/88.
	98% RQD 66%	NX	3		Slight drilling fluid loss during Run 3.	Rotary drilled with 4-1/2 in. tri-cone bit from 7 ft 14ft. Coring was done with a long ear 5 ft./NQ core barrel and a Series 8 bit.
20 -	REC 99% RQD 85%	NX	4		[DOLOMITE BEDROCK] 24.0	
25 						Boring Completed at 24.0 ft. G.W. elevation taken on 12/16/88.
30 - - 35 -		and and the design of the set of				
	SSIFICATIO	N	VISU	AL	LOG DEVELOPED BY ROBER	ASTM D1586-84, D2113-83

DATE	STARTED	ç	0/1/	88	RECRA ENVIRONMENTAL, INC.	HOLE NO. <u>GW-8S</u> SURFACE ELEV. <u>96.0</u>		
	FINISHED	9	/2/8)F _		SUBSURFACE LOG	G.W. ELEV. <u>92.24</u>		
PR	OJECT	STREET LANDFILL						
DEPTH-FT	RECOVERY	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0 6 6 12 18 18	2 DESCRIPTION	NOTES		
	1.8' REC 95% RQD 40%	SB	1			Boring advanced with 4 - 1/4 in. 1.D. HSA, truck mounted CME-55 drill rig. Driller - Lee Penrod Assistant - Shawn Penrod HNU = 0 ppm Explosimeter = 0% LEL Geiger Counter = 0 mr/hr. Micro R Meter = 6-8 micro-rem/hr. Auger drilling refusal at 7.0 ft. NX core run 1 drilled on 9/1/88. Coring was done with a long ear 5 ft. NQ core barrel and a Series 8 bit. Rotary drilled with 3-7/8. In. tri-cone bit from 7 ft. to 12.0 ft. Boring Completed at 12.0 ft. G.W. elevation taken on 12/16/88.		
-	SSIFICATI	ON	VISU	JAL	METHOD OF INVESTIGATION			
LOG DEVELOPED BY ROBERT STEINER								

DATE STARTED <u>8/22/88</u>					RECRA ENVIRONMENTAL, INC.	HOLE NO. <u>GW-9</u> SURFACE ELEV. <u>100.2</u>		
SHEET	FINISHED	8	/24 0F		SUBSURFACE LOG	G.W. ELEV		
PR		IYSDE		ASE IL INVES		STREET LANDFILL		
DEPTH-FT	BLOWS ON SAMPLER SAMPLER 12 18 18 12 18 18 24 12 18 18 25			SAMPLER 0 6 6 12 18 18	DESCRIPTION	NOTES		
	1.25'	SB	1	7 10 32 50/.		Boring advanced with 4-1/4 in. I.D. HSA, truck mounted CME-55 drill rig.		
5 <u> </u>	REC 79% RQD 14%	NX	1		[SILT with Rock FRAGMENTS] 5.0'	Driller - Lee Penrod Assistant - Shawn Penrod		
 10	REC 99% RQD 12%	NX	2		 Gray fine textured dolomite, highly fractured, fractures oriented horizontally, vertically and at 45 degrees to coring axis. Rock is soft to moderately hard 	HNU = a reading of 2-3 ppm was observed over the drilling fluid during run 3.		
	REC 100%5 RQD 10%5	NX	3		depending on extent of weathering. Rust staining on fractured surfaces at 8.0 ft. Some mottling beginning at 9.5 ft. At 10.0 ft.: Yuggy with small amount of white precipitate.	Explosimeter = 0 % LEL Geiger Counter = 0 mr/hr. Micro R Meter = 5-7 micro-rem/hr. Auger drilling refusal at		
 20	REC 93% RQD 52%	NX	4		Water table encountered at approximately 15.0 ft. At 21 ft.: Begin to lose some drilling fluid.	5.0 ft. NX core run 1 drilled on 8/22/88. NX core run 2-5 drilled on 8/23/88.		
	REC 99 % RQD 58%	NX	5		From 22 ft. to 27 ft.: Weathering decreases and rock is less fractured. [DOLOMITE BEDROCK] 27.0'	Coring was done with a long ear 5 ft. NQ core barrel and a Series 8 bit. Rotary drilled with a 3-7/8 in. tri-cone bit from 5.0 to 26.0 ft.		
						Boring completed at 27.0 ft. G.W. elevation taken on 12/16/88.		
	SIFICATIO	N _\	/150/	AL	METHOD OF INVESTIGATIONLOG DEVELOPED BYROBERT	ASTM D1586-84. D2113-83		

DATE STARTED8/24/8	88	RECRA ENVIRONMENTAL, INC.	HOLE NO. <u>GW-10S</u> SURFACE ELEV. <u>99.1</u>					
FINISHED		SUBSURFACE LOG	SURFACE ELEV. <u>99.1</u> G.W. ELEV. <u>96.68</u>					
PROJECT <u>NYSDEC PHAS</u> SITE #8280			STREET LANDFILL					
DEPTH-FT RECOVERY SAMPLE TYPE SAMPLE NO	- 0 - 12	DESCRIPTION	NOTES					
51.0' SB 1		Black organic SILT some brown-gray clay, dry. Grades to brown medium SAND, moist. At 6.0 ft.: Fine SAND, well graded, saturat At 7.5 ft.: Some silt, trace gravel. [SAND, SILT and CLAY] 8.0 Oray, fine textured dolomite, soft to moderately hard. Numerous horizontal and vertical fractures. Becomes vuggy at 10.0 ft. Mottling starts at about 11.5 ft. Becomes highly weathered and soft near base. [DOLOMITE BEDROCK] 13.0	Driller - Lee Penrod Assistant - Shawn Penrod ' HNU = 0 ppm Explosimeter = 0% LEL Geiger Counter = 0 mr/hr. Micro R Meter = 6-8 micro-rem/hr. Auger drilling refusal at 8.0 ft. NX core run 1 drilled on 8/24/88.					
30								
CLASSIFICATION VISUAL METHOD OF INVESTIGATION ASTM D1586-84. D2113-83 LOG DEVELOPED BY ROBERT STEINER B.00214.10S								

DATE	STARTED	8	3/25	/88	RECRA ENVIRONMENTAL, INC.	HOLE NOGW-10D SURFACE ELEV99.3			
FINISHED <u>8/29/88</u> SHEET <u>6</u> OF <u>1</u>					SUBSURFACE LOG	SURFACE ELEV. <u>99.3</u> G.W. ELEV. <u>96.45</u>			
PF		IYSDE ITE #		ASE IL INVES		STREET LANDFILL			
DEPTH-FT	BLOWS ON SAMPLER SAMPLER SAMPLER SAMPLER SAMPLER SAMPLER SAMPLER SAMPLER			SAMPLER	2 DESCRIPTION	NOTES			
5	1.3'	SB	1	19 21	Black organic SILT some brown-gray clay, dry. Grades to brown medium SAND, moist. At 6.0 ft.: Fine SAND, well graded, saturate At 7.5 ft.: Some silt, trace gravel.	Boring advanced with 4 1/4 in. I.D. HSA, truck mounted CME-55 drill rig. d. Driller - Lee Penrod Assistant - Shawn Penrod			
-	0.8'	SB SB	2 3	19 15 31 48 50/.3' 13	[SAND_SILT_and CLAY] 8.0				
10	REC 94% ROD 48%	NX	1	507.1	Gray fine textured dolomite, numerous horizontal fractures, few vertical frac- tures to 4 in. Numerous vuggy zones, intense weathering at some fractured areas. White precipitate present in some	Geiger Counter = 0 mr/hr. Micro R Meter = 6-7 micro-rem/hr. Auger drilling refusal at 8.0 ft.			
15 	REC 100% RQD 58%	NX	2		 vugs and on some fractured surfaces. Rock gets harder with depth except for areas of intense weathering. Some drilling fluid loss at 13-14 ft. 	Rotary drilled with 4 1/2 in. tri-cone bit from 8 ft. to 10 ft. Then core NX-1 from 10 ft. to 14 ft. and finish rotary drilling to 14 ft. on 8/26/88.			
20 25	REC 98 % RQD 79 %	NX	3		[DOLOMITE BEDROCK] 13.0	NX core run 2 &3 drilled on 8/29/88. Coring was done with a long ear 5 ft. NQ core barrel and a Series 8 bit.			
						Boring completed at 24.0 ft. G.W. elevation taken on 12/16/88.			
CLA	CLASSIFICATION <u>VISUAL</u> METHOD OF INVESTIGATION <u>ASTM D1586-84. D2113-83</u> LOG DEVELOPED BY <u>ROBERT STEINER</u>								

