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BARRON & ASSOCIATES, P.C.
10440 Main Street
Clarence, New York 14031

Tel: (716) 759-7821 Fax: (716) 759-7823

(915029)

April 3, 2001

Job No: 01-510

Ciminelli Development Company, Inc.
Centerpointe Corporate Park
350 Essjay Drive
Williamsville, New York 14221

RECEIVED
APR - 4 2001
CIMINELLI DEVELOPMENT COMPANY, INC.

ATTN: Mr. Corey Stewart

RE: Preliminary Subsurface Exploration and Geotechnical Engineering Recommendations Report for Proposed South Buffalo Redevelopment Plan - Phase I Union Ship Canal, City of Buffalo, Erie County, New York

Gentlemen:

Barron & Associates, P.C. (B&A) and Buffalo Drilling Company, Inc. (BDC) are pleased to submit this letter report, in synopsis form, which is a generalization of the overall project site conditions and presents the findings of the preliminary subsurface investigation program and preliminary geotechnical engineering recommendations for the above referenced project. This letter report is intended as an input towards modification to or as a supporting basis for the conceptual/preliminary plans for proposed site development and is not intended to be used in lieu of a thorough subsurface site investigation and geotechnical engineering evaluation of the site conditions. The environmental site factors are not given consideration relative to the geotechnical engineering evaluation in this report and must be evaluated on a site specific basis. It is recommended that site conditions be investigated and evaluated for each specific building type at it's designated location.

The following items are included in this report. Refer to the Appendices for additional details, discussions and/or considerations.

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I. SUBSURFACE INVESTIGATION:

Previous Investigations:

Refer to the complete citations on the Reference/Bibliography page. Recra Environmental, Inc. (1988, logs are in Appendix A), ABB Environmental Services (1995), and two studies by Malcolm Pirnie, Inc. (1999 and 2000). Malcolm Pirnie was concurrently undertaking a companion environmental study to the current Barron & Associates geotechnical engineering investigation.

- Figure No. 3. Shows boring and monitoring well locations from all referenced investigations.
- Table No. 2 Summarizes the pertinent thickness or depths and elevations of the fill, groundwater, and bedrock for the companion Malcolm Pirnie study.

General:

Several structures remain in the former Hanna Furnace railroad yard. Substructures and former foundations are expected to be buried at the site and are likely to cause interferences to foundation and utility line installations. Note that the character of the fill piles and mounds are not considered in the ensuing discussion. The investigated area was observed to be relatively level with a slightly downward slope from the south towards the Union Canal in the north-central part of the site.

B&A Geotechnical Study:

Fifteen test borings were drilled and sampled per American Society of Testing and Materials Standard (ASTM) D1586 from January 23 to February 15, 2001 (see Figure No. 2 and Appendix B).

- Table No. 1 Summarizes the pertinent thickness or depths and elevations of the fill, groundwater, and bedrock for the B&A study.

Classification of soil samples, as noted on the boring logs, is based on the Unified Soil Classification System (USCS) in the ASTM D2487/D2488. Refer to Appendix C for an explanation of the terminology that is used for soil and rock descriptions. Laboratory testing of select soil samples, in Table No. 3 and in Appendix D, is performed under the applicable ASTM test method.

Soil/Rock Stratigraphy:

To illustrate the variation in fill, soil, and bedrock conditions beneath the proposed development, the section lines A-A and B-B in Figure No. 4 are shown as profiles in Figure Nos. 5 and 6. Figure Nos. 5 and 6 utilize the data from all of the cited investigations.

The general or average soil profile is as follows:

- Principally, random granular fills that consist of sand and slag, but brick and metal deposits, as well as concrete, are present (see Figure No. 7). The depth of the fills range from as little as 0.5 feet to as much as 18 feet, with ten feet being the typical average depth. The relative density ranged from a very loose to a very dense state. Auger refusal and/or subsurface obstructions were noted to be encountered within these fills at several test boring locations (see Figure No. 7); which will influence foundation selection and installation. For the sand and/or slag fills only, differences in the relative density state within a boring and between borings will likely result in the differential building settlement as being the controlling criteria in the load carrying capacity of the selected foundation type. The underlying peat/organic clay layer, to be discussed below, is integrally include in the bearing capacity and settlement determinations. Mixed fills that include brick, concrete and expansive slag (if it exists) materials are generally unpredictable as a supporting media and require a site specific evaluation. The corrosion characteristics of the slag must also be determined.

- Beneath the fill, layers of soft and highly compressible peat and organic clay soils are present across most of the site (see Figure No. 9). The organic clays were only identified in the previous investigations. The combined thicknesses of these materials range from zero feet to as much as eight feet, with two to three feet being the typical average depths (see Figure No. 10). The stiffness of these soils range from a medium stiff to very stiff state which suggests that an improvement (such as, preloading) to the original soil properties has occurred. Significant thicknesses of peat are noted to be present and are also inter-layered with lower compressible clay units. The presence and thickness of this peat is of paramount concern, since large long term settlements are expected and may not be tolerated by a structure on shallow

foundation system. Peats generally have a unique property of continual settlement under a constant stress and portions may, in fact, be settling under the current fill conditions. The consolidation and strength properties of the peat are required for the determination of settlement and bearing capacity concerns relative to surface loads, as well as negative loads that may be imposed upon a deep foundation system. These types of materials are not used as a direct foundation bearing media.

- Beneath the fills and peat/organic clay, a moderately plastic natural silty clay soil exists and has a thickness that varies from two to 26 feet. This soil is generally in a stiff to hard state in the upper portions of the strata and grades to a very soft to medium stiff state with increasing depth. The soft clays generally associated with a low bearing capacity and usually large long term settlements, while the hard clays are somewhat similar to the hard clayey glacial tills that are discussed below.
- Beneath the silty clay, a generally hard clayey glacial till is present and is variable in thickness, from absent to 12 feet thick, across the site. This type of till has a moderate bearing or load carrying capacity with an associated acceptable degree of settlement for most foundation types.
- A thin zone of an apparent weathered shale bedrock was encountered at boring B-210, prior to reaching auger refusal. Also note that the Recra boring MW-7 in the north eastern corner of the investigated area had augered 26 feet into the shale bedrock. The strength and settlement of this type of material is expected to behave similarly to the overlying clayey glacial till that was previously discussed.

Bedrock Conditions:

N-values of 100+ and auger refusal, which are generally inferred to be top of competent bedrock, were encountered at all of the boring locations. Rock cores were taken at four test borings (that is, B-206G, B-208E, B-209, and B-213) which confirmed that bedrock was encountered. The depth to apparent bedrock ranged from approximately 21 to 48.5 feet below the ground surface. It is indeterminate if some of these conditions represent a boulder or the top of the apparent bedrock surface. Figure No. 11 illustrates the contour elevations of auger refusal/apparent top of bedrock and can be used as a guide in preliminary estimates of the deep foundation elements. Based on the Rock Quality Designation (RQD) of the four rock cores, the allowable bearing capacity typically ranges from 20,000 to 60,000 pounds per square foot (psf).

Bedrock type:

Levanna Shale unit of the Skaneateles Formation.

Groundwater Conditions:

Groundwater was encountered at several of the test borings during subsurface exploration. Based upon the soil moisture conditions and the measured groundwater levels, the static groundwater table is believed to be 10 to 15 feet below the ground surface. Localized perched groundwater may be encountered within the fill materials.

Seismic/Earthquake Activity:

• 1997 Uniform Building Code	Zone 1 is potential for minor damage due to an earthquake
• BOCA National Building Code 1996 (Section 1610.3)	Applicable soil profile type is S_3 and Site Coefficient of 1.5
• 1997 FEMA NEHRP Recommended Provisions	Soil type is categorized as Site Class D. Maximum considered earthquake accelerations/ground motions at 0.2 seconds and 1 second in firm bedrock (Site Class B) are taken as being less than 0.33 g and 0.065 g(g = 32.2 feet/sec^2; acceleration due to gravity), respectively. Values have a two percent probability of being exceeded in 50 years (i.e., 2%/50 year).
• Liquefaction/Settlement	For a Richter Scale magnitude VI earthquake, liquefaction potential is considered extremely very low. Potential for surface settlement is negligible, as a result of densification of the granular soils.

II. BUILDING FOUNDATION SYSTEM:

General:

Ground improvement techniques (such as, removal-replacement and compaction of an approved fill, preloading, surcharging, dynamic compaction, etc.) were generally considered to be of limited effectiveness in expeditiously improving the fill and natural soil properties for a shallow foundation system across the project site as a whole. One or more of the methods may have success in select areas of the site, once the subsurface conditions are more thoroughly defined.

Shallow Foundations – Footings:

Limited for potential use of lightly to moderately loaded buildings, in areas with sand and/or slag fill with somewhat consistent properties and an absence of peat and organic clays. Allowable bearing capacities are expected to range from 1,000 to 3,000 pounds per square foot. Floor slabs-on-grade would also be considered suitable with a footing foundation. Approximately 10 to 15 % of the currently investigated site is in this category, but these areas are scattered about the site and buildings would have footprints of 30,000 square feet or less. A nominal thickness of buried peat and organic clays would require a specific evaluation for the footing option to be viable, but would increase the percentage of available on-site area.

Exterior footing bearing:	4.0 ft. min. below final exterior grade (and frost depth)
Interior footing bearing:	2.5 ft. min. below finished floor
Wall footing, min. width:	2.0 ft.
Column footing, min. width:	3.0 ft.

Footing subgrade condition:

At footing bearing elevations and depending on fill type(especially for a peat/organic layer or soft subgrade condition), an undercut/removal (from two to four feet) of the sand and/slag fills down to a firm/very stiff/dense condition would be required. Backfill any undercuts with the placement of approved, select granular fill (such as a NYSDOT No. 304.03 Subbase Course Type 2 {< 2 in. max.} crusher run) or approved on-site granular fill that is compacted in lifts to a min. of 95 % of the maximum dry density from ASTM D1557. Refer to Appendix E for the definitions of fill

types and gradations, recommended minimum compaction requirements for various site developments, and placement and compaction methods.

Deep Foundations: For potential use of moderately to heavily loaded buildings, in areas with mixed random fills and the presence of peat and organic clays. Structural floor slabs would most likely accompany these types of buildings. A nominal thickness of peat and organic clays that have an overlying approved granular fill would require a specific evaluation for a slab-on-grade option to be viable. Approximately 80 to 85 % of the currently investigated site is in this category.

Bearing Strata: In substantial thickness of hard glacial till, on or in weathered bedrock and on highly fractured bedrock, the allowable bearing capacities preliminarily range from 10,000 to 20,000 psf. On poor to very poor bedrock, the allowable bearing capacities preliminarily range from 20,000 to 60,000 psf. The higher values would have to be confirmed beneath an individual building footprint.

Types and Allowable Capacity: Straight shaft concrete filled drilled piers -
60 to 400 kips for 2.0 to 3.5 foot diameter

Driven H-Piles and Concrete filled closed pipe piles -
60 to 200 kips for 8 to 14 inch width

Design Factors: Negative skin friction will develop on the deep foundations that have deposits of peat, organic clays and soft inorganic clays. The above allowable capacities are likely to be reduced by 10 % in thin deposits and up to 50 % in thick deposits of these materials.

The auger refusal conditions that were encountered within the random fill (most likely the slag) will require pre-augering for any driven deep foundation element (that, is piles) through this fill.

Corrosion protection may be required for steel piles that are driven through the peat.

Other Foundation Considerations

Potential interferences: Underground utilities, substructures and former building or tank foundations.

Trench side slopes and undercuts: Trench excavation sidewall stability can be addressed with the Occupational Safety and Health Act (OSHA) requirements as set forth in Subpart P of 29 CFR Part 1926, Sections 1926.650 to 1926.652. Side slopes of one on one (vertical to horizontal distance) or flatter in cohesive soils or one on one and one-half or flatter in granular soils.

Portland Cement: Type I for shallow foundation systems and
Type II for deep foundation systems, due to sulfate in groundwater (tentative pending confirmatory testing of soils)

Steel corrosion potential: moderate level (tentative pending confirmatory testing of soils & fills)

Dewatering:

Dewatering of groundwater during construction is generally not expected to be required for shallow (that is, footing) foundation systems. For a deep foundation system (that is, drilled piers), a dewatering option may be required and is a function of the concrete placement technique that is utilized and it's location on site.

Surface water must not be allowed to accumulate in trench excavations or on the building pad and pavement areas. Long term dewatering would be required for any proposed substructure construction (i.e., loading dock, retaining wall, basement, elevator pit, etc.). Typically, a 4-inch min. diameter perforated/slotted pipe that is protected by a 6-inch min. thickness of an open graded clean gravel backfill is placed at footing level and drains to a sump pit. A 6 inch min. diameter perforated/slotted pipe may be required if substantial quantities of groundwater are encountered during construction. Depending on the wall backfill type, a geotextile filter fabric (such as a Typar 3401 or 3601) may be required.

Lateral earth pressure - walls:

coefficients and equivalent fluid pressure {as based upon a compacted, moist unit weight of 120 pounds per cubic foot (pcf), but linearly proportional for other unit weights} against an earth retaining structure/wall based on fill type

1. select granular sandy gravel fill
   - ♦ at rest (rigid wall) = 0.76 or = 90 pcf
   - ♦ active = 0.24 or = 30 pcf
   - ♦ passive = 2.8 or = 330 pcf
2. moist, compacted granular sandy silt or silty sand fill
   - ♦ at rest (rigid wall) = 1.0 or = 120 pcf
   - ♦ active = 0.33 or = 40 pcf
   - ♦ passive = 2.0 or = 240 pcf

III. BUILDING PAD AND FLOOR SLAB

Slab Type:

Thick random fills and variable thickness of peat/organic clay layers, along with moderately to heavily floor slab loading conditions, will likely result in a structural slab that is supported by a deep foundation system. Any raise in site grade will also be in this category. Excessive differential settlements are expected for slab-on-grade condition.

The potential use of lightly loaded, concrete slabs-on-grade are tentatively limited to areas with sand and/or slag fill with somewhat consistent properties and an absence of peat and organic clays. A nominal thickness of peat and organic clays would require a specific evaluation for the slab-on-grade option to be viable.

Most of the following discussion is for slab-on-grade construction, but aspects are applicable to a structural slab system.

General subgrade pad preparation:

Demolition and complete removal of any encountered foundations floor slabs and substructures (i.e., septic, chemical or petroleum tanks, vaults, piping, etc.) and removing all unsuitable surficial material (i.e., asphalt pavement, concrete, brick, expansive

	slag/cinders, organic or topsoil layer, and construction and demolition-like fill) to a depth where firm, granular or cohesive fills or naturally occurring soils are encountered. At the locations that have a peat/organic layer or soft subgrade condition, an undercut/removal of these soils down to a firm/very stiff/dense condition would be required.
Isolate floor slab:	yes, from walls and footings, or at discretion of structural engineer
Floor slab thickness:	4-inch min. office areas, 6-inch min. heavy storage areas, but above per design of structural engineer
Vapor barrier for floor slab:	no; but thin sand cushion atop a vapor barrier at discretion of structural engineer/architect
Subgrade modulus for floor slab:	100 pounds/cubic inch, with following aggregate base course thickness, and Poisson Ratio = 0.35
Granular aggregate base:	Place slab on 8 in select granular fill base (such as a NYSDOT No. 304.03 Subbase Course Type 2 {< 2 in. max.} crusher run) that is compacted to a minimum of 95 % of the maximum dry density from ASTM D1557.
Raised grade/lower subbase layers:	Place an approved on-site, imported or select granular fill subbase (such as a NYSDOT No. 304.03 Subbase Course Type 2 {< 2 in. max.} crusher run) or approved on-site cohesive/fine-grained fill or granular fill that is compacted to a minimum of 92 % of the maximum dry density from ASTM D1557. Place subbase on an approved subgrade. Refer to Appendix E for the definitions of fill types and gradations, recommended minimum compaction requirements for various site developments, and placement and compaction methods.
Fabric on Prepared Subgrade:	Placement of geotextile strength and filter fabric (such as, a Mirafi 500X/600X or equal) on subgrade is necessary.
Prepared subgrade:	Depending on the existing and final grade elevations and in order to prepare a uniform subgrade condition, strip one to two feet of the existing fill to an approvable lower subgrade surface. Approve the exposed surface from in-place compaction testing and proof rolling with a fully loaded 10-wheel truck for an approved on-site granular material. The originally excavated material may be approved for use as is or after proper sorting and blending. This material is to be compacted in thin lifts to a minimum of 92 % of the maximum dry density from ASTM D1557.

IV. ASPHALT CONCRETE PAVEMENT FOR TRUCK PARKING & LOADING/UNLOADING

General	The following pavement component thickness for the heavy duty sections apply to equivalent 18-kip axle loads of less than 20 per day. Greater traffic volume will require a specific analysis for each building type. Repairs may be expected to the pavement systems, due to the presence of random granular fill on-site.

Standard Duty Asphalt Pavement	auto and light truck parking
• Design Life:	20 years
• Asphalt Concrete Pavement:	3.0 in. min. {such as NYSDOT bituminous wearing course - Item No. 403.18, Asphalt Concrete, Type 7 top course (1 to 1.5 in. typical); and bituminous binder course - Item No. 403.13, Asphalt Concrete, Type 3 binder course (for remaining thickness)}
• Granular aggregate base:	12-in. min. compacted select granular fill base (such as a NYSDOT No. 304.03 Subbase Course Type 2 {< 2 in. max.} crusher run) to 95 % min. of max. dry density from ASTM D1557
• Fabric on prepared subgrade:	geotextile strength and filter fabric (Mirafi 500X or 600X or equal), unless compacted granular fills are used to raise the subgrade
• Prepared subgrade:	approved from in-place compaction testing (90 % min. of max. dry density from ASTM D1557). Refer to above Building Floor Slab – Pad Preparation and Prepared Subgrade discussions and to Appendix E.

Heavy Duty Asphalt Pavement	truck traffic, heavily traveled roadways	
• Design Life:	20	years
• Asphalt Concrete Pavement:	4.0	in. min.;
• Granular aggregate base:	12	in. min.
• Subgrade:	90	% min. (of max. dry density from ASTM D1557)
• Fabric on prepared subgrade:	geotextile strength and filter fabric (Mirafi 500X or 600X or equal)	

Prepared subgrade:	approved from in-place compaction testing (90 % min. of max. dry density from ASTM D1557). Refer to above Building Floor Slab – Pad Preparation and Prepared Subgrade discussions and to Appendix E.
Dewatering/Groundwater:	Refer to SUBSURFACE INVESTIGATION Groundwater Conditions. Subgrade surface is adequately graded (i.e., 1 to 2% slope) and/or underdrains are installed to prevent infiltrating surface water or groundwater from accumulating or ponding on the subgrade.

V. PORTLAND CEMENT PAVEMENT FOR TRUCK PARKING & LOADING/UNLOADING

General	See above for asphalt pavement.		
Concrete type:	4,000 psi min. Type I Portland cement, but verify type with local construction practices		
Design Life:	20 years		
Pavement Type:	Portland Cement	/	Granular aggregate base
• Standard Duty - (auto parking):	5.0 in. min.	/	12 in. min.
• Heavy Duty - (truck traffic, heavily traveled roadways):	6.0 in. min.	/	12 in. min.
• Pavement - truck trailer pads:	7.0 in. min.	/	12 in. min.
• Pavement - dumpster pads:	6.0 in. min.	/	6 in. min. under pad & 12 in. min. at approach

Granular aggregate base:	compacted select granular fill base (such as a NYSDOT No. 304.03 Subbase Course Type 2 {< 2 in. max.} crusher run) to 95 % min. of max. dry density from ASTM D1557
Subgrade:	90 % min. of max. dry density from ASTM D1557
Design Subgrade Modulus:	150 pci and Poisson Ratio = 0.35
Fabric on prepared subgrade:	geotextile strength and filter fabric (Mirafi 500X or 600X or equal), unless compacted granular fills are used to raise the subgrade for standard duty section
Prepared subgrade:	See above for asphalt pavement
Dewatering/Groundwater:	See above for asphalt pavement

This report is based on the preliminary information that is provided by project representatives and the subsurface conditions that were encountered at the limited number of test boring locations. Since this is a preliminary study, detailed subsurface exploration programs will need to be developed and implemented upon a further definition of the specific building types and locations are identified. Additional test borings will be required, but consideration may be given to the use of field geophysical methods (such as, seismic velocity). Due to the nature of the investigation method, test pit excavation will also provide a greater level of delineation of the subsurface soil/fill/rock conditions than can be defined by the test boring data alone. As detailed in Appendix F "Limitations", modification regarding proposed building locations and other site developments can result in changes to provided recommendations. It is recommended that the geotechnical engineer be provided the opportunity to generally review the final detailed design and contract specifications. Required earthwork and foundation construction should be done under the supervision of experienced construction personnel and in a manner consistent with proven methods. All site work should be carefully monitored and tested by experienced geotechnical personnel to assure compliance with earthwork and foundation construction specifications.

Thank you for the opportunity to assist on this phase of the project. If questions should arise, please call the undersigned at your earliest convenience.

Very truly yours,
BARRON & ASSOCIATES, INC.
and
BUFFALO DRILLING COMPANY, INC.

Carmen M. Panuccio

Carmen M. Panuccio
Geotechnical Engineer

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2. American Society of Materials and Testing, 1994 Annual Book of ASTM Standards, Volume 04.08 Soil and Rock, American Society of Materials and Testing (ASTM), Philadelphia, Pa., c-1994

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5. Ciminelli Development Company, of Williamsville, New York, Mr. Corey Stewart letter of transmittal with enclosures to Mr. James Grajek, of Buffalo Drilling Company, Inc., of Clarence, New York, Re: "Union Ship Canal", dated October 20, 2000.

6. Fisher, D.W., Isachsen, Y.W., and Rickard, L.V., Geologic Map of New York State, New York State Museum and Science Service, Map and Chart Series No. 15, March, 1970.

7. LaSala, Jr., A. M. (1968), "Ground Water Resource of Erie-Niagara Basin, New York," United States Department of the Interior, Geologic Survey, in cooperation with the New York State Department of Environmental Conservation, Division of Water Resources, Basin Planning Report ENB-3.

8. Malcolm Pirnie, Inc., of Buffalo, New York, "Hanna Furnace Site, Characterization of Former Railroad Yard", prepared for Buffalo Economic Renassaince Corporation, Buffalo, New York, Malcolm Pirnie Project No. 3587-001, June, 1999, Revised October, 1999 (partial report).

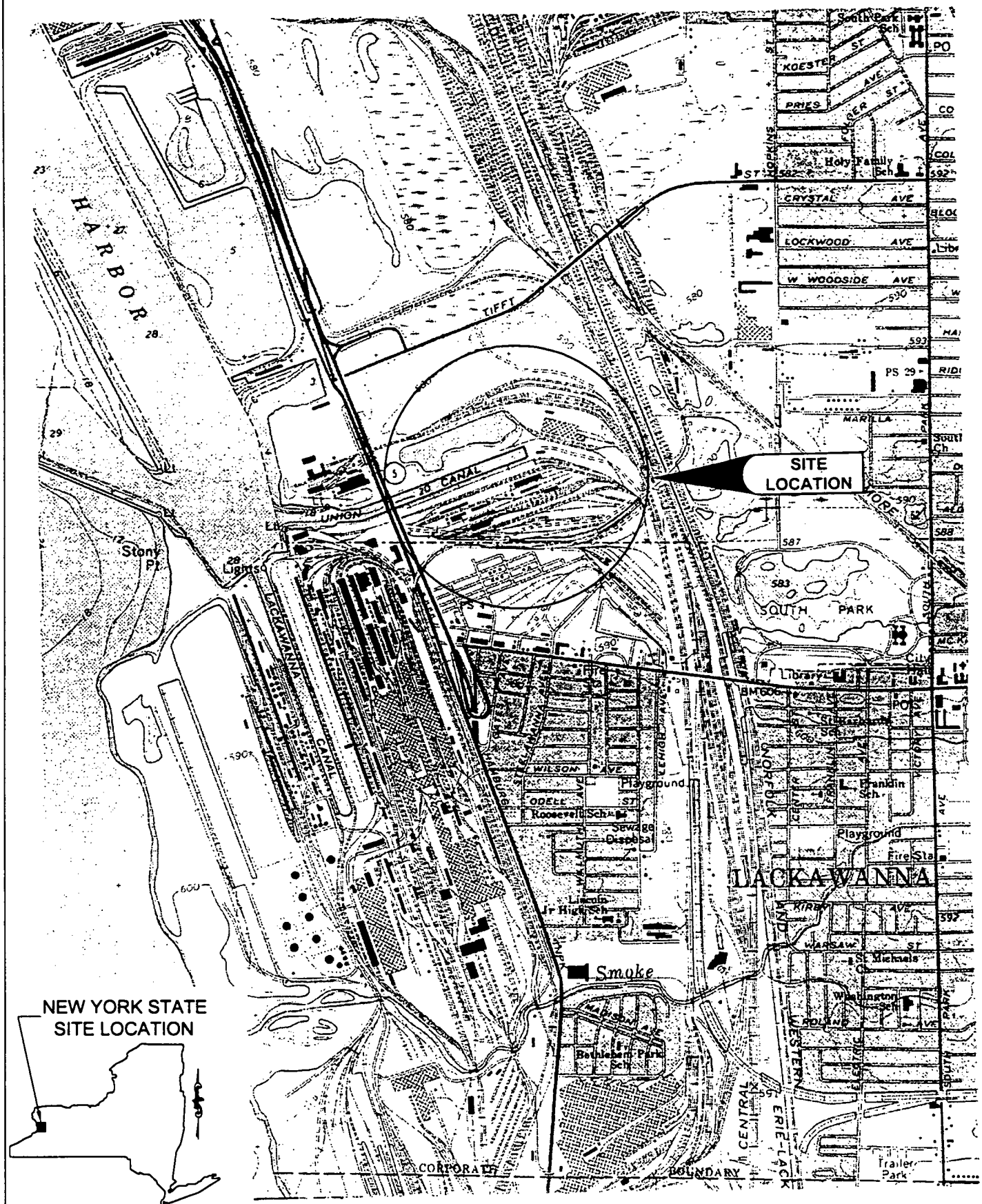
9. Malcolm Pirnie, Inc., of Buffalo, New York, "Supplemental Investigation Report, Hanna Furnace Site, The Former Railroad Yard", prepared for Buffalo Economic Renassaince Corporation, Buffalo, New York, Malcolm Pirnie Project No. 3587-001, July, 2000 (partial report).