	Consu	ulting Ge	otechnica	ER, NEW YORK Engineers, TEST PIT REPORT eologists	TEST PIT REPORT FILE	
	ION:	ATION: Ben-Mer Mfg. 1255 Emerson St VATION: LORATION DATE: 10 Dec. 199 REP.: M. Beikirch				
CALE IN FEET	SAMPLE NUMBER		STRATA	DESCRIPTION OF MATERIALS	REMARKS	
<u> </u>				Brown silty fine SAND, with cobbles, logs, bric moist.	ks and boulders,	OVA reading = 30 ppm ລ 0 ft. to 2.0 ft.
-2	- S1	2.0		Dark brown sandy SILT, some clay, with C&D debr	is, moist.	No radiation meter readings above back- ground.
				-FILL-		
-4			4.0	Light brown silty fine SAND, with cobbles and b wet.	- Water level in test pir at 4.0 ft.*	
-6 —						
	-		7.0	Same, with brick fragmentsFILL-		-
-8 —				-FILL OR DISTURBED NATURAL MATERI	ALS-	
			9.0	Apparent Bedrock and		
-10 —				Bucket Refusal at 9.0 ft. Bottom of Test Pit at 9.0 ft.		
. <u>.</u> .						
-12 —						* - See Note #3 on Subsurface Exploratio
						Key.
WATER LEVEL				APPROXIMATE PIT DIMENSIONS AT SU	RFACE	SUMMARY
DATE		TIME*	DEPTH FT	LENGTH 8 feet WIDTH	DEPTH: 9.0 ft. JAR SAMPLES: 1	
				BOULDERS		BAG SAMPLES:
				8" to 18" DIAMETER: No. = Vol.	cu ft	WATER LEVEL: 4.0 ft.
* H	rs aft	er comple	ted	Over 18" DIAMETER: No. = Vol.	cu ft	TEST PIT NO. TP-13

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	Consu	ulting Geo	otechnica	TER, NEW YORK L Engineers, geologists	T PIT REPORT	TEST FILE	PIT NO. TP-14 NO. 70352-44		
PROJECT: FORMER EMERSON STREET LANDFILL FILL VERIFICATION/DELIST LOCATION: ROCHESTER, NEW YORK CLIENT: CITY OF ROCHESTER CONTRACTOR: NOTHNAGLE DRILLING EQUIPMENT USED: JOHN DEERE 310 BACKHOE								LOCATION: Ben-Mer Mfg. 1255 Emerson St ELEVATION: EXPLORATION DATE: 10 Dec. 199 H&A REP.: M. Beikirch	
SCALE IN FEET	SAMPLE NUMBER		STRATA CHANGE		REMARKS				
				Dark brown clayey	organic SILT, wit	h brick and plywoo	od fragments.		
					-TOPSOI	L-			
								No OVA or radiation	
-2 —			1.5	Brown silty SAND, s	some clay, with c	obbles and boulder	rs, moist.	meter readings above background.	
					6117			,	
,				Tan to brown claye wet.	/ SILI, SOME SAND	and gravet, commo	on coddles,	Water level in test pit	
-4 —				Same with brick fra	agments.			at 4.0 ft.*	
	1				-FILL-				
-6 —									
-8 —]		8.0	Same, bedrock frag	ments present.				
				Light brown sandy s	SILT, trace clay,	wet.			
			9.0		-GLACIAL T	ILL-			
				E E	Bottom of Test Pi	t at 9.0 ft.			
-10 —	•								
· _									
-12 -								* - See Note #3 on	
								Subsurface Exploration Key.	
	I WA	TER LEVEL	L		OXIMATE PIT DIME	NSIONS AT SURFACE		SUMMARY	
DAT		TIME*	DEPTH FT	APPROXIMATE PIT DIMENSIONS AT SURFACE			DEPTH: 9.0 ft.		
				LENGTH 8 fe	eet	WIDTH 3	feet	JAR SAMPLES:	
					BOULDI	ERS		BAG SAMPLES:	
				8" to 18" DIA	METER: No.	= Vol.	cu ft	WATER LEVEL: 4.0 ft.*	
* H	rs aft	er comple	ted	Over 18" DIA	METER: No.	= Vol.	cu ft	TEST PIT NO. TP-14	

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<u> </u>	H&A OF	NEW YOR	K, ROCHESI	ER, NEW YORK Engineers,	TEST PIT REPORT	TEST	PIT NO. TP-15	
	Geo	logists	and Hydrog	eologists		FILE	NO. 70352-44	
PROJEC LOCATI CLIENT CONTRA EQUIPM	ION: [: ACTOR:	ROCHES CITY O	TER, NEW Y F ROCHESTE GLE DRILLI	2	/DELIST	ST LOCATION: Jada Precision Plastics Co., 1335 Emerson St ELEVATION: EXPLORATION DATE: 10 Dec. 199 H&A REP.: M. Corrigan		
	SAMPLE NUMBER		STRATA	DESCRIPTION	REMARKS			
				Dark brown clayey organic SILT.	-TOPSOIL-		No radiation meter	
			0.5	Gray and black fine sandy SILT, ceramics to ~ 5.0 ft.	little gravel, tra	ce brick and	readings above back- ground.	
-2	s1	3.0					OVA readings from 20 to 1000+ ppm from soil at a depth of ~ 3.0 to 5.0 ft.	
-4								
	s2	5.0						
-6								
			7.5	- F1	ILL-			
-8				Apparent 1 and Bottom of Te	Top of Bedrock est Pit at 7.5 ft.			
-10 —								
- 12								
	WA1	I TER LEVEL	<u> </u>	APPROXIMATE PIT D	IMENSIONS AT SURFA	CE	SUMMARY	
DATE	E	TIME*	DEPTH FT	LENGTH 7 feet	DEPTH: 7.5 ft. JAR SAMPLES: 2			
				BC	DULDERS		BAG SAMPLES:	
				8" to 18" DIAMETER: No.	= Vol.	cu ft	WATER LEVEL: Not Encountered	
* Hr	rs afte	er comple	ted	Over 18" DIAMETER: No.	= Vol.	cu ft	TEST PIT NO. TP-15	

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	Consu	lting Geo		ER, NEW YORK Engineers, TEST PIT REPO cologists	RT	TEST PIT NO. TP-16 FILE NO. 70352-44	
PROJEC LOCATI CLIENT CONTRA EQUIPM	ION: F: ACTOR:	ROCHEST CITY OF	ER, NEW Y ROCHESTE	2	E	DCATION: Alton Mfg., Inc. 1365 Emerson St. LEVATION: XPLORATION DATE: 10 Dec. 1992 &A REP.: M. Corrigan	
SCALE IN FEET	SAMPLE NUMBER		STRATA CHANGE	DESCRIPTION OF MATERIALS		REMARKS	
			0.5	Gray fine GRAVEL (Crusher run). Brown silty coarse to fine SAND, some gravel, concrete, and wood fragments. -FILL- -FILL- Apparent Top of Bedrock and Bottom of Test Pit at 7.0		Water seeping into test	
- 10 - 10 - 12						* - See Note #3 on Subsurface Exploratio Key.	
	WAT	ER LEVEL		APPROXIMATE PIT DIMENSIONS AT	SURFACE	SUMMARY	
DAT	E	TIME*	DEPTH FT	- LENGTH 6 feet WIDT	H 3 feet	DEPTH: 7.0 ft. JAR SAMPLES:	
				BOULDERS		BAG SAMPLES:	
				8" to 18" DIAMETER: No. = Vol.	cu ft	WATER LEVEL: 7.0 ft.*	
* H	rs afte	er comple	ted	Over 18" DIAMETER: No. = Vol.	cu ft	TEST PIT NO. TP-16	

	Geol	ogists a	and Hydrog	Engineers, TEST PIT REPORT eologists		NO. 70352-44		
PROJEC LOCATI CLIENT CONTRA EQUIPM	ON:	ROCHEST CITY OF NOTHNAG	ER, NEW Y ROCHESTE	R	ELEV	LOCATION: Alton Mfg., 1365 Emerso ELEVATION: EXPLORATION DATE: 10 Dec. H&A REP.: M. Corrigan		
	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS		REMARKS		
			0.5	Gray fine GRAVEL (Crusher run).		2 to 10 ppm OVA re from soil at a dep		
				Brown silty coarse to fine SAND, little gravel, ver and boulders (rocky fill), trace brick. Slight per noted from test pit soils.	ry few cobbles troleum odor	~2.0 ft. No radiation meter reading above back		
-2 —	\$1 \$2	2.0				ground.		
-4			4.0	-FILL-				
				 Apparent Top of Bedrock and Bottom of Test Pit 	at 4.0 ft.			
-6 —								
-8								
10								
-10								
- 12 -								
	WATE	R LEVEL		APPROXIMATE PIT DIMENSIONS AT SURFAC	E	SUMMARY		
DATE	E T	IME*	DEPTH FT	– LENGTH 5 feet WIDTH	3.5 feet	DEPTH: 4.0 JAR SAMPLES: 2		
				BOULDERS		BAG SAMPLES: WATER LEVEL: Not		
				8" to 18" DIAMETER: No. = Vol.	cu ft	Encou		

	Consul	ting Geo	technica	TER, NEW YORK l Engineers, geologists	TES	ST PIT REPORT		PIT NO. TP-18 NO. 70352-44		
	ION: T: ACTOR:	ROCHEST CITY OF	ER, NEW Y ROCHESTI	ER	VERIFICATION/DEL	IST	Plas ELEV EXPL	LOCATION: Jada Precision Plastics Co., 1335 Emerson St. ELEVATION: EXPLORATION DATE: 10 Dec. 1992 H&A REP.: M. Corrigan		
CALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE		DESCRIPTION OF	MATERIALS	· · · · · · · · · · · · · · · · · · ·	REMARKS		
				Brown silty coarse with trace asphalt,	to fine SAND, fe , and brick.	w cobbles and b	poulders	No OVA or radiatio meter readings abo background.		
.2					-FILL-					
· <u> </u>			3.0 3.5	Dark brown organic	SILT, with roots	-BURIE	D TOPSOIL-			
.4				Brown coarse to fir	ne SAND, some sil	t, little grave	el, trace clay.			
·6 —										
•			7.5		-GLACIAL T	ILL-				
8 —				B	Apparent Top of Bottom of Test Pi	Bedrock and t at 7.5 ft.		Water level in tes at 7.5 ft.*	c pro	
_										
10 —										
_										
12								* - See Note #3 on Subsurface Explo Key.		
WATER LEVEL				APPR	OXIMATE PIT DIME	NSIONS AT SURFA	CE	SUMMARY		
DATI	E 1	TIME*	DEPTH FT	LENGTH 7 fe	et	WIDTH	3.5 feet	DEPTH: 7.5 JAR SAMPLES:	ft.	
					BOULD	ERS		BAG SAMPLES:		
				8" to 18" DIA	METER: No.	= Vol.	cu ft	4	ft.*	
* Hi	rs after	r complet	ted	Over 18" DIA	METER: No.	= Vol.	cu ft	TEST PIT NO. TP-	18	

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	Consul	ting Geo	otechnica	ER, NEW YORK Engineers, TEST PIT REPORT eologists	TEST PIT NO. TP-19 FILE NO. 70352-44			
PROJEC LOCATI CLIENT CONTRA EQUIPM	ON: : CTOR:	ROCHEST CITY OF NOTHNAC	EMERSON S FER, NEW M ROCHESTE GLE DRILL DEERE 310	R NG	Prod ELEV EXPL	LOCATION: Peko Precision Prods., Inc., 1425 Emerson St ELEVATION: EXPLORATION DATE: 10 Dec. 199 H&A REP.: M. Beikirch		
	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS		REMARKS		
				Dark brown silty fine SAND, common cobbles, trace clay, with bricks and C&D debris, moist. Road gravel at 1.0 ft. to 3.0 with tiles, piece of plastic wrap and metal can.	ft.	No OVA or radiation meter readings above background except as noted below.		
	s1	3.0				OVA reading= 3 to 4 pp		
-4			4.0	-FILL-				
				Light brown-tan silty fine SAND, common cobbles, with clayey pockets or lenses, concrete and asphalt-like material, moist				
				Same, except more clay.				
-6								
				-FILL-				
-8 —			8.0 8.5	Brown coarse to fine SAND, some silt, little gravel, trace c -GLACIAL TILL-	lay.			
-				Apparent Bedrock, Bucket refusal at 8.5 ft. Bottom of Test Pit at 8.5 ft.				
-10								
-								
12 —								
-								
	WATE	ER LEVEL		APPROXIMATE PIT DIMENSIONS AT SURFACE		SUMMARY		
DATE	1	TIME*	DEPTH FT	- LENGTH 8 feet WIDTH 3 feet		DEPTH: 8.5 ft. JAR SAMPLES: 1		
				BOULDERS		BAG SAMPLES: WATER LEVEL: Not		
				8" to 18" DIAMETER: No. = Vol. cu ft		Encounter		

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	Consu	ulting Ge	otechnical	ER, NEW YORK Engineers, geologists	TE	ST PIT REPORT	•	EST PIT NO. ILE NO.	TP-20 70352-44	
	ION: T: ACTOR:	ROCHES CITY C	TER, NEW N F ROCHESTE GLE DRILL	R	VERIFICATION/DE	LIST	P E E	OCATION: Peko Precision rods., Inc., 1425 Emerson St. LEVATION: XPLORATION DATE: 10 Dec. 1992 &A REP.: M. Corrigan		
CALE IN FEET	SAMPLE NUMBER		STRATA		DESCRIPTION OF	MATERIALS			REMARKS	
	s1	2.5		Brown and black sil wire, metal to 5.5		ne SAND, some	gravel with bri	from so depth of Readings zone che ppm near tank ~ 2 excavati No OVA c meter re	ding = 5 ppm il sample at a f ~ 2.5 ft. s in breathing ecked. Up to 10 propane gas 20 ft. from on. or radiation eadings above and from test	
-4					-FILL	-				
6 —			5.5	Light brown fine sa						
			6.5	Apparent Top of	-LACUSTRINE/		it at 6.5 ft.			
8										
-										
10 —										
-										
12 —										
_										
WATER LEVEL				APPRO		SUMMARY				
DATE	:	TIME*	DEPTH FT	LENGTH 7 fee	et	WIDTH	3.5 feet	DEPTH: JAR SAMP	6.5 ft. LES: 1	
					BOULD	ERS		BAG SAMP	LES: VEL: Not	
				8" to 18" DIAM		= Vol.	cu ft		Encountere	
* Hr	rs afte	er comple	ted	Over 18" DIAM	ETER: No.	= Vol.	cu ft	TEST PIT	NO. TP-20	

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	Consul Geol	ting Geo ogists =	otechnica and Hydro	L Engineers, TEST PIT REPORT geologists	FILE NO. 70352-44	
PROJE						
LOCAT CLIEN CONTR/	ION: T: ACTOR:	ROCHEST CITY OF NOTHNAG	EMERSON TER, NEW F ROCHESTI GLE DRILL DEERE 310	R NG	LOCATION: Ben-Mer Mfg. 1255 Emerson S ELEVATION: EXPLORATION DATE: 10 Dec. 19 H&A REP.: M. Beikirch	
SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS	
				Brown silty coarse to fine SAND, with cobbles, moist.		
_2			2.0	-FILL-	No OVA or radiation meter readings above background except as noted below.	
				Gray-brown-red sandy SILT, some clay, with cobbles and boulder	·s.	
<u> </u>	- S1	4.0	4.5	-FILL-	OVA reading = 2 ppm	
			5.5	Brown, coarse to medium SAND, few cobbles, wet. -FILL OR DISTURBED NATURAL MATERIALS-		
-6			2.5	Apparent Bedrock, Bucket Refusal at 5.5 ft. Bottom of Test Pit at 5.5 ft.	at 5.0 ft.*	
-8						
- 10 —						
·12 —					* - See Note #3 on Subsurface Explorat Key.	
		RLEVEL		APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY	
DATE	T	IME* I	DEPTH FT	- LENGTH 7 feet WIDTH 3 feet	DEPTH: 5.5 ft JAR SAMPLES: 1	
				BOULDERS	BAG SAMPLES:	
				8" to 18" DIAMETER: No. = Vol. cu ft	WATER LEVEL: 5.0 ft	
* 80	s after	complete	ed	Over 18" DIAMETER: No. = Vol. cuft	TEST PIT NO. TP-24	

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С	lient		NY	EM SDE ICAN	С			ET		Date <u>1/26/89</u> <u>7/26/89</u> start <u>Finish</u> Boring Location <u>210 (or fax - IM Pound Lor</u> Total Depth <u>16'</u>					
W	Monitoring Instrument(s) SAMPLE HAMMER Weight Ib Fall in.									Depth to Water $2.5 - 1.27$ Hole Diameter $.73'$ Ground Surface Elevation $5^{*}35.8$					
Deptn		6"	12" 1 o to	»	Recovery (feet)	Sample No.	Instrument Reading	Mcisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks				
								DAMI Noist Min 3.75 3.0 2.0 3.0 3.0 3.0	57 10 Ft. 234 156 17	NO SAMPLING REDUIRED AUGERED THEOUGH SLRFALE GRAVEL TO DARK GREV MIXED SAND, GRAVEL, SILT (HILL) COBBLES - INTERMITENT LIGHT BROWN FINE-MEDIUM SAND, SILT - NO REFUSE COBBLES REFUSAL AT II HO CORING FROM II BOULDER IN TIP OF BARREL LIGHT BROWN CUTTING WATER GREY DULOM.TE HOLE OPEN TO 16.5' WATER @ 7.5 SET 2" PVC MONITOR WELL AT 16 #2 SANDPACK TO 4' "S" BENTONITE PELLETS TO 2' FORTLAND CEMENT TO SUFFACE					

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LAWLER, MATUSKY & SKELLY ENGINEERS

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Data by KPA

Sheet	1	of

Boring No. <u>Gw-11</u> Project No. <u>576-005</u>

SUBSURFACE EXPLORATION - TEST BORING LOG

Project Name EMERSON STREET

Client NYSDEC

Driller AMERICAN AUGER

Monitoring Instrument(s) HAULMER. CE-1, DosiMETUR

SAMPLE HAMMER

Weight 140 lb

Fall <u>30</u> in.