10. Malcolm Pirnie, Inc., of Buffalo, New York, Mr. Kent R. McManus, P.E., letter of transmittal with enclosures to Mr. Corey Stewart, of Ciminelli Development Company, of Williamsville, New York, Re: "Hanna Furnace Site – Soil Boring Logs", dated October 6, 2000.

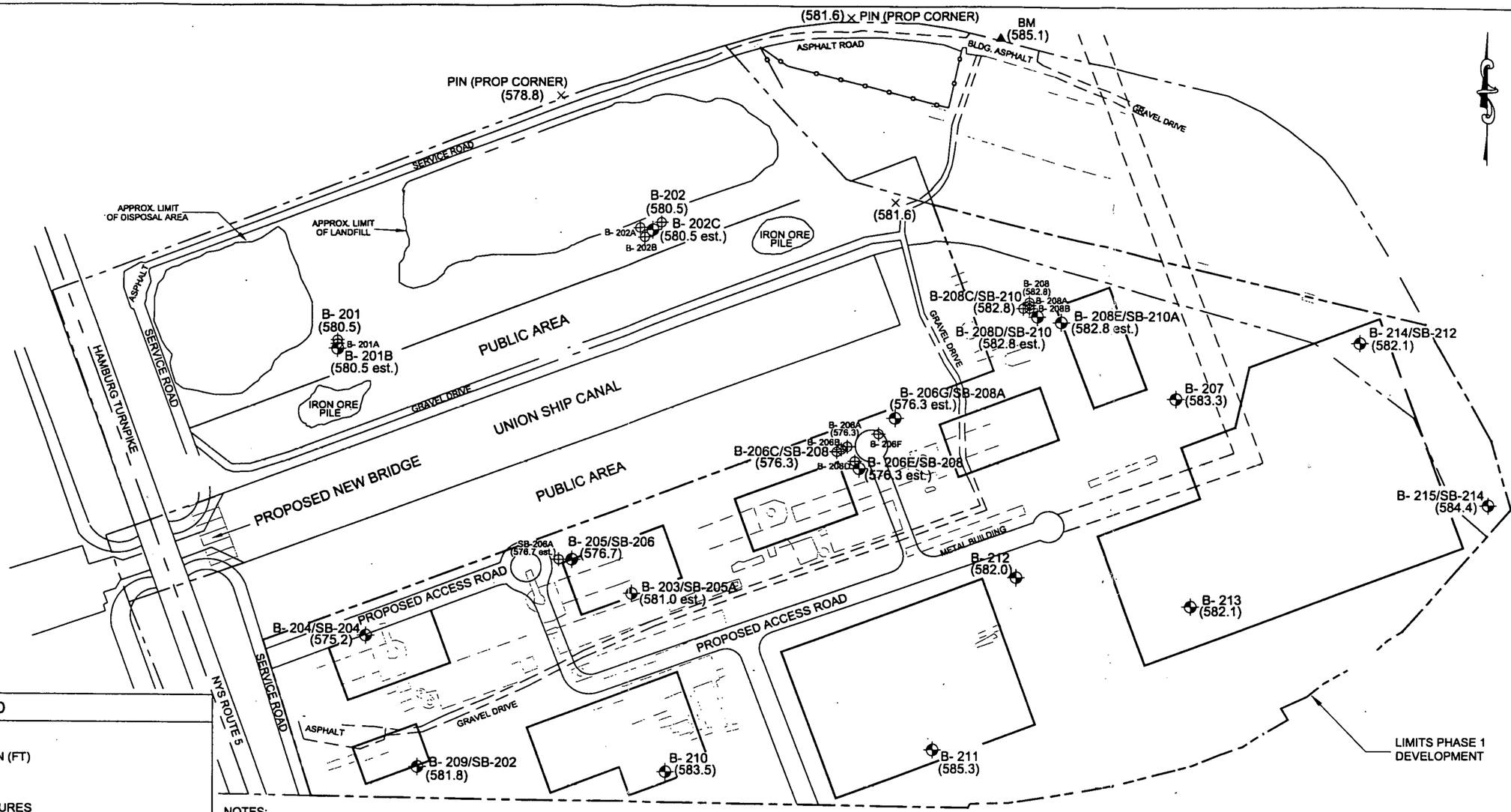
11. Malcolm Pirnie, Inc., of Buffalo, New York, supplied handwritten field soil boring logs B-201 to B-215 and SB-201 to SB-214 (and included the retests at several borings) to personnel of Buffalo Drillilng Company, Inc. and Barron & Associates, P.C., of Clarence, New York, February, 2001.

12. Owens, D.W., Pittman, W.L., Wulforst, J.P., and Hanna, W.E., "Soil Survey of Erie County, New York," United States Department of Agriculture, Soil Conservation Service in cooperation with the Cornell University Agricultural Experiment Station, Washington, D.C., December, 1986.

13. Recra Environmental, Inc., of Amherst, New York, "Site Characterization and Environmental Assessment, Hanna Furnace, Buffalo, New York, Volume I", prepared for Regional Real Estate Office, State of New York Department of Transportation, Buffalo, New York, Recra Project No. 7C745, August, 1988 (partial report).



BARRON & ASSOCIATES, P.C. & BUFFALO DRILLING COMPANY 10440 MAIN ST. CLARENCE, NY 14031 (716)759-7821 FAX (716)759-7823 BUFFALO_DRILLING@BUFFALO.COM BARRONANDASSOCIATES@BUFFALO.COM DRAWN: DAN KASPROWICZ	CLIENT: CIMINELLI DEVELOPMENT COMPANY, INC. CENTERPOINTE CORPORATE PARK 350 ESSJAY DRIVE WILLIAMSVILLE, NEW YORK 14221 PROJECT: PROPOSED SOUTH BUFFALO REDEVELOPMENT PLAN, PHASE 1 UNION SHIP CANAL –BUFFALO, NEW YORK	USGS SITE LOCATION PLAN BUFFALO SE, NY QUAD 1965 JOB NO.: 01-510 | SCALE: 1" = 2000'± DATE: 1/24/01 | FIGURE NO. 1



LEGEND

×	= SPOT ELEVATION
(581.6)	= GROUND SURFACE ELEVATION (FT)
▲ BM	= BENCH MARK (SPIKE IN PP)
□	= PROPOSED PHASE 1 STRUCTURES
	= OLD FOUNDATIONS AND STRUCTURES
⊕ B - 209/ SB-202	= COMBINED GEOTECHNICAL AND ENVIRONMENTAL TEST BORING & NO. BY BARRON & ASSOCIATES WITH MALCOLM PIRNIE
⊕ B - 201B	= GEOTECHNICAL TEST BORING & NO. BY BARRON & ASSOCIATES
⊕ B - 201	= GEOTECHNICAL TEST BORING & NO. BY BARRON & ASSOCIATES - NO TEST BORING LOG PREPARED

NOTES:

1. BORING, PROPERTY LINE, ROADWAY LOCATIONS & SCALE OF DRAWING ARE APPROXIMATE.
2. IT IS ASSUMED THAT THERE HAS BEEN NO SIGNIFICANT CHANGE IN SURFACE ELEVATION FROM 1988-2001.
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CLARENCE, NY 14031
(716)759-7821
FAX (716)759-7823
BUFFALO_DRILLING@BUFFALO.COM
BARRONANDASSOCIATES@BUFFALO.COM

DRAWN: DAN KASPROWICZ

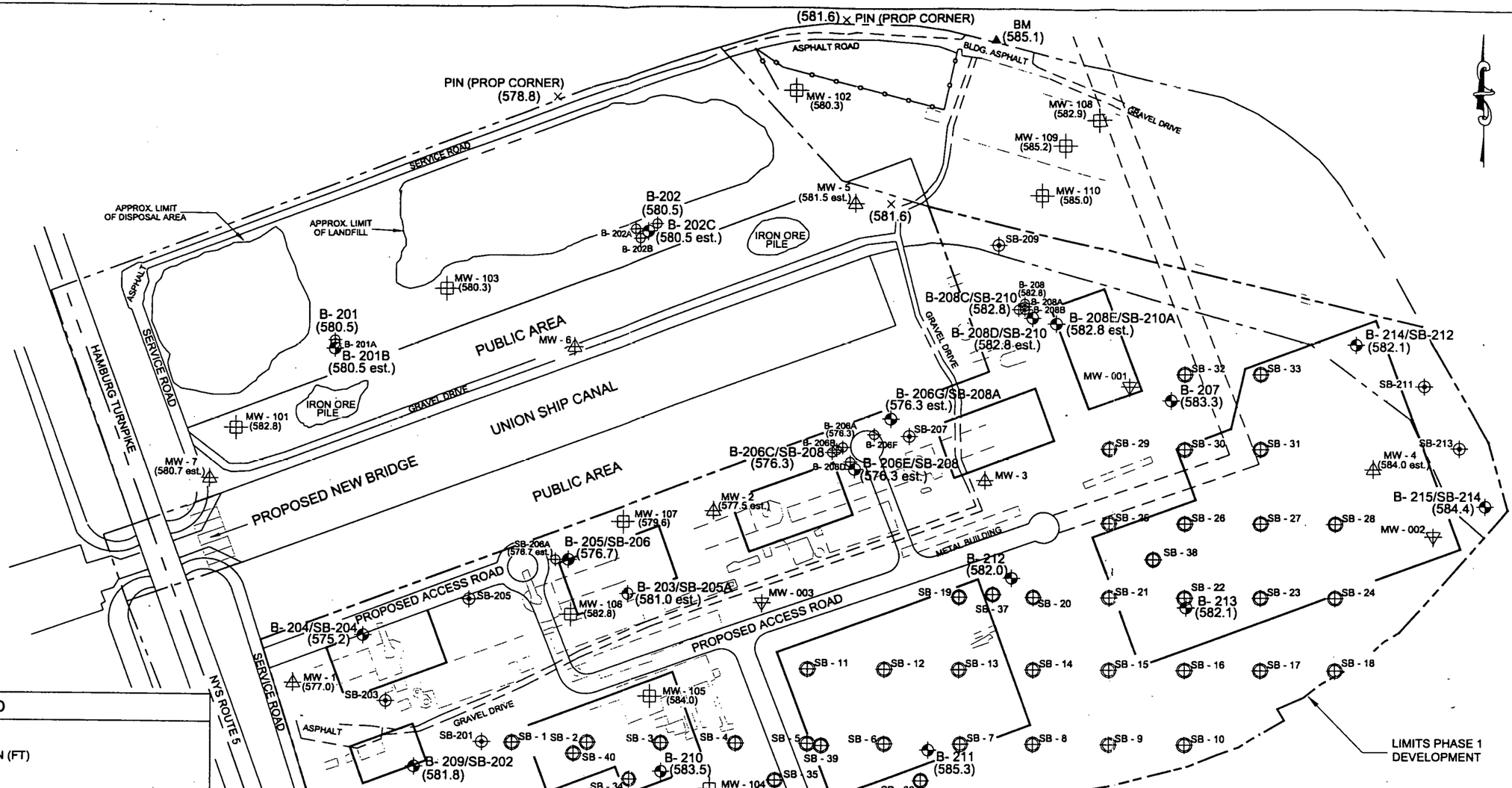
CLIENT: CIMINELLI DEVELOPMENT COMPANY, INC.
CENTERPOINTE CORPORATE PARK
350 ESSJAY DRIVE
WILLIAMSVILLE, NEW YORK 14221

PROJECT: PROPOSED SOUTH BUFFALO REDEVELOPMENT PLAN, PHASE 1
UNION SHIP CANAL –BUFFALO, NEW YORK

BARRON & ASSOCIATES-BUFFALO DRILLING CO.
TEST BORING LOCATION PLAN

0 150 300 600

JOB NO.: 01-510	SCALE: 1" = 300' ±
DATE: 4/2/01	FIGURE NO. 2



LEGEND

×	= SPOT ELEVATION
(581.6)	= GROUND SURFACE ELEVATION (FT)
▲ BM	= BENCH MARK (SPIKE IN PP)
□	= PROPOSED PHASE 1 STRUCTURES
. . .	= OLD FOUNDATIONS AND STRUCTURES
⊕ B - 209/ SB-202	= COMBINED GEOTECHNICAL AND ENVIRONMENTAL TEST BORING & NO. BY BARRON & ASSOCIATES WITH MALCOLM PIRNIE
⊕ B - 201B	= GEOTECHNICAL TEST BORING & NO. BY BARRON & ASSOCIATES
⊕ B - 201	= GEOTECHNICAL TEST BORING & NO. BY BARRON & ASSOCIATES - NO TEST BORING LOG PREPARED
⊕ SB-201	= MALCOLM PIRNIE, INC. TEST BORING & NO. (2001)
⋔ MW - 1	= RECRA ENVIRONMENTAL, INC. MONITORING WELL & NO. (1988)
⊞ MW - 101	= ABB ENVIRONMENTAL SERVICES MONITORING WELL & NO. (1995)
⊕ SB - 5	= MALCOLM PIRNIE, INC. SHALLOW TEST BORING & NO. (1999-2000)
⋔ MW - 002	= MALCOLM PIRNIE, INC. MONITORING WELL & NO. (2000)