Date 8/2/89	8/2/89
start	finish
Boring Location $\mathcal{P}_{\mathcal{Y}_{\mathcal{I}}}$	2AMIA BROKERAGE
Total Depth15	
Depth to Water	6.64 BG.
Hole Diameter	.7'
Ground Surface Elev	vation532.6

Depth	-OW AMP 6° to 12°			Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
0-2 4-6	8 36	57.05	5		.7			DRY Loose DRY 5.25 1.2 4.5 3.6 2.5 2.5 2.5 2.5 1.0	.3 4.5 1.5 8.5 9.5 10.5 12.5 13.5 14.5 15.0	ANGULAR GRAVEL O SURFALE PROCESSILT - FINE SAND WI ANGULARI SUBANGULAR GRAVEL, SOME ASPHALT MASSES (COMESSUE) METAL GRATING FRAGRIENTS FINE SAND, BROKEN F.N ERADER PULVERIZED COARSE - CONCRETE LOCSE SOME TARMACK FRAGMENTS COBBLE REFUSAL O 5' RETRIEVED 1.6' DOLOMITE W/ UPPER ,2' CONCRETE NOTICEABLE OXIDATION BETWEEN NUMEROUS FRACTURES FRACTURED GLEY DOLOMITE SOLUTION CAUITIES NOTED THROUGHOUT - (SMALL) INSTALLED 2" PVC MONITOR WELL OI THROUGHOUT - (SMALL)	HNIL - 3-5 RDM BOREHOLE 5-2.5 RDM NO ODOK NO ODOK

LAWLER, MATUSKY & SKELLY ENGINEERS

-110-210 Colfax St. PROJECT: LOCATION "GU Log of Well No. SUL 16117 **ELEVATION AND DATUM:** BORING LOCATION: DRILLING CONTRACTOR: DATE STARTED: DATE FINISHED: DRILLING METHOD: TOTAL DEPTH: SCREEN INTERVAL: DEPTH TO FIRST DRILLING EQUIPMENT: COMPL CASING: WATER: SAMPLING METHOD: LOGGED BY: 4/41 HAMMER WEIGHT: **RESPONSIBLE PROFESSIONAL:** DROP: UN 11) REG. NO. BA OVM Reading (ppm) SAMPLES DESCRIPTION DEPTH (feet) NAME (USCS Symbol): color, moist, % by weight, plast, WELL CONSTRUCTION DETAILS Sample No. Foot Sample consistency, structure, cementation, react. wiHCL geo, inter. AND/OR DRILLING REMARKS Surface Elevation: 0-6" - Brown topen'l courst, firm-b"-2.0' Aser /F:11- state broked tragmost, porcelain, plass, ash, coal dialer, coal fragmosts. boose, worst, no oders-RAS X 2 Sigli N 4 AA which brown to /silt matino. little broke. No vidous-Z Ske b 8 AA - looser (low recovery いようん à 10 3 sampler Sourcing (velocit) 0 * a drave 41/4# p HSA to 1/35 4"/B permanent start asing. 12 13.01 AX 21 14 16 18 22 or 24 20 28 W-1 (12/95) Project No. **Geomatrix Consultants** Figure W-1 (Blank)

(Log of Well No. SUT Sayplin PAGE 2062 PROJECT: Lto Wut Foot CVM Raading SAMPLES DEPTH (feet) DESCRIPTION WELL CONSTRUCTION DETAILS Sample No. Sample NAME (USCS Symbol): color, moist, % by weight, plast AND/OR DRILLING REMARKS consistency, structure, cementation, react. w/HCl. g Brin Mi love ww @ 15'd 3p Dull whe 26 Suin /fl. (first 5.0' of worth) after where hitting just to isio go. Dilliste slows to 2-25 mil/ Af snow 5.0's with Rus#1: 15.0'-25,0 6p Rec: 9.5'/10' = 95% Pap: 68 /95' = 72% * 105 20 5-20 sal of Pap: 68/95 veche-water in figt (-0' of wetty (30g bby forlid a 37/4" vollerbit to 257/20 Littl' Horas bury Lineston with shale interbals (interbals roundly & Remark VSI K Sum thickness) sevent windit St water tea tudius a (iven strining they pust. two barbal homestal trating Schwar S.5-5.5'. open are very kingting O borehole of Dill You braited Rig Mayno Runo. R-7-10' if Rout #1_ Mild dolonotication for well unovers slouly Situren 5-0 & b.0' Core exhibits - 2.5' nearry in Siteron 5.0 & b.0' - Core exclusion us builty stylelite preserve soften E pre Gur (From due 1.5' of isve Rec 118/98% RQD 72"/60 2 W-2 (12/95) **Geomatrix Consultants** Project No. Figure W-2 (Blank)

.....

	ner Emers hester, Ne	son Street Landfill- SVI Investigation	Log of Well No. LAB-108				
BORING LOCAT	ION: 11	0-210 Colfax Street	TOP OF RISI fmsl	ER ELEVATION:	DATUM:		
ORILLING CONT	RACTOR	: Nothnagle Drilling	DATE STAR 9/29/10	TED:	DATE FINISHED: 9/30/10		
ORILLING METH	IOD: 41/	/4" Diameter HSA	TOTAL DEPTH: SCREEN INTERV/ 25.0 fbgs 15.0-25.0 fbgs				
	PMENT:	CME 850	DEPTH TO WATER:	FIRST			
SAMPLING MET	HOD: 4'	Macrocore Sampler	LOGGED BY MAC/KRM	· ·			
HAMMER WEIGH	HT: 140	DROP: 30"		LE PROFESSION	AL: REG. NO.		
DEPTH (feet) Sample Blows/		DESCRIPTION NAME (USCS Symbol): color, moist, % by weight, pla cementation, react. w/HCl, geo. inter.			ISTRUCTION DETAILS DRILLING REMARKS		
DEPT (feet Sample No. Sample Blows/	foot OVN (ppm	Surface Elevation: fmsl			flush-mount surface casing		
1-		Brown topsoil, moist, firm	//////////				
	ia O	ASH/FILL- Shale bedrock fragments, proce ash, coal clinker, coal fragments, loose, m	elain, glass, oist, no odors.		4" permanent stee casing to 15.0' bgs		
5 - 2 6 2 7 - 8 - 1 8 - 1 8 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ia O	As above, within brown fine-sand/silt matri no odors.	x. Little brick,				
9 10 11 12	IA O						
13 4	ıa 0 _	refusal at 13.0' bgs (sampler bouncing) Advanced roller bit to 15.0' bgs.			Cement/bentonite		
14 <u>-</u> 15-		-			grout		
16 _ 17 _ 18 _ 19 _		Begin NX bedrock core at 15.0' bgs. Run #1 Depth: 15.0-25.0 'bgs Rec: 118" (98%) RQD: 72" (60%)		• • • • •	Bedrock		
20 - 21 - 22 - 23 - 23 - 24 - 25 - 26 - 27 - 27 - 27 - 27 - 27 - 27 - 27		Lithology: LOCKPORT FORMATION (Penfield Dolostone Member) Light to medium gray, fine-grained, mediur moderately hard to hard, siliceous Dolosto occassional to frequent argillaceous partin occassional shale interbeds. Zones of occ and vugs are present. Secondary crystalliz gypsum) infilling of bedding planes, joints a common.	ne, with gs and assional pits ation (calcite or		Open Bedrock Corehole (reamed to 3 7/8")		
28 29 30 31 32 33 33 34		 Rock coring details: * highly fractured zone, intersecting, planal dipping to high angle joints between 15 a * short fractured zone at 16.7', 17.3-17.5', 19.7-19.9', 10.0-21.1' *vertical cracks, pits, vugs at 21-22' * high angle joints at 22.2-22.5', 22.8-23.0' 	nd 16.3' bgs 18.9-19.2',				
35 - 36 - 37 - 38 - 39 - 40							
ΤV			trix Consultant		SL WELL LOGS 9-2010.GPJ (11/10		

DESIG	N	D	

Project No.	2-2570.0	Page 1	of	Test Pit No.	TP02-1	
Project Name	Flower City Transfe	er Statoin, 200 F	errano, Street, R	ochester, New York		
Client	Mitchell Group, 580	00 Pittsford-Pali	nyra Road, P.O.	Box 1058, Pittsford	, New York 14534	
Elevation	527.0 Est.	Weather	Sunny 75°	Inspector	Jay Goggin	
Date Started	07/26/02	Completed	07/26/02	Operator	Doug	
Backhoe Subcontractor Re-Surface Inc. Equipment Case Extend-A-Hoe						

Depth Below	Sample	Depth of	Soil and Rock Classifications
Surface	Number	Sample	Remarks
			ASPHALT 0'3"
			Washed No. 1 and No. 2 STONE 0'6"
			FILL: TOPSOIL, barrel bands, gravel silt, clay, wood
2			
<u> </u>			
		[2'6"
			TOPSOIL
4			
			4'6"
			Compact gray green wet SAND and SILT, little gravel
6		-	
	1		
			7'0''
			Refusal on fractured rock 7'0"
8		ļ	
10			
12			
			Notes:
			1. Sides vertical and stable on completion.
			2. Water seepage at rock.
			3. Test pit elevation estimated to the nearest half foot from the site plan.
14			
14			

DESIGN, P.C.