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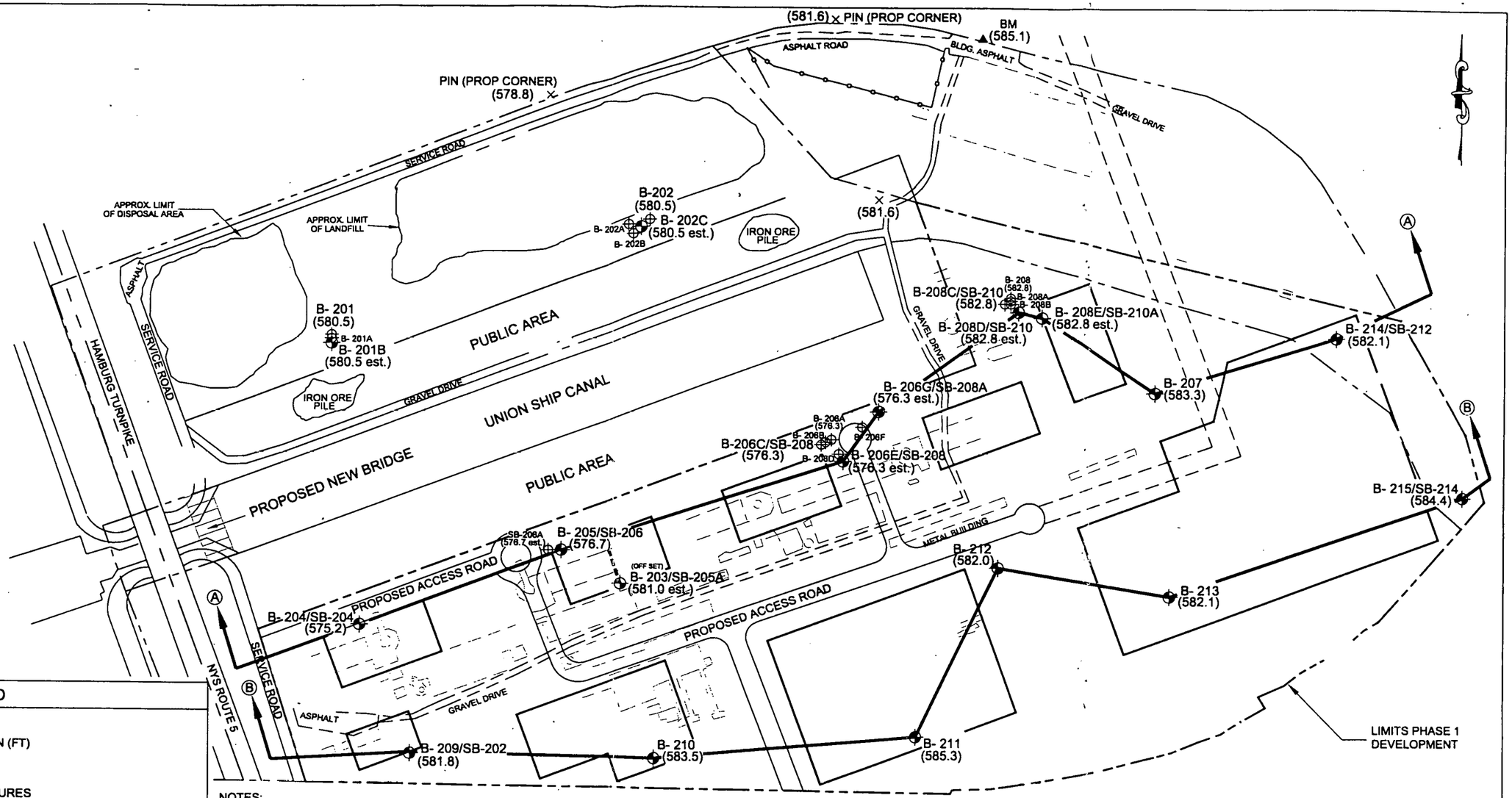
350 ESSJAY DRIVE
WILLIAMSVILLE, NEW YORK 14221

PROJECT: PROPOSED SOUTH BUFFALO
REDEVELOPMENT PLAN, PHASE 1
UNION SHIP CANAL –BUFFALO, NEW YORK

TEST BORING AND MONITORING WELL
LOCATION PLAN FOR ALL INVESTIGATIONS

0 150 300 600

JOB NO.: 01-510	SCALE: 1" = 300' ±
DATE: 4/2/01	FIGURE NO. 3



LEGEND

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⊕ B - 201B	= GEOTECHNICAL TEST BORING & NO. BY BARRON & ASSOCIATES
⊕ B - 201	= GEOTECHNICAL TEST BORING & NO. BY BARRON & ASSOCIATES - NO TEST BORING LOG PREPARED
Ⓐ Ⓑ	= SECTION LINE AND NO. FOR PROFILE

NOTES:

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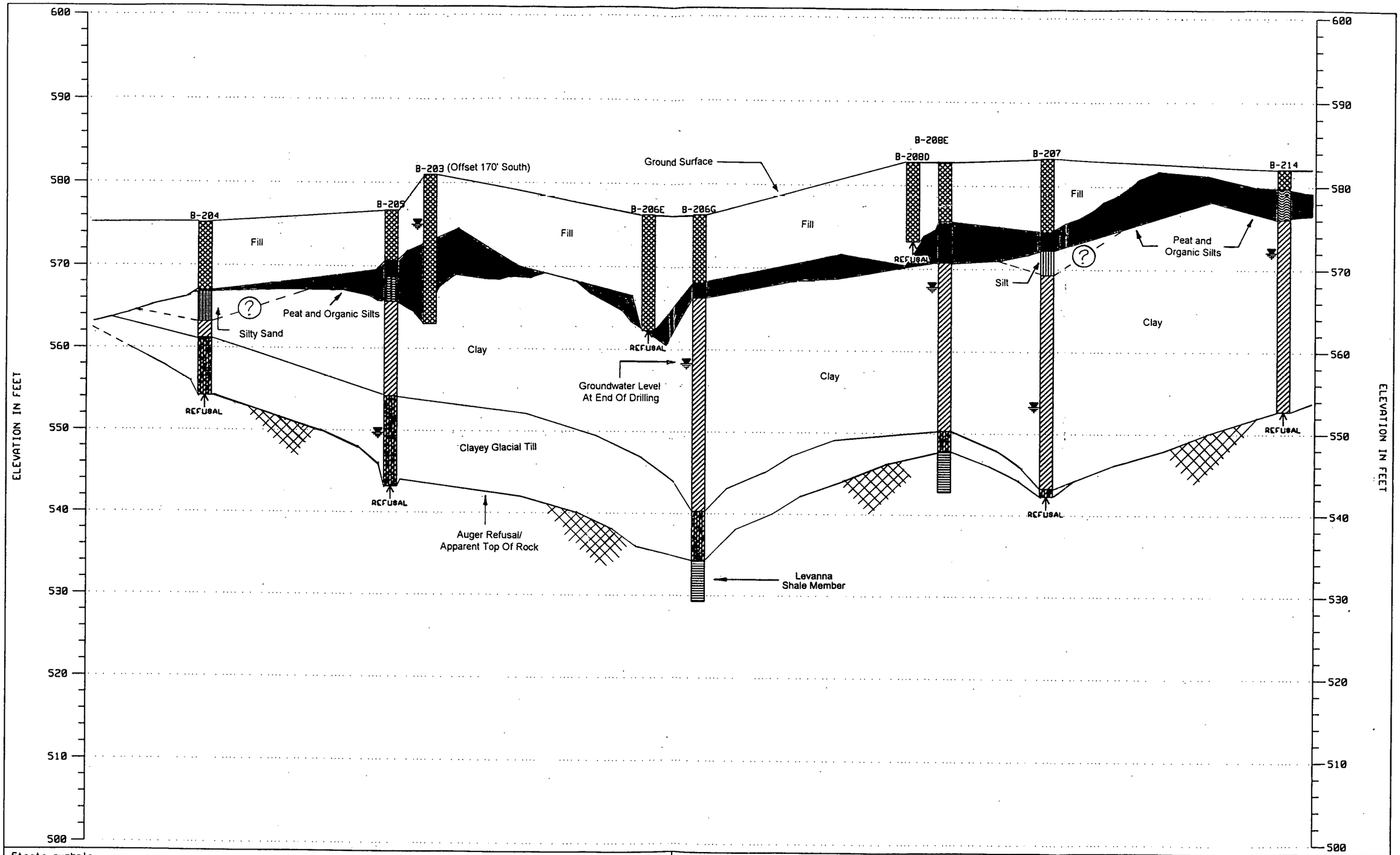
PROJECT: PROPOSED SOUTH BUFFALO REDEVELOPMENT PLAN, PHASE 1
UNION SHIP CANAL –BUFFALO, NEW YORK

BARRON & ASSOCIATES-BUFFALO DRILLING CO.
SECTION LINES

0 150 300 600

JOB NO.: 01-510	SCALE: 1" = 300' ±
DATE: 4/2/01	FIGURE NO. 4



Strata symbols

- Fill
- Peat
- Silty sand
- Low plasticity clay
- Clayey glacial till
- High plasticity organic clays
- Shale
- Silt
- Low plasticity organic silts

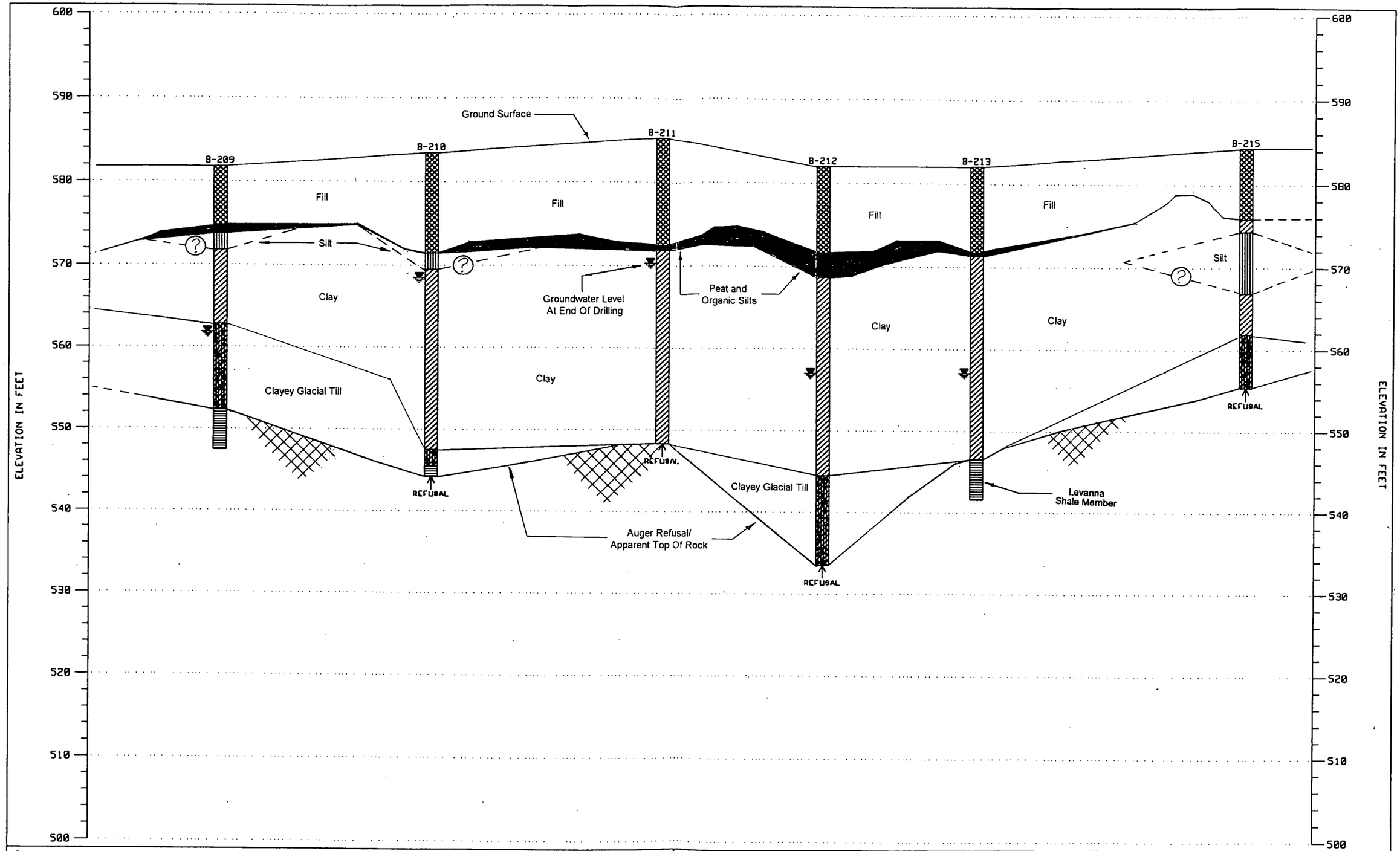
BARRON & ASSOCIATES-BUFFALO DRILLING COMPANY SECTION A-A

PROJECT: South Buffalo Redevelopemnt Plan, Phase I,
Union Ship Canal, Buffalo, New York

PLOTTED: 3/20/2001

JOB No.: 01-510

FIGURE No.: 5



Strata symbols: Fill; Peat; Silt; Low plasticity clay; Clayey glacial till; Shale