Test Pit Log

Project No.	2-2570.0	Page 1	of 1	Test Pit No.	TP02-2	
Project Name	Flower City Trans	fer Statoin, 200 F	errano, Street, Ro	chester, New York	<u> </u>	
Client	Mitchell Group, 5	Mitchell Group, 5800 Pittsford-Palmyra Road, P.O. Box 1058, Pittsford, New York 14534				
Elevation	526.0 Est.	Weather	Sunny 75°	Inspector	Jay Goggin	
Date Started	07/26/02	Completed	07/26/02	Operator	Doug	
Backhoe Subcontractor Re-Surface Inc. Equipment Case Extend-A-Hoe						

	~ .	Depth	Soil and Rock Classifications
	Sample Number	of Sample	Remarks
Surface 1	- uniber	Cutterin	ORGANIC MAT0'5"
			Run of bank sand and gravel, and crusher-run stone 1'1"
			FILL: ASH, grades to topsoil
2			
			3'2"
4			Firm gray green moist SILT4'0"
			Compact tan red moist SAND, some gravel, some silt
			4'9" Test pit terminated at 4'9"
6			
8			
10		<u> </u>	4
12			
			Notes: 1. Sides vertical and stable on completion.
			 Dry on completion. Test pit elevation estimated to the nearest half foot from the site plan.
14			



Project No.	2-2570.0	Page 1	of	Test Pit No.	TP02-3	
Project Name	Flower City Transf	fer Statoin, 200 F	errano, Street, R	ochester, New York	<u>t</u>	
Client	Mitchell Group, 5800 Pittsford-Palmyra Road, P.O. Box 1058, Pittsford, New York 14534					
Elevation	528.0 Est.	Weather	Sunny 75°	Inspector	Jay Goggin	
Date Started	07/26/02	Completed	07/26/02	Operator	Doug	
Backhoe Subcontractor Re-Surface Inc. Equipment Case Extend-A-Hoe						

Depth Below	Sample	Depth of	Soil and Rock Classifications
Surface	Number	Sample	Remarks
			ASPHALT 0'3.5" FILL: Run of Bank sand and gravel, and crusher run stone (building side), black ash, rock, metal, wood, cmu concrete, perforated drain tile at 3'10"
2			
4			
6		:	
8			7'0". Refusal on rock at 7'0"
10			
12			Notes:
14			 Sides vertical and stable on completion. Flowing water at 3'10"±, static water level at 3'10" on completion. Test pit elevations estimated to the nearest half foot from the site plan.



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Project No.	2-2570.0	Page 1	of _1	Test Pit No.	TP02-4	
Project Name				ochester, New York		
Client	Mitchell Group, 5800 Pittsford-Palmyra Road, P.O. Box 1058, Pittsford, New York 14534					
Elevation	531.0 Est.	Weather	Sunny 75°	Inspector	Jay Goggin	
Date Started	07/26/02	Completed	07/26/02	Operator	Doug	
Backhoe Subcontractor Re-Surface Inc. Equipment Case Extend-A-Hoe						

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
Janace	. camber	Jumpio	FILL: 50% Run of Bank sand and gravel 50% SILT
2			
			2'8" FILL: Black ASH, plastic, wood, rock, few cobbles/boulders, blends to black topsoil 4'0"
4			Firm to compact moist tan red SAND, some silt, little gravel, few cobbles
6			
			Broken rock below 6'
8			8'0"
			Refusal on fractured rock at 8'0"
10			
12			
			 Notes: Sides vertical and stable on completion. Water seepage 6'8". Test pit elevations estimated to the nearest half foot from the site plan.
14			



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Project No.	2-2570.0	Page 1	of	Test Pit No.	TP02-5	
Project Name	Flower City Transfe	r Statoin, 200 F	errano, Street, Ro	ochester, New York	<u>د</u>	
Client	Mitchell Group, 5800 Pittsford-Palmyra Road, P.O. Box 1058, Pittsford, New York 14534					
Elevation	532.0 Est.	Weather	Sunny 75°	Inspector	Jay Goggin	
Date Started	07/26/02	Completed	07/26/02	Operator	Doug	
Backhoe Subcontractor Re-Surface Inc. Equipment Case Extend-A-Hoe						

Depth		Depth	Soil and Rock Classifications
Below	Sample	of	Bamoulu
Surface	Number	Sample	Remarks ORGANIC MAT 0'3"
			ORGANIC MAT 0'3" FILL: Gray and brown SILT, some gravel, some wood, little concrete, brick, ash, incompletely stripped topsoil 1'9"
2			Compact to dense moist SILT, some sand, little gravel, trace roots, trace clay
4			3'5" Compact to dense red-tan moist SAND, little gravel, little silt/clay, few cobbles, few boulders, random clay with green varved pockets
	S-1	5'0"	
6			
8			Cobbles and boulders increase below 7'
10			9'9" Refusal on rock at 9'9"
12			Notes:
14			 Notes: Sides slough below 5' on completion at 9:35 A.M. Sides slough below 4'6" at 12:00 P.M. Dry on completion at 9:35A.M. test pit had 5" of water at 12:00 P.M. before backfilling. Test pit elevation estimated to the nearest half foot from the site plan.



5.0

Project No.	2-2570.0	Page 1	of 1	Test Pit No.	TP02-6		
Project Name	Flower City Transfer Statoin, 200 Ferrano, Street, Rochester, New York						
Client	Mitchell Group, 5800 Pittsford-Palmyra Road, P.O. Box 1058, Pittsford, New York 14534						
Elevation	530.5 Est.	Weather	Cloudy 70°	Inspector	Jay Goggin		
Date Started	07/26/02	Completed	07/26/02	Operator	Doug		
Backhoe Subcontractor Re-Surface Inc. Equipment Case Extend-A-Hoe							

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
Gurnace	Ituinoti	Cumpie	ASPHALT 0'3"
			Run of bank gravel, some asphalt0'9"
			Compact black moist TOPSOIL
			1'10"
2			Compact brown with red mottling moist SILT, some gravel, trace sand, trace
<u> </u>			roots
			2'11"
			Compact red moist SILT, some fine sand
			Dense tan moist SILT, some sand, little gravel
4			Dense fan moist SILT, some sand, inne graver
6			Grades to and rock/gravel below 6'
		1	1
			7'11"
8			Refusal on rock at 7'11"
°		<u> </u>	4
10			
12			
			- Notes:
			1. Sides vertical and stable on completion.
			2. Water seepage at 7'10".
			3. Test pit elevations estimated to the nearest half foot from the site plan.
14			
14	1		



Project No.	2-2570.0	Page 1	of	Test Pit No.	TP02-7
Project Name	Flower City Transi	fer Statoin, 200 F	errano, Street, R	ochester, New York	<u>.</u>
Client	Mitchell Group, 58	800 Pittsford-Palr	nyra Road, P.O.	Box 1058, Pittsford	, New York 14534
Elevation	532.5 Est.	Weather	Sunny 75°	Inspector	Jay Goggin
Date Started	07/26/02	Completed	07/26/02	Operator	Doug
Backhoe Subco	ontractor Re-Sur	face Inc.		Equipment	Case Extend-A-Hoe

Depth Below	Sample	Depth of	Soil and Rock Classifications
Surface	Number	Sample	Remarks
2			FILL: GRAVEL, silt, brick, concrete 1'5" TOPSOIL
4			3'3" Compact tan moist-wet SAND, little gravel, little silt, trace clay seams, root stain
6	S-1	4'5"	5'6"5'6"
8			
10			
12			Notes:
14			 Notes: Sides vertical and stable on completion at 9:55 A.M. Little running sand below 5' at 11:50 A.M. before backfilling. Water seepage at rook at 9:55 A.M. 7" of water at 11:50A.M Test pit elevations estimated to the nearest half foot form the site plan.



Project No.	2-2570.0	Page 1	of 1	Test Pit No.	
Project Name	Flower City Transf	er Statoin, 200 F	Ferrano, Street, Ro	chester, New York	· · · · · · · · · · · · · · · · · · ·
Client	Mitchell Group, 58	00 Pittsford-Pal	myra Road, P.O. E	lox 1058, Pittsford	, New York 14534
Elevation	532.5 Est.	Weather	Sunny 75°	Inspector	Jay Goggin
Date Started	07/26/02	Completed	07/26/02	Operator	Doug
Backhoe Subc	ontractor Re-Surf	ace Inc.		Equipment	Case Extend-A-Hoe

Depth Below	Sample	Depth of	Soil and Rock Classifications
Surface	Number	Sample	Remarks
			ORGANIC MAT, little topsoil, grass and roots FILL: 75% BRICK, soil, ash, wood, metal (R-Bar) 25% COBBLES and boulders
2			
			2'11" TOPSOIL
4	S-1	4'0"	
6			Grades to some gravel and a few cobbles below 5'
6			4
8			-
10			Refusal on rock. at 10'0"
12			Notes:
14			 Sides slough below 8'6" and 7'0" after 5min. Running water and sands at 9'6" at 9:00A.M., 12" of water in test pit at 11:45A.M before backfilling. Test pit elevations estimated to the nearest half foot from the site plan.