Misc. Symbols: Water table at boring completion; Drill rejection

BARRON & ASSOCIATES-BUFFALO DRILLING COMPANY SECTION B-B

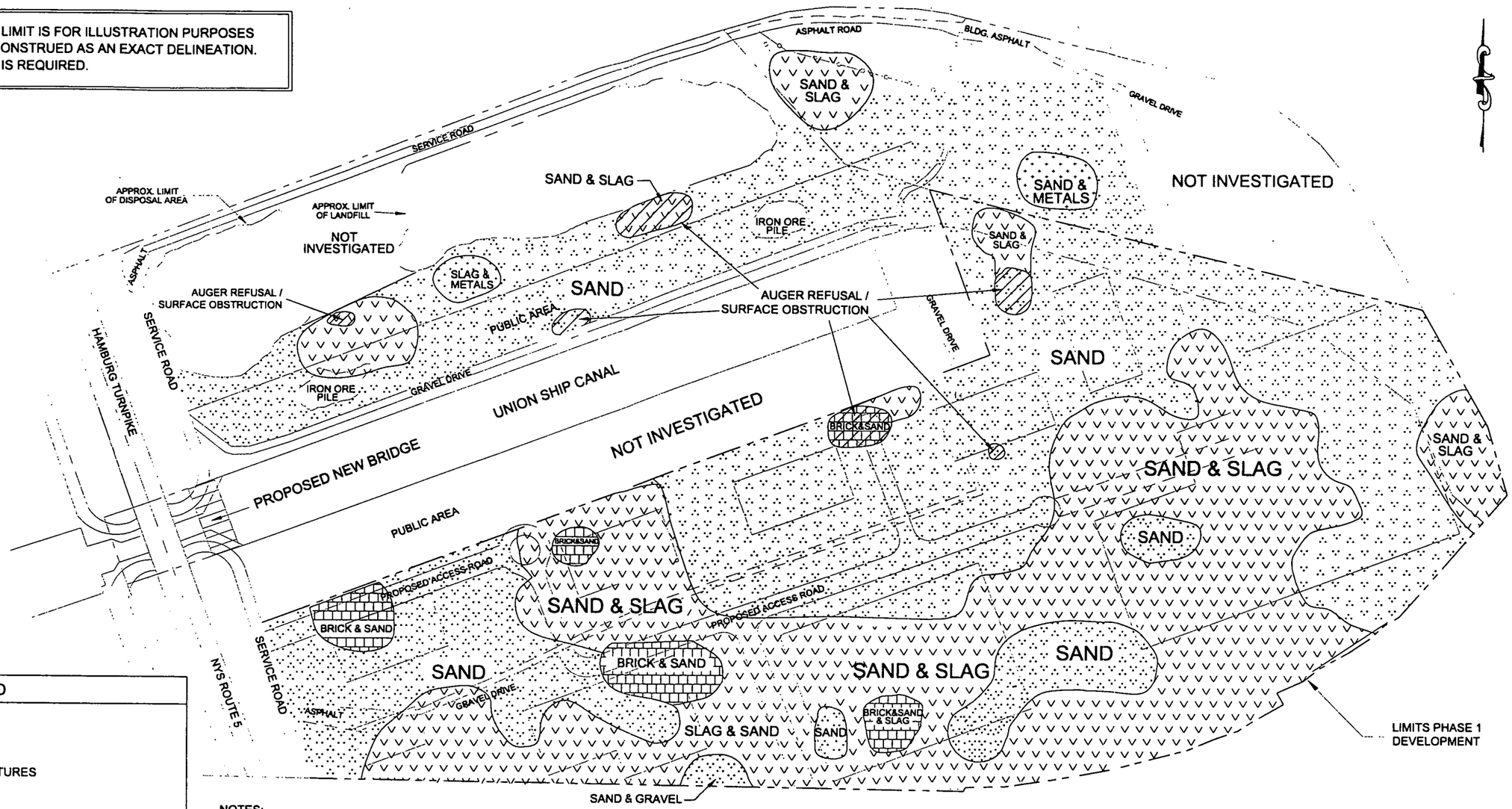
PLOTTED: 3/21/2001

JOB No.: 01-510

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

FIGURE No.: 6

NOTE: EXTENT OF SPECIFIC FILL LIMIT IS FOR ILLUSTRATION PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS AN EXACT DELINEATION. FURTHER INVESTIGATION IS REQUIRED.



LEGEND

= PROPOSED PHASE 1 STRUCTURES

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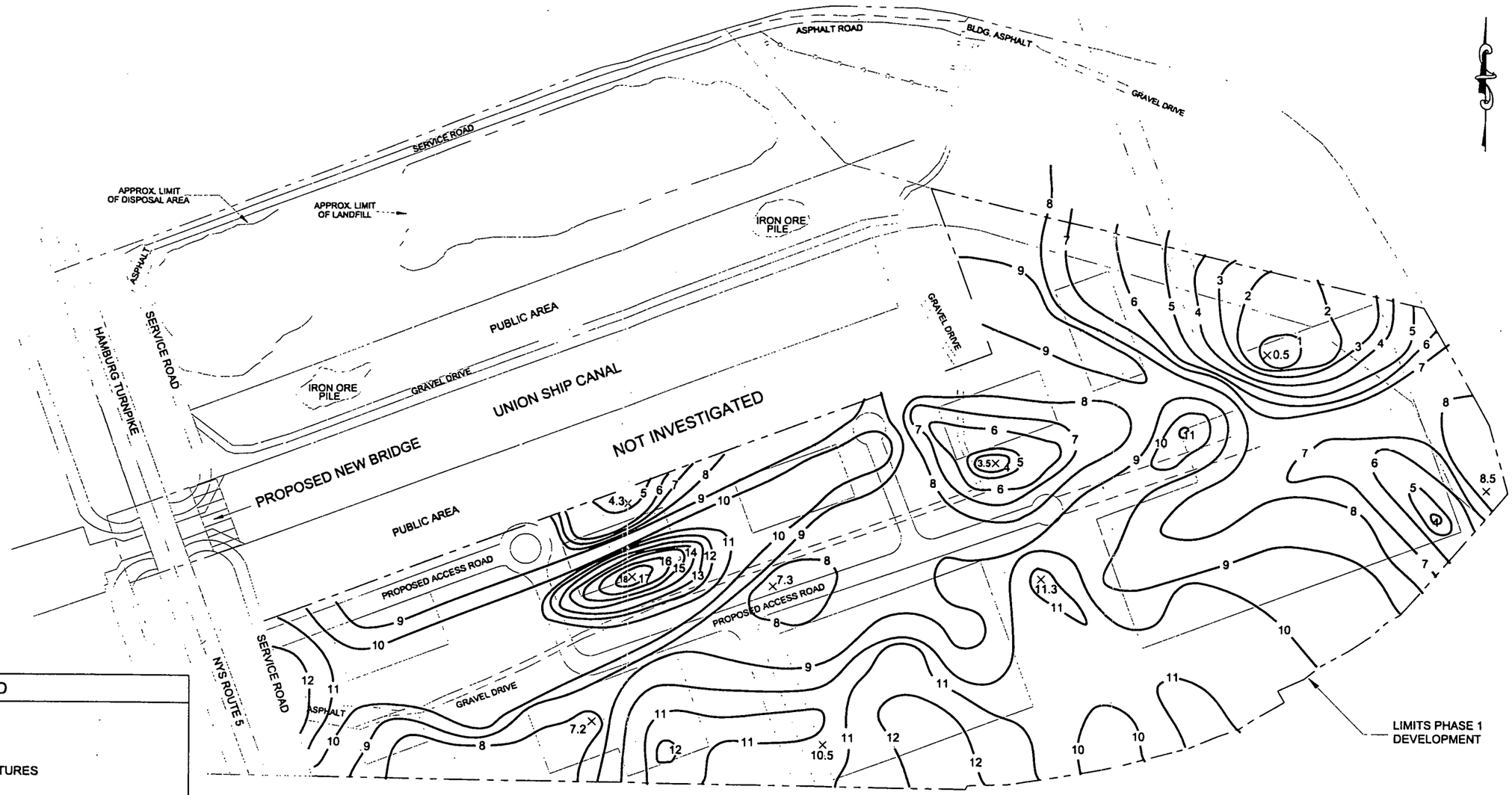
PROJECT: PROPOSED SOUTH BUFFALO REDEVELOPMENT PLAN, PHASE 1
UNION SHIP CANAL –BUFFALO, NEW YORK

GENERALIZED DISTRIBUTION OF ALL BELOW GRADE FILL TYPES

0 150 300 600

JOB NO.: 01-510	SCALE: 1" = 300' ±
DATE: 4/2/01	FIGURE NO. 7



LEGEND

= PROPOSED PHASE 1 STRUCTURES

8 = DEPTH OF FILL CONTOUR (FT.)

× 4.3 = POINT DEPTH (FT.)

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350 ESSJAY DRIVE
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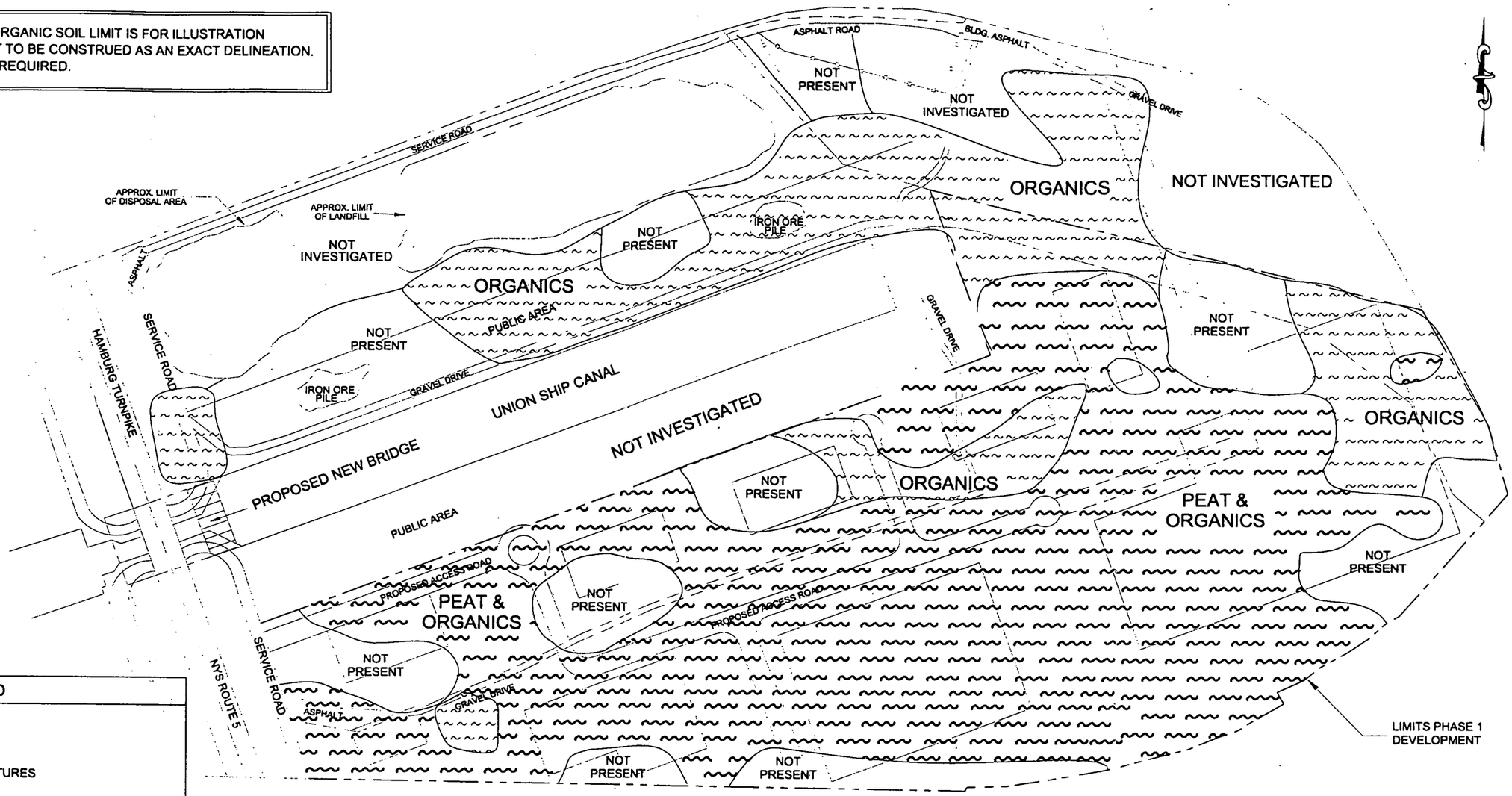
PROJECT: PROPOSED SOUTH BUFFALO REDEVELOPMENT PLAN, PHASE 1
UNION SHIP CANAL –BUFFALO, NEW YORK

DEPTH OF FILL CONTOURS

0 150 300 600

JOB NO.: 01-510	SCALE: 1" = 300' ±
DATE: 4/2/01	FIGURE NO. 8

NOTE: EXTENT OF SPECIFIC PEAT/ORGANIC SOIL LIMIT IS FOR ILLUSTRATION PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS AN EXACT DELINEATION. FURTHER INVESTIGATION IS REQUIRED.