Project No.	2-2570.0	Page 1	of <u>1</u>	Test Pit No.	TP02-9
Project Name	Flower City Tran	sfer Statoin, 200 F	Ferrano, Street, Ro	ochester, New York	c
Client	Mitchell Group,	5800 Pittsford-Pali	myra Road, P.O.	Box 1058, Pittsford	I, New York 14534
Elevation	532.0 Est.	Weather	Sunny 75°	Inspector	Jay Goggin
Date Started	07/26/02	Completed	07/26/02	Operator	Doug
Backhoe Subc	ontractor Re-Su	urface Inc.		Equipment	Case Extend-A-Hoe

ile i

Depth	0	Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
2			FILL: Construction debris, concrete, wood, wire spool ends to 3'0"diameter, 2'x2'x3 'concrete (footing like), rock, brick, metal, wire, asphalt, trace ash, cobbles, and boulders
4			
			4'6" TOPSOIL 5'6"
6			Compact gray moist to wet SILTY CLAY, some sand
			7'0" Compact red brown moist SAND, some gravel, little silty clay
8			
10			9'4" Refusal on rock at 9'4"
10			
12			
14			 Notes: Sides vertical and stable on completion at 10:10A.M., little running sands below 8' at 11:50. Seepage at rock, 8" of water at 11:50A.M. Test pit elevations estimated to the nearest half foot from the site plan.



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Test Pit Log

Project No.	2-2570.0	Page 1	of	Test Pit No.	TP02-10
Project Name	Flower City Trans	fer Statoin, 200 Fe	errano, Street, R	ochester, New York	
Client	Mitchell Group, 58	800 Pittsford-Paln	nyra Road, P.O.	Box 1058, Pittsford	, New York 14534
Elevation	530.0 Est.	Weather	Sunny 75°	Inspector	Jay Goggin
Date Started	07/26/02	Completed	07/26/02	Operator	Doug
Backhoe Subco	ontractor Re-Sur	face Inc.		Equipment	Case Extend-A-Hoe

A.C.F

Depth		Depth	Soil and Rock Classifications
Below Surface	Sample Number	of Sample	Remarks
			ORGANIC MAT 0'3" FILL: Compact brown moist SILT, little gravel, little sand, few cobbles, few boulders, 20" diameter trace wood, ash, brick, trace topsoil and roots 1'3"
2			Compact dense tan SAND, some silt, little gravel, few cobbles, few boulders, trace fine roots (Wet sand and gravel pocket at 3'4" – 4'3" with wet silt/clay inclusions 3"-6"
4			diameter)
6			Compact red tan SILT, some sand, some gravel, few cobbles and small
			boulders
8			8'3"
			Refusal on rock at 8'3"
10			
12			
			 Notes: Sides vertical and stable on completion at 9:15A.M. Sloughing, caving, and running sands below 3'6", test pit 6' deep at 11:40A.M. before backfilling. Dry on completion at 9:15A.M. 7" of water at 11:40A.M.
14			3. Test pit elevations estimated to the nearest half foot from the site plan.

Co	H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists					TEST BORING REPORT		BORING NO.	в135	
PROJECT: CLIENT: CONTRACT	CI	RMER EMERSON IY OF ROCHES THNAGLE DRIL	TER	NDFILL MODI	FIED REM	EDIAL INVESTIGATION	FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: City of			
	DRIVE ITEM CASING SAMPLER				CORE BARREL				Rochester Colfax St. Complex (See Plan) ELEVATION:	
TYPE INSIDE D HAMMER W HAMMER F	EIGHT	(IN) (LB) (IN)		S 1-3/8 140 30		RIG TYPE: Diedrich D-50, Tr BIT TYPE: 2-1/2 in. I.D. H DRILL MUD: OTHER:		DATUM: START: 14 May 1993 FINISH: 14 May 1993 DRILLER: R. Bauer H&A REP: M. Corrigan		
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	D REMARKS		
 		3 2 2 3	\$1 15"/24"	3.0 5.0	6.5	Soft brown clayey SILT, lit -DISTURBED NAT				
 		50 50/.2	·\$2 5"/8"	8.0 8.7] L	AVEL, some c AL TILL- Boring at 8		ne sand, damp	
 - 15 -						Notes: 1. Borehole backfilled to 2. No OVA, explosimeter or background from sample	- radioactiv	ity meter re	adings above	
 20										
		WATER LEVEL	DATA	L <u></u>	<u> </u>	SAMPLE IDENTIFICATION		SUMMARY		
				H (FT) TO:	<u></u>	OPEN LE IDENTIFICATION	OVERBURDEN		8.7 ft.	
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	ROCK CORED			
						S Split Spoon	SAMPLES:		2S	
							BORING NO.		B135	

H&. C	H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists					TEST BORING REPORT		BORING NO. B136		
PROJECT CLIENT: CONTRAC	CI	RMER EMERSON TY OF ROCHES	STER	NDFILL MOD	IFIED REM	IED REMEDIAL INVESTIGATION SHEET NO. 1 OF 1 LOCATION: City of Rochester Colfax St.				
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO	· · · ·	Complex (See Plan) ELEVATION:		
TYPE INSIDE I HAMMER I HAMMER		(IN) (LB) (IN)	 	S 1-3/8 140 30	 	RIG TYPE: Truck Mounted, BIT TYPE: 4-1/4 in. I.D. DRILL MUD: OTHER:		DATUM: START: 14 May 1993 FINISH: 14 May 1993 DRILLER: S. Spring H&A REP: J. Marschner		
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	D REMARKS		
 		1 1 2 1	\$1 12"/24"	3.0 5.0		Very loose black and red-b	orown ASH, wi -FILL-	th wood and glass.		
 - 10		7 10 14 12	·\$2 16"/24"	8.0	8.6	Same. Medium dense red-brown fin and fine gravel, wet. -LACU	-FILL- e SAND, littl STRINE/FLUVIA			
 						Bottom of Notes: 1. Borehole backfilled to	Boring at 10 ground surfa			
 15						 OVA readings from samp S1 = 5 ppm (methane) S2 = 0 ppm No explosimeter or rad background from sample 	ioactivity me			
		ATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY		
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample	OVERBURDEN ROCK CORED			
						S Split Spoon	SAMPLES: BORING NO.	2S B136		

H8 C	A OF NEW Consultin Geologi	BORING NO. B137						
PROJECT CLIENT: CONTRAC	CI	FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: City of						
	ITEM		CASING	DRIVE	CORE	DRILLING EQUIPMENT & PRO	OCEDURES	Rochester Auto Pound (See Plan) ELEVATION:
TYPE INSIDE HAMMER HAMMER	DIAMETER WEIGHT FALL	(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30		 RIG TYPE: CME-75, Truck-Me BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers to while standard sam 	H.S. Augers o 8.0 ft.	DATUM: START: 14 May 1993 FINISH: 14 May 1993 DRILLER: S. Spring H&A REP: J. Marschner
DEPTH (FT)	CASING BLOWS PER FT	BLOWS	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASS	SIFICATION AN	D REMARKS
 		5 5 2	s1 24"/24"	3.0		Loose brown to black ASH w	with wood, cin -FILL-	nders and glass, damp.
 		6 8 9 1;	•s2 24#/24#	8.0	8.4 9.5	Medium dense red-brown co	FLUVIAL-	
						[L	LATION TILL/	
							Boring at 10	D.0 ft.
15]					Notes: 1. Backfilled borehole to	ground surfa	ace with soil cuttings.
 						 OVA readings from samp S1 = 1000+ ppm (800 pp S2 = 600 ppm methane No OVA readings above No explosimeter or rad 	m methane) background ir lioactivity me	n the breathing zone. eter readings above
20						background from sample 4. Sample S1 was submitted characteristics analys	d for TCLP me	in the breathing zone.
25								
	1	WATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY
DATE	TIME	ELAPSED	DEPT	H (FT) TO:		0 Open End Rod	OVERBURDEN	(LIN FT): 10.0
		TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	T Thin Wall Tube U Undisturbed Sample	ROCK CORED	
						S Split Spoon	SAMPLES:	2S
							BORING NO.	B137

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists						TEST BORING REPORT		BORING NO. B138	
PROJECT: FORMER EMERSON STREET LANDFILL MODIF CLIENT: CITY OF ROCHESTER CONTRACTOR: NOTHNAGLE DRILLING				NDFILL MOD	IFIED REM	EDIAL INVESTIGATION		FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: City of Roch. Colfax Street Complex	
:	ITEM	×	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PRO		(See Plan) ELEVATION:	
TYPE INSIDE I HAMMER I HAMMER I		(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30	 	RIG TYPE: CME-75, Truck-Mo BIT TYPE: 4-1/4 in. I.D. H DRILL MUD: OTHER: Advanced augers t while standard sa	.S. Augers o 8.0 ft.	DATUM: START: 14 May 1993 FINISH: 14 May 1993 DRILLER: S. Spring H&A REP: J. Marschner	
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASS	IFICATION AN	D REMARKS	
 		1 1 1 1 1 1 4 15 21	\$1 12"/24" 	3.0 5.0 8.0 10.0	3.8	Dense red-brown silty coars gravel, wet.	ilty CLAY, tr AL SUBSOIL-	AND, some subround	
		27				 Notes: Backfilled borehole to OVA readings from samples of the same samples of the same same same same same same same sam	le screening Dackground in ioactivity me screening or Domitted for 1	ace with soil cuttings. noted as follows: n the breathing zone. eter readings above in the breathing zone.	
-25		WATER LEVEL	DATA			SAMPLE IDENTIFICATION		SUMMARY	
DATE	TIME	ELAPSED		H (FT) TO:		0 Open End Rod	OVERBURDEN		
		TIME (HR)	BOTTOM OF CASING	BOTTOM OF HOLE	WATER	T Thin Wall Tube U Undisturbed Sample S Split Spoon	ROCK CORED	(LIN FT): 2S	
						1	BORING NO.	B138	

H&. Ci	onsulting	YORK, ROCHE g Geotechnic sts and Hydr	al Enginee	rs,		TEST BORING REPORT	BORING NO. B139								
PROJECT CLIENT: CONTRAC	CI	RMER EMERSON IY OF ROCHES IHNAGLE DRIL	TER	NDFILL MOD	FIED REM	EDIAL INVESTIGATION	FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: City of								
	ITEM	- <u></u>	CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROC	EDURES	Rochester Auto Pound (See Plan) ELEVATION:							
TYPE INSIDE I HAMMER I HAMMER		(IN) (LB) (IN)	Auger 4-1/4 	S 1-3/8 140 30	 	RIG TYPE: CME-75, Truck-Mou BIT TYPE: 4-1/4 in. I.D. H. DRILL MUD: OTHER: Advanced augers to while standard samp	DATUM: START: 14 May 1993 FINISH: 14 May 1993 DRILLER: S. Spring H&A REP: J. Marschner								
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA CHANGE (FT)	VISUAL CLASSIFICATION AND REMARKS									
 	-	3 5 6 5	\$1 6"/24"	3.0	6.5	Medium dense black ASH, with glass, cinders (possible coal fragments), damp. -FILL-									
 		2 2 3	S2 24"/24"	8.0		Loose black clayey SILT with wood, roots and other organic material, damp. -MARSH DEPOSIT-									
		12	\$3	13.0	13.3	Same, except wet. Hard, highly to completely weathered, gray-brown, fine-grained, DOLOSTONE, wetLOCKPORT FORMATION-									
		15 20 100/.5	18"/24"	15.0											
						Bottom of Boring at 15.0 ft.									
	-				•	Notes:									
<u>⊢</u> –						 Backfilled borehole to OVA readings from sampl 	-								
						\$1 = 850 ppm (500 ppm m \$2 = 70 ppm (50 ppm met	noted as follows:								
20 						 S3 = 0 ppm No OVA readings above background in the breathing zon 3. No explosimeter or radioactivity meter readings above background from sample screening or in the breathing 									
-23	 	WATER LEVEL													
			· · · · · · · · · · · · · · · · · · ·	H (FT) TO:		SAMPLE IDENTIFICATION	OVERBURDEN	SUMMARY (LIN FT): 15.0							
DATE	TIME	ELAPSED TIME (HR)	BOTTOM OF CASING	BOTTOM BOTTOM		0 Open End Rod T Thin Wall Tube U Undisturbed Sample	(LIN FT):								
						S Split Spoon	SAMPLES:	35							
	1						BORING NO.	B-139							

	onsulting	Geotechnic Sts and Hydr	STER, NEW al Engineer ogeologist	rs,		TEST BORING REPORT	BORING NO. B140					
PROJECT CLIENT: CONTRAC	CIT	MER EMERSON Y OF ROCHES HNAGLE DRIL	STER	NDFILL MOD	IFIED REM	EDIAL INVESTIGATION	FILE NO. 70352-46 SHEET NO. 1 OF 1 LOCATION: City of Rochester Colfax Stre					
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING EQUIPMENT & PROC		Complex (See Plan) ELEVATION:				
TYPE INSIDE HAMMER HAMMER		(IN) (LB) (IN)	Auger 2-1/4 	S 1-3/8 140 30	 	RIG TYPE:Diedrich D-50, Tru BIT TYPE: 2-1/4 in. I.D. H. DRILL MUD: OTHER: Advanced augers to while standard sam	DATUM: START: 14 May 199 FINISH: 14 May 199 DRILLER: R. Bauer H&A REP: M. Corriga					
DEPTH (FT)	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE NUMBER & RECOVERY	SAMPLE DEPTH (FT)	STRATA Change (FT)	VISUAL CLASSI	FICATION AN	D REMARKS				
 		15 11 5	S1 6"/24"	3.0		Medium dense black ASH, with glass, cinders, trace wood charred paper, wet. -FILL-						
 		2 3 8	\$2 3"/24"	8.0 10.0	11.5	Loose black ASH with glass, cinders, slag, and wood, trace brown silty clay, moist. -FILL-						
 		13 100/.5	\$3 6"/12"	13.0		Completely weathered, very weathered to silty fine S fragments), wet. Bottom of		gravel (dolostone L SOIL-				
						 Notes: 1. Backfilled borehole to ground surface with soil cuttin 2. OVA readings from sample screening noted as follows: S1 = 7 ppm methane S2 = 9 ppm (5 ppm methane) S3 = 0 ppm No OVA readings above background in the breathing zone 						
 						 No explosimeter or radi background from sample 	oactivity m screening o	eter readings above r in the breathing zo				
		WATER LEVEL	DATA	1	L	SAMPLE IDENTIFICATION		SUMMARY				
DATE	TIME	ELAPSED TIME (HR)	DEPT BOTTOM OF CASING	H (FT) TO: BOTTOM OF HOLE	WATER	0 Open End Rod T Thin Wall Tube U Undisturbed Sample		(LIN FT): 14.0 (LIN FT):				
					<u> </u>	S Split Spoon	SAMPLES:	3S 				



Appendix 3

Table

Groundwater Analytical Results Sampling Events: July, August, October, December 2010

													_				
Sample ID:		GMX-MW-1	GMX-MW-2	GMX-MW-3	GMX-MW-4	GMX-MW-5	GMX-MW-6S	GMX-MW-6D	P-5	MW-7	MW-5	GW-5	P-1	GW-6	MW-17	MW-168	MW-16D
Lab Sample Number:	Part 703 Groundwater	B2986-01	B2986-02	B2986-03	B2986-04	B2986-05	B2986-17	B2986-18	B2986-08	B2986-09	B2986-10	B2986-11	B2986-12	B3444-01	B3444-02	B3444-08	B3444-09
Sample Collection Date:	Standards (ug/L)	July 14, 2010	July 13, 2010	July 13, 2010	July 13, 2010	July 13, 2010	July 13, 2010	July 14, 2010	August 26, 2010	August 26, 2010	August 26, 2010	August 26, 2010					
Dilution Factor:		1	1	1 & 20	1	1	1	1 & 20	1	1	1	1	1,200 & 1000	1	1	1	1
Chlorinated VOCs																	
1,1,1-Trichloroethane	5.0	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Tetrachloroethene	5.0	<1 U	<1 U	1.9	<1 U	5200 D	<1 U	<1 U	<1 U	<1 U							
Trichloroethene	5.0	5.5	<1 U	1.5	<1 U	3200 D	<1 U	<1 U	<1 U	<1 U							
cis-1,2-Dichloroethene	5.0	3.4	<1 U	870 D	<1 U	2.4	1.3	<1 U	24000 <u>D</u>	<1 U	<1 U	<1 U	<1 U				
trans-1,2-Dichloroethene	5.0	<1 U	<1 U	17	<1 U	<1 U	1.2	<1 U	77	<1 U	<1 U	<1 U	<1 U				
Vinyl Chloride	2.0	<1 U	<1 U	<mark>930</mark> D	<1 U	1400 D	<1 U	<1 U	<1 U	<1 U							
1,1-Dichloroethane	5.0	<1 U	2.2	50 <mark>.</mark>	1.5	2.7	13	<1 U	67	<1 U	<1 U	<1 U	1.1				
1,1-Dichloroethene	5.0	<1 U	<1 U	5.2	<1 U	44	<1 U	<1 U	<1 U	<1 U							
Chloroethane	5.0	<1 U	<1 U	160 D	<1 U	3.5	74	<1 U	<1 U	<1 U	<1 U	<1 U					
Chloromethane	5.0	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	0.6 J	1.2	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Subtotal Chlorinated VOCs		8.9	2.2	2,035.6	1.5	8.6	89.5	0.0	0.0	0.6	1.2	0.0	33,988.0	0.0	0.0	0.0	1.1
Petroleum Related VOCs																	I
Benzene	1.0	<1 U	<1 U	<mark>20</mark>	<1 U	<1 U	3.2	520 D	<1 U	<1 U	<1 U	<1 U	6.2	<1 U	<1 U	<1 U	<1 U
Toluene	5.0	<1 U	<1 U	24	<1 U	<1 U	<1 U	300 D	<1 U	<1 U	<1 U	<1 U	13	<1 U	<1 U	<1 U	<1 U
Ethyl Benzene	5.0	<1 U	<1 U	5.8	<1 U	<1 U	<1 U	19	<1 U	<1 U	<1 U	<1 U	<1 U				
m/p-Xylenes	5.0	<2 U	<2 U	15	<2 U	<2 U	<2 U	130	<2 U	<2 U	<2 U	<2 U	<2 U				
o-Xylene	5.0	<1 U	<1 U	11	<1 U	<1 U	<1 U	36	<1 U	<1 U	<1 U	<1 U	<1 U				
Subtotal BTEX		0.0	0.0	75.8	0.0	0.0	3.2	1,005.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0	0.0	0.0
Methyl tert-butyl Ether	10.0	<1 U	<1 U	140 D	<1 U	<1 U	54	<1 U	<1 U	<1 U	<1 U	<1 U					
2-Butanone	50.0	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	21	<5 U	<5 U	<5 U	<5 U	<5 U				
Carbon Disulfide	60.0	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	6.4	<1 U	<1 U	<1 U	<1 U	<1 U				
Cyclohexane	Not Listed	<1 U	<1 U	5.3	<1 U	<1 U	<1 U	85	<1 U	<1 U	<1 U	<1 U	<1 U				
Methylcyclohexane	Not Listed	<1 U	<1 U	8.5	<1 U	<1 U	<1 U	42	<1 U	<1 U	<1 U	<1 U	<1 U				
Acetone	50.0	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	330	<5 U	<5 U	<5 U	<5 U	<5 U				
1,1,2-Trichlorotrifluoroethane	5.0	<1 U	<1 U	<mark>18</mark>	<1 U	<1 U	<1 U	<1 U	<1 U								
1,2,4-Trichlorobenzene	5.0	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Isopropylbenzene	5.0	<1 U	<1 U	3.3	<1 U	<1 U	<1 U	1.5	<1 U	<1 U	<1 U	<1 U	<1 U				
	Subtotal Other VOCs	0.0	0.0	175.1	0.0	0.0	54.0	485.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total VOCs	8.9	2.2	2,286.5	1.5	8.6	146.7	1,490.9	0.0	0.6	1.2	0.0	34,007.2	0.0	0.0	0.0	1.1
	Final Stabilized ORP (mV)	18	-280	-202	-276	-315	68	-86	-162	-162	-211	-112	-83	-110	-130	-179	-270
	Final Stabilized DO (mg/L)	8.04	0.00	0.00	0.00	0.00	NR	2.50	0.39	0.63	0.54	0.03	1.01	3.64	3.94	6.75	4.79