LEGEND

= PROPOSED PHASE 1 STRUCTURES

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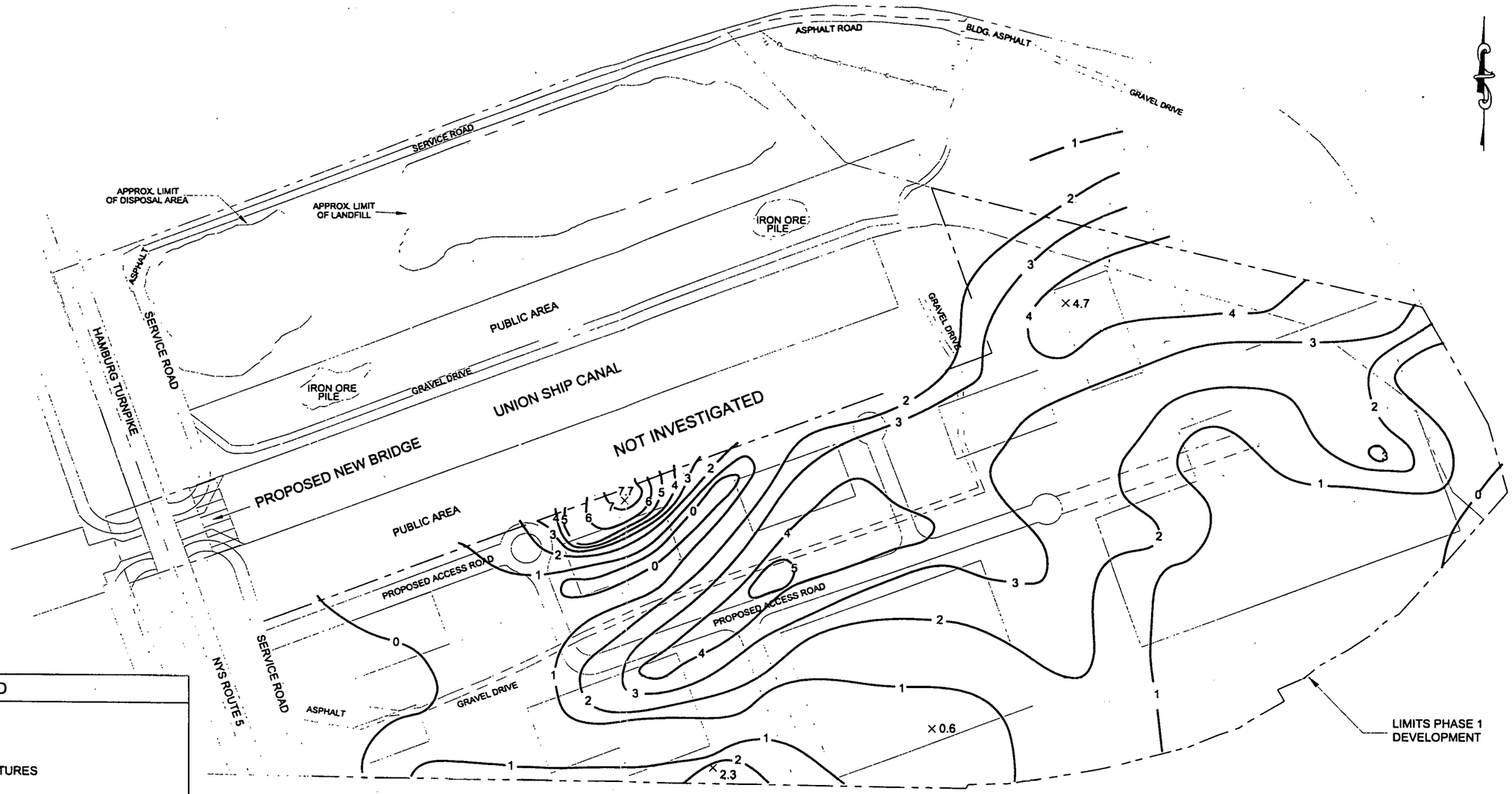
PROJECT: PROPOSED SOUTH BUFFALO REDEVELOPMENT PLAN, PHASE 1
UNION SHIP CANAL –BUFFALO, NEW YORK

GENERALIZED DISTRIBUTION OF BURIED NATURAL PEAT AND ORGANIC SOILS

0 150 300 600

JOB NO.: 01-510	SCALE: 1" = 300' ±
DATE: 4/2/01	FIGURE NO. 9



LEGEND

= PROPOSED PHASE 1 STRUCTURES

— 2 — = THICKNESS OF BURIED PEAT & ORGANIC CONTOUR (FT.)

× 4.7 = POINT THICKNESS (FT.)

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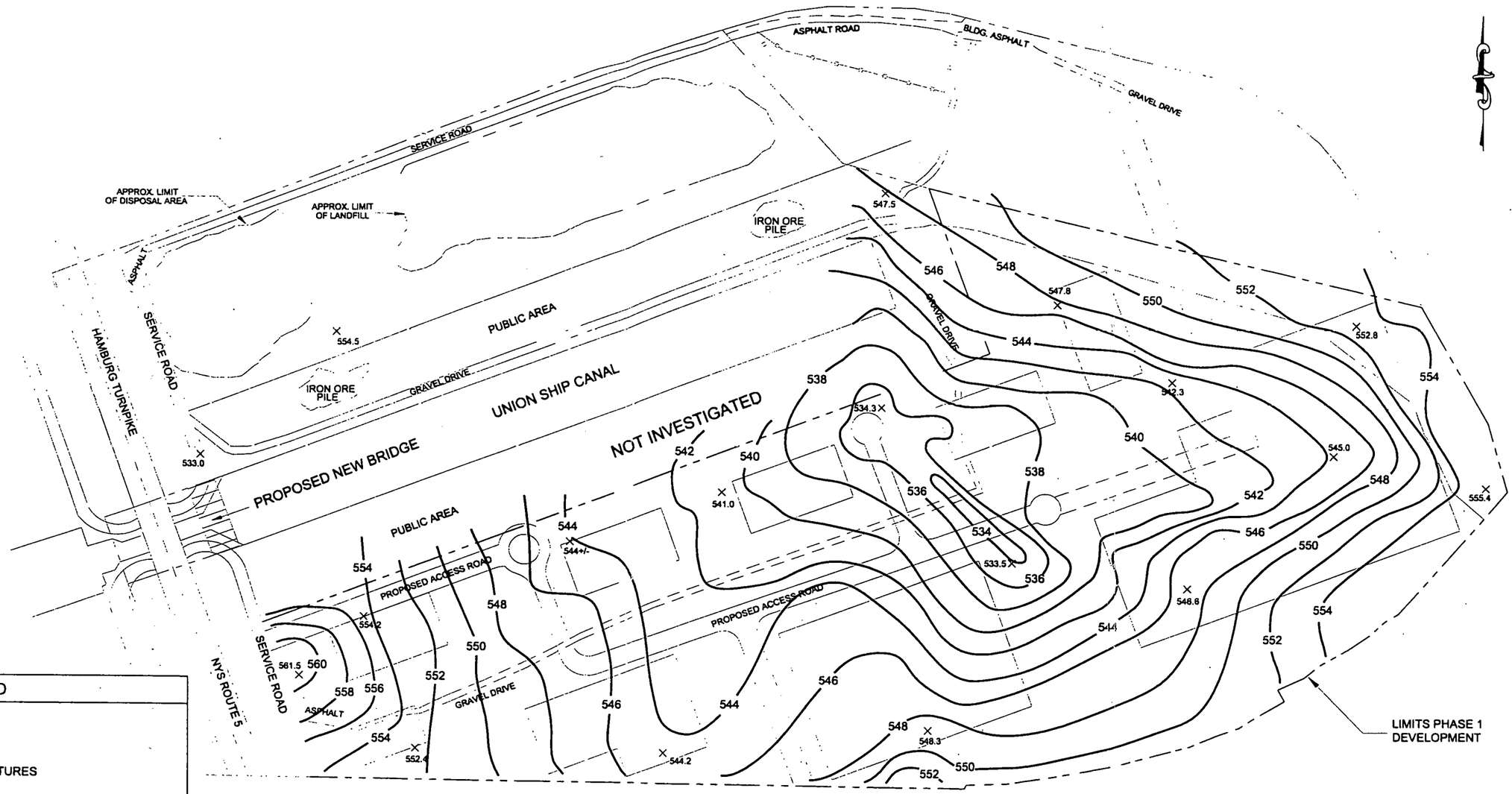
PROJECT: PROPOSED SOUTH BUFFALO
REDEVELOPMENT PLAN, PHASE 1
UNION SHIP CANAL –BUFFALO, NEW YORK

THICKNESS OF BURIED PEAT AND ORGANIC SOILS

0 150 300 600

JOB NO.: 01-510 | SCALE: 1" = 300' ±

DATE: 4/2/01 | FIGURE NO. 10



LEGEND

= PROPOSED PHASE 1 STRUCTURES

542 = APPARENT TOP OF SHALE BEDROCK ELEVATION CONTOUR (FT.)

× 542.3 = SPOT ELEVATION FROM TEST BORING (FT.)

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5. INFORMATION SUPPLIED BY REPORT SUBMITTED BY RECRA ENVIRONMENTAL, INC. TO REGIONAL REAL ESTATE OFFICE STATE OF NY D.O.T., "SITE CHARACTERIZATION AND ENVIRONMENTAL ASSESSMENT, HANNA FURNACE, BUFFALO, NEW YORK, VOLUME I", AUG. 1988.
6. INFORMATION SUPPLIED BY REPORTS SUBMITTED BY MALCOLM PIRNIE TO BUFFALO ECONOMIC RENAISSANCE CORP., "HANNA FURNACE SITE, CHARACTERIZATION OF THE FORMER RAILROAD YARD", JUNE 1999 - REVISED OCT. 1999, & "SUPPLEMENTAL INVESTIGATION REPORT, HANNA FURNACE SITE, CHARACTERIZATION OF FORMER RAILROAD YARD", JULY 2000.
7. MALCOLM PIRNIE SUPPLIED HAND-WRITTEN FIELD LOGS FOR SB-201 TO SB-214 (JAN. & FEB., 2001). RECOVERED SAMPLES SPLIT IN FIELD BY MALCOLM PIRNIE GEOLOGISTS. SUBTLE DIFFERENCES MAY EXIST IN THE FILL SOIL AND ROCK DESCRIPTIONS BETWEEN THE INDEPENDENTLY PREPARED BARRON & ASSOCIATES LOGS AND THE MALCOLM PIRNIE LOGS FOR THE COMBINED BORE HOLES.

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY
10440 MAIN ST.
CLARENCE, NY 14031
(716)759-7821
FAX (716)759-7823
BUFFALO_DRILLING@BUFFALO.COM
BARRONANDASSOCIATES@BUFFALO.COM

DRAWN: DAN KASPROWICZ

CLIENT: CIMINELLI DEVELOPMENT COMPANY, INC.
CENTERPOINTE CORPORATE PARK
350 ESSJAY DRIVE
WILLIAMSVILLE, NEW YORK 14221

PROJECT: PROPOSED SOUTH BUFFALO
REDEVELOPMENT PLAN, PHASE 1
UNION SHIP CANAL –BUFFALO, NEW YORK

APPARENT TOP OF BEDROCK / AUGER REFUSAL ELEVATION CONTOURS

0 150 300 600

JOB NO.: 01-510	SCALE: 1" = 300' ±
DATE: 4/2/01	FIGURE NO. 11

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN ST.
CLARENCE, NY 14031
(716)759-7821
FAX (716)759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

JOB NO.: 01-510
PROJECT: South Buffalo Redevelopment Plan
Phase I, Union Ship Canal
Buffalo, New York

TABLE NO. 1
SUMMARY OF SUBSURFACE EXPLORATIONS WITH BARRON & ASSOCIATES - BUFFALO DRILLING COMPANY TEST BORINGS

B & A - BDC Test Boring No.	Ground Surface Elev.	Total Fill Thickness		Groundwater		Apparent Top of Weathered Bedrock		Auger Refusal		Total Depth Drilled
	(ft.)	Thickness (ft.)	To. Elev. (ft.)	Depth (ft.)	Elev. (ft.)	Depth (ft.)	Elev. (ft.)	Depth (ft.)	Elev. (ft.)	(ft.)
B-201	580.5 [5.]	26.0	554.5	15.0	565.5	24.8	555.7	26.0	554.5	26.0
B-202	580.5 [5.]	14.0	566.5	2.0	578.5	-	-	-	-	14.0
B-203	581.0 [4.]	18.0	563.0	6.0	575.0	-	-	-	-	18.0
B-204	575.2	8.2	567.0	-	-	18.0	557.2	21.0	554.2	21.0
B-205	576.7	6.0	570.7	27.0	549.7	-	-	33.5	543.2	33.5
B-206	576.3 [5.]	2.5	573.8	-	-	-	-	2.5 [2.]	573.8 [2.]	2.5
B-206A	576.3 [5.]	2.0	574.3	-	-	-	-	2.0 [2.]	574.3 [2.]	2.0
B-206B	576.3 [5.]	2.0	574.3	-	-	-	-	2.0 [2.]	574.3 [2.]	2.0
B-206C	576.3 [5.]	2.0	574.3	-	-	-	-	2.0 [2.]	574.3 [2.]	2.0
B-206D	576.3 [5.]	6.0	570.3	-	-	-	-	6.0 [2.]	570.3 [2.]	6.0
B-206E	576.3 [5.]	14.0	562.3	-	-	-	-	14.0 [2.]	562.3 [2.]	14.0
B-206F	576.3 [5.]	5.0	571.3	-	-	-	-	5.0 [2.]	571.3 [2.]	5.0
B-206G	576.3 [5.]	8.2	568.1	18.0	558.3	-	-	42.0	534.3	47.0 [3.]
B-207	583.3	8.8	574.5	30.0	553.3	-	-	41.0	542.3	41.0
B-208	582.8	4.0	578.8	-	-	-	-	4.0 [2.]	578.8 [2.]	4.0
B-208A	582.8 [5.]	4.0	578.8	-	-	-	-	4.0 [2.]	578.8 [2.]	4.0
B-208B	582.8 [5.]	2.5	580.3	-	-	-	-	2.5 [2.]	580.3 [2.]	2.5
B-208C	582.8 [5.]	6.0	576.8	-	-	-	-	6.0 [2.]	576.8 [2.]	6.0
B-208D	582.8 [5.]	9.5	573.3	-	-	-	-	9.5 [2.]	573.3 [2.]	9.5
B-208E	582.3 [5.]	7.3	575.0	15.0	567.3	-	-	35.0	547.3	40.0 [3.]
B-209	581.8	7.2	574.6	-	-	-	-	29.4	552.4	34.4 [3.]
B-210	583.5	12.0	571.5	15.0	568.5	38.0	545.5	-	-	39.3
B-211	585.3	12.8	572.5	15.0	570.3	-	-	37.0	548.3	37.0
B-212	582.0	9.4	572.6	25.0	557.0	-	-	48.5	533.5	48.5
B-213	582.1	8.8	573.3	25.0	557.1	34.0	548.1	35.5	547.1	40.5 [3.]
B-214	582.1	2.3	579.8	10.0	572.1	29.0	553.1	29.3	552.8	29.3
B-215	584.4	8.5	575.9	-	-	-	-	29.0	555.4	29.0

NOTES:

1. Groundwater levels taken at completion of test boring.
2. Auger refusal with drill rig is not interpreted to indicate contact with bedrock.
3. Cored five feet into bedrock.
4. Estimated elevation.
5. Estimated elevation from original location.

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN ST.
CLARENCE, NY 14031
(716)759-7821
FAX (716)759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

JOB NO.: 01-510
PROJECT: South Buffalo Redevelopment Plan
Phase I, Union Ship Canal
Buffalo, New York

TABLE NO. 2
SUMMARY OF SUBSURFACE EXPLORATIONS WITH BUFFALO DRILLING COMPANY
TEST BORINGS FOR COMPANION MALCOLM PIRNIE PROGRAM

Malcolm Pirnie Test Boring No.	B & A - BDC Test Boring No.	Ground Surface Elev.	Total Fill Thickness		Groundwater		Apparent Top of Weathered Bedrock		Auger Refusal		Total Depth Drilled
		(ft.)	Thickness (ft.)	To. Elev. (ft.)	Depth (ft.)	Elev. (ft.)	Depth (ft.)	Elev. (ft.)	Depth (ft.)	Elev. (ft.)	(ft.)
SB-201	-	-	10.2	-	-	-	-	-	-	-	12.0
SB-202	B-209	581.8	7.2	574.6	2.0	579.8	-	-	29.4	552.4	34.4 [3]
SB-203	-	-	10.0	-	-	-	-	-	-	-	12.0
SB-204	B-204	575.2	8.2	567.0	-	-	18.0	557.2	21.0	554.2	21.0
SB-205	-	-	8.3	-	-	-	-	-	-	-	12.0
SB-205A	B-203	581.0 [4]	18.0	563.0	6.0	575.0	-	-	-	-	18.0
SB-206	B-205	576.7	6.0	570.7	27.0	549.7	-	-	33.5	543.2	33.5
SB-206A	-	576.7	8.3	568.4	-	-	-	-	32.0	544.7	32.0
SB-207	-	-	6.2	-	-	-	-	-	-	-	10.0
SB-208	B-206E	576.3 [5]	14.0	562.3	-	-	-	-	14.0 [2]	562.3 [2]	14.0
SB-208A	B-206G	576.3 [5]	8.2	568.1	18.0	558.3	-	-	42.0	534.3	47.0 [3]
SB-209	-	-	8.2	-	-	-	-	-	-	-	12.0
SB-210	B-208D	582.8 [5]	9.5	573.3	-	-	-	-	9.5 [2]	573.3 [2]	9.5
SB-210A	B-208E	582.3 [5]	7.3	575.0	15.0	567.3	-	-	35.0	547.3	40.0 [3]
SB-211	-	-	7.2	-	-	-	-	-	-	-	8.0
SB-212	B-214	582.1	2.3	579.8	10.0	572.1	29.0	553.1	29.3	552.8	29.3
SB-213	-	-	8.4	-	-	-	-	-	-	-	10.0
SB-214	B-215	584.4	8.5	575.9	-	-	-	-	29.0	555.4	29.0

NOTES:

1. Groundwater levels taken at completion of test boring.
2. Auger refusal with drill rig is not interpreted to indicate contact with bedrock.
3. Cored five feet into bedrock.
4. Estimated elevation.
5. Estimated elevation from original location.

BARRON & ASSOCIATES, P.C. ▲
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

Job No.: 01-510
Project : South Buffalo Redevelopment Plan
Phase I, Union Ship Canal
Buffalo, New York

TABLE NO. 3
LABORATORY PHYSICAL SOIL TEST RESULTS

Boring No.	Sample No.	Depth (ft.)	Moisture Content ASTM D2216 (%)	Unconfined Compressive Strength ASTM D2166 (psf)	Wet Density ASTM D2166 (pcf)	Organic Matter Content ASTM D2974 (%)	Grain Size Analysis ASTM D422				Atterberg Limits ASTM D4318			USCS Soil Classification ASTM D2487 / ASTM D2488 *
							Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
B-204	S-1	0-2	15.0	-	-	-	-	-	-	-	-	-	-	Fill
	S-2	2-2.3	10.0	-	-	-	-	-	-	-	-	-	-	Fill
	S-3	4-6	21.4	-	-	-	-	-	-	-	-	-	-	Fill
	S-4	6-8	117.2	-	-	-	-	-	-	-	-	-	-	Fill
	S-5	8-10	55.1	-	-	8.7	-	-	-	-	-	-	-	Pt-SM
	S-6	10-12	89.6	-	-	-	-	-	-	-	-	-	-	SM
	S-7	12-14	22.1	-	-	-	-	-	-	-	-	-	-	CL
	S-8	14-16	10.4	-	-	-	-	-	-	-	-	-	-	CL-Till
	S-9	18-18.6	9.7	-	-	-	-	-	-	-	-	-	-	CL-Till
B-206G	S-1	0-2	21.5	-	-	-	-	-	-	-	-	-	-	Fill
	S-2	2-4	-	-	-	-	-	-	-	-	-	-	-	No Sample
	S-3	4-6	36.6	-	-	-	-	-	-	-	-	-	-	Fill
	S-4	6-8	11.4	-	-	-	-	-	-	-	-	-	-	Fill
	S-5	8-10	67.3	-	-	-	-	-	-	-	-	-	-	Pt
	S-6	10-12	73.2	-	-	-	-	-	-	-	-	-	-	Pt
	S-7	12-14	19.8	-	-	-	-	-	-	-	-	-	-	CL
	S-8	14-16	20.1	-	-	-	-	-	-	-	-	-	-	CL
	U-1	16-17	20.9	-	127.2	-	-	-	-	-	32	23	19	CL
	S-9	18-20	25.7	-	-	-	-	-	-	-	-	-	-	CL
	S-10	20-22	22.9	-	-	-	-	-	-	-	-	-	-	CL
	S-11	22-24	24.9	-	-	-	-	-	-	-	-	-	-	CL
	U-2	25-26	24.8	2080.0	125.0	-	-	-	-	-	34	19	15	CL
	S-12	26-28	28.5	-	-	-	-	-	-	-	-	-	-	CL
	S-13	28-30	27.4	-	-	-	-	-	-	-	-	-	-	CL
	S-14	30-32	28.4	-	-	-	-	-	-	-	-	-	-	CL
	S-15	32-34	33.6	-	-	-	-	-	-	-	-	-	-	CL
	S-16	34-36	18.8	-	-	-	-	-	-	-	-	-	-	CL
	S-17	36-36.7	11.9	-	-	-	-	-	-	-	-	-	-	CL-Till
	S-18	38-38.8	9.6	-	-	-	-	-	-	-	-	-	-	CL-Till
	S-19	40-40.2	12.4											CL-Till

* Soil classification based on visual identification and soil classification of adjacent samples (as applicable).

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

Job No.: 01-510
Project : South Buffalo Redevelopment Plan
Phase I, Union Ship Canal
Buffalo, New York

TABLE NO. 3 (cont'd)

LABORATORY PHYSICAL SOIL TEST RESULTS

Boring No.	Sample No.	Depth (ft.)	Moisture Content ASTM D2216 (%)	Unconfined Compressive Strength ASTM D2166 (psf)	Wet Density ASTM D2166 (pcf)	Organic Matter Content ASTM D2974 (%)	Grain Size Analysis ASTM D422				Atterberg Limits ASTM D4318			USCS Soil Classification ASTM D2487 / ASTM D2488 *
							Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
B-208D	S-1	0-2	35.4	-	-	-	-	-	-	-	-	-	-	Fill
	S-2	2-3.1	64.7	-	-	-	-	-	-	-	-	-	-	Fill
	S-3	4-5.1	-	-	-	-	-	-	-	-	-	-	-	No Sample
	S-4	6-7.8	38.3	-	-	-	-	-	-	-	-	-	-	Fill
	S-5	8-8.3	22.2	-	-	-	-	-	-	-	-	-	-	Fill
B-208E	S-1	4-6	16.7	-	-	-	-	-	-	-	-	-	-	Fill
	S-2	6-8	62.7	-	-	-	-	-	-	-	-	-	-	ML
	S-3	8-10	140.7	-	-	-	-	-	-	-	-	-	-	CL
	S-4	14-16	21.6	-	-	-	-	-	-	-	-	-	-	CL
	S-5	19-21	29.0	-	-	-	-	-	-	-	-	-	-	No Sample
	S-6	24-26	43.6	-	-	-	-	-	-	-	-	-	-	CL
	S-7	29-31	11.5	-	-	-	-	-	-	-	-	-	-	CL
	S-8	34-34.7	11.2	-	-	-	-	-	-	-	-	-	-	CL
B-210	S-1	0-2	91.9	-	-	-	-	-	-	-	-	-	-	Fill
	S-2	2-4	89.5	-	-	-	-	-	-	-	-	-	-	Fill
	S-3	4-6	82.5	-	-	-	-	-	-	-	-	-	-	Fill
	S-4	6-8	91.7	-	-	-	-	-	-	-	-	-	-	Fill
	S-5	8-10	116.5	-	-	-	-	-	-	-	-	-	-	Fill
	S-6	10-12	116.9	-	-	-	-	-	-	-	-	-	-	Fill
	S-7	12-14	19.7	-	-	-	-	-	-	-	-	-	-	ML
	S-8	14-16	25.5	-	-	-	-	-	-	-	-	-	-	CL
	S-9	16-18	30.1	-	-	-	-	-	-	-	-	-	-	CL
	S-10	18-20	-	-	-	-	-	-	-	-	-	-	-	No Sample
	S-11	20-22	30.6	-	-	-	-	-	-	-	-	-	-	CL
	S-12	22-24	23.7	-	-	-	-	-	-	-	-	-	-	CL
	S-13	24-26	14.0^	-	-	-	-	-	-	-	-	-	-	CL
	S-14	26-28	10.9^	-	-	-	-	-	-	-	-	-	-	CL
	S-15	28-30	16.2^	-	-	-	-	-	-	-	-	-	-	CL

* Soil classification based on visual identification and soil classification of adjacent samples (as applicable).
^ Moistures averaged with duplicate tests.

BARRON & ASSOCIATES, P.C.
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

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TABLE NO. 3 (cont'd)
LABORATORY PHYSICAL SOIL TEST RESULTS

Boring No.	Sample No.	Depth (ft.)	Moisture Content ASTM D2216 (%)	Unconfined Compressive Strength ASTM D2166 (psf)	Wet Density ASTM D2166 (pcf)	Organic Matter Content ASTM D2974 (%)	Grain Size Analysis ASTM D422				Atterberg Limits ASTM D4318			USCS Soil Classification ASTM D2487 / ASTM D2488 *
							Gravel (%)	Sand (%)	Silt (%)	Clay (%)	LL (%)	PL (%)	PI (%)	
B-210	S-16	30-32	11.1^	-	-	-	-	-	-	-	-	-	-	CL
	S-17	32-34	11.3^	-	-	-	-	-	-	-	-	-	-	CL
	S-18	34-36	10.3^	-	-	-	-	-	-	-	-	-	-	CL
	S-19	36-38	8.5	-	-	-	-	-	-	-	-	-	-	CL
	S-20	38-39.3	0.9	-	-	-	-	-	-	-	-	-	-	SHALE
B-212	S-6	10-12	285.1	-	-	46.0	-	-	-	-	-	-	-	Pt
B-213	S-1	0-2	46.7	-	-	-	-	-	-	-	-	-	-	Fill
	S-2	2-4	42.5	-	-	-	-	-	-	-	-	-	-	Fill
	S-3	4-6	62.2	-	-	-	-	-	-	-	-	-	-	Fill
	S-4	6-6.6	55.4	-	-	-	-	-	-	-	-	-	-	Fill
	S-5	8-10	45.4	-	-	-	-	-	-	-	-	-	-	Fill
	S-6	10-12	69.5	-	-	-	-	-	-	-	-	-	-	Pt
	U-1	12-13	20.9	2410	124.1	-	-	-	-	-	35	22	16	CL
	S-7	14-16	21.1	-	-	-	-	-	-	-	-	-	-	CL
	S-8	19-21	24.3	-	-	-	-	-	-	-	-	-	-	CL
	S-9	24-26	36.9	-	-	-	-	-	-	-	-	-	-	CL
	U-2	29-29.6	10.1	240	130.1	-	-	-	-	-	28	16	12	CL
		29.6-29.8	16.2	-	-	-	-	-	-	-	23	14	9	CL
	S-10	34-34.9	10.1	-	-	-	-	-	-	-	-	-	-	CL
B-214	S-1	0-2	45.3	-	-	-	-	-	-	-	-	-	-	Fill
	S-2	2-4	-	-	-	-	-	-	-	-	-	-	-	No Sample
	S-3	4-6	-	-	-	-	-	-	-	-	-	-	-	No Sample
	S-4	6-8	24.2	-	-	-	-	-	-	-	-	-	-	CL
	S-5	8-10	25.7	-	-	-	-	-	-	-	-	-	-	CL
	S-6	14-16	22.5	-	-	-	-	-	-	-	28	17	11	ML
	S-7	19-21	27.6	-	-	-	-	-	-	-	-	-	-	CL
	S-8	24-26	21.2	-	-	-	-	-	-	-	-	-	-	CL
	S-9	29-29.3	7.6	-	-	-	-	-	-	-	-	-	-	CL
B-215	S-5	8-10	27.2	-	-	4.3	-	-	-	-	38	23	15	CL

* Soil classification based on visual identification and soil classification of adjacent samples (as applicable).
^ Moistures averaged with duplicate tests.