D - Denotes results from initial dilution

<u>D</u> - Denotes results from secondary dilution (dilution factor of 1000)

Denotes results exceed the Part 703 Groundwater Standards

Table

Groundwater Analytical Results Sampling Events: July, August, October, December 2010

Sample ID:		LAB-101	LAB-102	LAB-103	LAB-104	LAB-105	LAB-106	LAB-107	LAB-108	LAB-101	P-4	MW-19	GW-9	LAB-109	GW-7R
	Part 703 Groundwater	D 20/2 01			B3962-06	B3962-07	B3962-08	B3962-09	B3962-11	D 4500 04	D 4500 04	D 4500 05	D 4500 00	B4646-02	B4646-05
Lab Sample Number:	Standards (ug/L)	B3962-01	B3962-03	B3962-05						B4508-01	B4508-04	B4508-05	B4508-09		
Sample Collection Date:		October 20, 2010	October 20, 2010	October 19, 2010	October 20, 2010	October 19, 2010	October 20, 2010	October 19, 2010	October 19, 2010	December 9, 2010	December 9, 2010	December 9, 2010		December 29, 2010	December 29, 2010
Dilution Factor:		1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chlorinated VOCs															ł
1,1,1-Trichloroethane	5.0	<1 U	<1 U	<1 U	1.3	<1 U	<1 U		<1 U	<1 U	<1 U	<1 U	<1 U		
Tetrachloroethene	5.0	<1 U	<1 U	<1 U											
Trichloroethene	5.0	<1 U	<1 U	<1 U	1.1	<1 U	0.73 J	<1 U	<1 U	<1 U					
cis-1,2-Dichloroethene	5.0	1	<1 U	1.2	2.2	<1 U	1.1	<1 U	45	<1 U					
trans-1,2-Dichloroethene	5.0	<1 U	<1 U	<1 U	1.7	<1 U	1.5	<1 U	<1 U	<1 U	2.8				
Vinyl Chloride	2.0	<1 U	<1 U	1.3	3.8	<1 U	2.1	<1 U	67	<1 U	11				
1,1-Dichloroethane	5.0	<1 U	<1 U	<1 U	45	<1 U	38	<1 U	3.8	<1 U	<1 U				
1,1-Dichloroethene	5.0	<1 U	<1 U	<1 U	<1 U										
Chloroethane	5.0	<1 U	<1 U	<1 U	11	<1 U	5	<1 U	<1 U	<1 U	<1 U				
Chloromethane	5.0	<1 U	1.9	<1 U	<1 U	<1 U	<1 U	1.6	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Subtotal Chlorinated VOCs		1.0	1.9	2.5	66.1	0.0	48.4	1.6	0.0	0.0	0.0	0.0	115.8	0.0	70.6
Petroleum Related VOCs															
Benzene	1.0	<1 U	<1 U	<1 U	<1 U										
Toluene	5.0	<1 U	<1 U	<1 U	<1 U										
Ethyl Benzene	5.0	<1 U	<1 U	<1 U	<1 U										
m/p-Xylenes	5.0	<2 U	2.3	<2 U	<2 U	<2 U	<2 U	<2 U							
o-Xylene	5.0	<1 U	<1 U	<1 U	<1 U										
Subtotal BTEX		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0
Methyl tert-butyl Ether	10.0	<1 U	<1 U	<1 U	1.7	<1 U	0.87 J	<1 U	<1 U	<1 U	<1 U	0.61 J	1.6	<1 U	<1 U
2-Butanone	50.0	<5 U	<5 U	<5 U	<5 U										
Carbon Disulfide	60.0	1.2	1.6	2	<1 U	<1 U	<1 U	1.3	1.9	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Cyclohexane	Not Listed	<1 U	<1 U	<1 U	0.73 J	<1 U	0.72 J	<1 U	<1 U	2.4	<1 U	<1 U	<1 U	<1 U	<1 U
Methylcyclohexane	Not Listed	<1 U	<1 U	<1 U	1.2	<1 U	0.67 J	<1 U	0.82 J	5.5	<1 U	<1 U	<1 U	<1 U	
Acetone	50.0	<5 U	3.4 J	<5 U	<5 U	<5 U									
1.1.2-Trichlorotrifluoroethane	5.0	<1 U	<1 U	<1 U											
1,2,4-Trichlorobenzene	5.0	<1 U	<1 U	<1 U	1.2	<1 U	<1 U	<1 U							
Isopropylbenzene	5.0	<1 U	<1 U	<1 U											
	Subtotal Other VOCs	1.2	1.6	2.0	4.8	0.0	2.3	1.3	2.7	7.9	3.4	0.6	1.6	0.0	0.0
	Total VOCs	2.2	3.5	4.5	70.9	0.0	50.7	2.9	2.7	10.2	3.4	0.6	117.4	0.0	70.6
	Final Stabilized ORP (mV)	-253	-322	-179	210	-296	-300	-245	-362	-110	34	139	-89	-167	-21
	Final Stabilized OKP (mV) Final Stabilized DO (mg/L)	-253 7.09	-322 5.98	-179 9.35	-319 5.83	-296 8.09	-300 7.16	-245 7.80	-362 6.96	-110	34 2.37	-128 1.84	-89 1.83	-167	-21 3.14
	r mai Stabilized DO (mg/L)	7.09	5.98	9.35	5.83	8.09	7.16	7.80	0.96	1.24	2.37	1.84	1.83	2.11	3.14

D - Denotes results from initial dilution

D - Denotes results from secondary dilution (dilution factor of 100

Denotes results exceed the Part



Appendix 4

Appendix New York State Department of Health Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all <u>ground intrusive</u> activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during <u>non-intrusive</u> activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the

work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

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Appendix 1B Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

- (a) Objects to be measured: Dust, mists or aerosols;
- (b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);

(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;

(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);

- (e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
- (f) Particle Size Range of Maximum Response: 0.1-10;
- (g) Total Number of Data Points in Memory: 10,000;

(h) Logged Data: Each data point with average concentration, time/date and data point number

(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;

(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;

(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;

(1) Operating Temperature: -10 to 50° C (14 to 122° F);

(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see Paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential-such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

- (a) Applying water on haul roads;
- (b) Wetting equipment and excavation faces;
- (c) Spraying water on buckets during excavation and dumping;
- (d) Hauling materials in properly tarped or watertight containers;
- (e) Restricting vehicle speeds to 10 mph;
- (f) Covering excavated areas and material after excavation activity ceases; and
- (g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.