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN ST.
CLARENCE, NY 14031
(716)759-7821
FAX (716)759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

TABLE NO. 4
PHOTOIONIZATION DETECTOR SUMMARY OF ORGANIC VAPOR SCREENING

CLIENT: Ciminelli Development Company
PROJECT: South Buffalo Redevelopment Plan, Union Ship Canal
JOB NO: 01-510

TECHNICIAN: A. Morse
DATE: 2/2/01
PAGE: 1 of 1

TOTAL IONIZABLES PRESENT

SAMPLE ID #	DEPTH (ft.)	PID READING (ppm)
Background in air		0.0
B-206G; U-1	16-17	0.0
U-2	25-26	0.0
B-213; U-1	12-13	0.0
U-2	29-30	0.0

SAMPLE ID #	DEPTH (ft.)	PID READING (ppm)

* Petroleum-type odors detected.

+ Earthy-type odors detected.

NOTES:

1. Screening of the headspace of sample containers was done using a MiniRae hand-held air monitor/photoionization detector (PID) equipped with a 10.6 eV bulb.
2. The PID was calibrated prior to sample screening using isobutylene in air at an equivalent concentration of 57.0 ppm benzene in air.
3. The detected concentration in sample headspace does not represent actual concentration in soil, but rather a relative measure of total ionizables present with an ionization potential of less than 10.6 eV
4. Soil samples were allowed to acclimate to room temperature (22°C) prior to headspace screening. Readings were obtained by inserting the sample line into the sample container through a hole in the lid.

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

APPENDIX A

RECRA ENVIRONMENTAL, INC.
TEST BORING LOGS MW-1 TO MW-7

DATE
STARTED 2-4-88
FINISHED 2-4-88
SHEET 1 OF 1

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-1 (HF-1)
SURFACE ELEV. _____
G.W. DEPTH _____

PROJECT HANNA FURNACE SITE INVESTIGATION; RECRA PROJECT #70745

LOCATION HANNA FURNACE SITE, BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER (0/6, 6/12, 12/18, 18/24)	DESCRIPTION	NOTES
	2"	SS	1	13 / 44 / 50 / 57	Very dense, brown, fine to coarse SAND, some Gravel, little Silt, little Cinders, damp. [Misc. Fill]	Boring advanced with 3-3/4 in. I.D. HSA, truck mounted Diedrich-50 drill rig.
		SS	2	9 / 12 / 18 / 15		
5		SS	3	8 / 11 / 7 / 3	Grades to ..... Medium dense, brown to gray-white, trace blue to grey rock fragments, moist.	HNu photoionization analyzer: SS-2 = 25 ppm; SS-3 = 30 ppm. No other readings.
		SS	4	WOH / WOH / 2 / 13	Grades to ..... dark brown to gray blue, trace Clay.	
		SS	5	2 / 1 / WOR / 1	Grades to ..... loose, wet. Grades to ..... little Gravel.	Sampler is saturated with water.
10		SS	6	1 / WOR / WOR / 1	12.0'	
		SS	7	4 / 4 / 3 / 4	Medium stiff, brown to gray CLAY, some fine Sand, wet, low plasticity. [Silty Clay]	Auger refusal at 15.5 feet.
15	9"	SS	8	5 / 5 / 100 / -	Grades to ..... Hard, trace Gravel, moderate plasticity. 15.5'	2 in. diameter I.D. sch 40 PVC flush joint casing with 5 foot long screen installed 10.5 feet on 2-4-88.
						Boring completed at 15.5 feet.
20						Boring collapsed upon auger removal to 13.0 feet.
						No. 4 sand pack placed around screen from 10.5 feet to 3.5 feet.
25						
30						
35						

CLASSIFICATION Visual

METHOD OF INVESTIGATION See Preface Notes

DATE
STARTED 1-28-88
FINISHED 1-29-88
SHEET 1 OF 2

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-2 (HF-2)
SURFACE ELEV. ____
G.W. DEPTH ____

PROJECT HANNA FURNACE SITE INVESTIGATION, RECRA PROJECT #7C745

LOCATION HANNA FURNACE SITE, BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER (0/6 6/12 12/18 18/24)	DESCRIPTION	NOTES
	2"	SB	1	- - / - -	Dark brown, fine to coarse SAND, little Gravel, trace Silt, moist. [Misc. Fill]	Boring advanced with 3-3/4 in. I.D. HSA truck mounted Diedrich-50 drill rig.
		SB	2	2 2 / 2 2	Grades to ..... loose, brown to white, little Silt, wet.	Drilling problems and blow counts at SB-1
5		SB	3	2 2 / 6 100/2	Grades to ..... brown to dark gray. Grades to ..... little brown Silty Clay. 8.0'	Sample becomes wet. TIP photoionization analyzer no readings.
		SB	4	21 3 / 3 3		
		SB	5	WOH 3 / 4 4	Medium, brown Silty CLAY, trace Gravel, wet, slight plasticity. [Silty CLAY] 10.0'	
10	9"	SB	6	2 1 / 4 6	Loose, dark brown, Clayey SILT and fine to medium SAND, little Gravel, wet, slight plasticity. [Clayey SILT and fine to medium SAND] 12.6'	
		SB	7	1 2 / 1 3		
15		SB	8	1 1 / 6 9		
		SB	9	4 5 / 8 12	Soft, gray, Silty CLAY, wet, medium plasticity. [Silty Clay]	
		SB	10	5 10 / 15 20	Grades to ..... CLAY, moist, high plasticity.	
20		SB	11	5 8 / 9 8	Grades to ..... Stiff to very stiff, brown to gray.	Sampler broke, no sample SB-11.
		SB	12	12 14 / 9 9		No sample SB-12, 0% recovery.
		SB	13	2 3 / 3 4	Grades to ..... Medium to stiff, brown, Silty CLAY, trace fine Gravel, slight plasticity.	
25		SB	14	1 4 / 6 4		
		SB	15	1 3 / 2 3	Grades to ..... Soft to stiff, brown to gray, medium plasticity.	
30		SB	16	1 3 / 6 4	32.0'	
		SB	17	55 50 / 74 37	Very dense GRAVEL, some brown Silty Clay, wet. [GRAVEL] 34.0'	
35						

CLASSIFICATION VISUAL

METHOD OF INVESTIGATION SEE PREFACE NOTES

DATE
STARTED 1-28-88
FINISHED 1-29-88
SHEET 2 OF 2

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-2 (HF-2)
SURFACE ELEV.
G.W. DEPTH

PROJECT HANNA FURNACE SITE INVESTIGATION; RECRA PROJECT #7C745

LOCATION HANNA FURNACE SITE, BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER (0/6 | 6/12 | 12/18 | 18/24)	DESCRIPTION	NOTES
35		SB	18	9 | 29 | 48 | 100	Hard, black, SHALE fragments and brown, Silty CLAY, wet. [SHALE and Silty CLAY] 36.5'	Top of rock 36.5 feet. Auger refusal at 36.5 ft.
		SB	19	100 | - | - | -		2 in. diam. I.D. sch 40 PVC flush joint casing with 5 ft. long screen installed to 8.0 ft and grouted on 1-29-88.
40						Initial boring completed at 36.5 feet.
						Initial boring grouted with cement/bentonite mixture to ground surface.
10						Monitoring well installed approximately 7 feet from initial boring.
						No. 4 sand pack placed around screen from bottom of hole to 2.5 ft.
15						
20						
25						
30						
35						

CLASSIFICATION VISUAL

METHOD OF INVESTIGATION SEE PREFACE NOTES

DATE
STARTED 2-3-88
FINISHED 2-3-88
SHEET 1 OF 1

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-3 (HF-3)
SURFACE ELEV. ____
G.W. DEPTH ____

PROJECT HANNA FURNACE SITE INVESTIGATION; RECRA PROJECT #70745

LOCATION HANNA FURNACE SITE, BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER (0-6 / 6-12 / 12-18 / 18-24)	DESCRIPTION	NOTES
	2"	SS	1	8 / 50	12 / -	Very dense, brown, fine to coarse SAND, some Gravel, little Silt, little Cinders, moist. [Misc. Fill]
		SS	2	6 / 4	12 / 8	Grades to ..... Medium dense, dark brown. 3.5'
5		SS	3	12 / 5	6 / 10	Stiff, grey, Silty CLAY, medium plasticity, wet. [Silty CLAY]
		SS	4	2 / 3	2 / 5	
		SS	5	3 / 3	3 / 4	Grades to ..... Medium, little organic Clayey Silt, trace Gravel. 10.0
10		SS	6	3 / 6	4 / 5	Stiff, black to brown, organic, Clayey SILT and fine to medium SAND. [Clayey organic SILT and fine to medium SAND] 11.0'
		SS	7	3 / 13	6 / 7	
15	9"					Stiff, gray, Silty CLAY, moist, medium plasticity. [Silty CLAY] 14.0
20						
25						
30						
35						

Boring advanced with 3-3/4 in. I.D. HSA truck mounted Diedrich-50 drill rig.

Sampler only driven to 1.5 ft. S8-1 auger refusal at 2 ft. Relocated drill rig.

HNu photoionization analyzer. No readings.

2 in. diam. I.D. sch 40 PVC flush joint casing with 5 ft. long screen installed to 10 ft. and grouted on 2-3-88.

Boring completed at 12.0 ft.

Lacustrine clay unit at 12.0 ft.

No. 4 sand pack placed around screen from 10.5 ft. to 3.0 ft.

CLASSIFICATION VISUAL

METHOD OF INVESTIGATION SEE PREFACE NOTES

DATE
STARTED 2-2-88
FINISHED 2-2-88
SHEET 1 OF 1

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-4 (HF-4)
SURFACE ELEV.
G.W. DEPTH

PROJECT HANNA FURNACE SITE INVESTIGATION; RECRA PROJECT #7C745

LOCATION HANNA FURNACE SITE BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	DESCRIPTION	NOTES
	2"	SB	1	19	17	100 4"	-	Very dense, black to brown GRAVEL and fine to coarse SAND, little Silt, occasional roots, moist [Misc. Fill]	Boring advanced with 3-3/4 in. I.D. HSA truck mounted Diedrich-50 drill rig. Auger advanced to 2.0 ft. Water encountered at 3.0 ft.
		SB	2	9	12	6	14		
5		SB	3	5	30	20	10	Grades to .... Medium dense, some Silt, wet.	Sampler is saturated with water.
		SB	4	WOH	3	4	4	Grades to .... Very dense, brown to gray blue, little Silt. 6.0'	
		SB	5	3	2	3	2	Medium, brown, Silty CLAY, trace fine to coarse Sand, wet, medium plasticity. [Silty CLAY]	HNu photoionization analyzer. No readings.
10	9"	SB	6	2	4	6	5		
		SB	7	1	2	3	6	Grades to .... Trace organic Clayey Silt, trace Gravel.	No. 4 sand pack placed from 8.0 ft. to 2.0 ft.
15		SB	8	3	2	4	8	Grades to .... Stiff, some organic Clayey Silt, trace fine Gravel. 13.0'	
								Medium to stiff, gray brown, SILT and CLAY, little fine Sand. [SILT and CLAY]	Sampled every 5 ft. to boring completed. 2 in. diam. I.D. sch 40 PVC flush joint casing with 5 ft. long screen.
20		SB	9	6	13	6	22	Same as previous sample.	Installed to 8.0 ft. and grouted on 2-2-88.
									Initial boring grouted with cement/bentonite mixture to ground surface.
25		SB	10	4	1	8	18	Same as previous sample.	Monitoring well installed approximately 10 feet from initial boring.
									Top of rock at 39.0 ft.
30		SB	11	40	25	54	48	Same as previous sample, becoming hard. 34.0'	Initial boring completed at 39.0 ft. Auger refusal at 39.0 ft.
								Very dense, fine to coarse SAND and GRAVEL, little gray Silty Clay, wet. [Fine to coarse SAND and GRAVEL] 36.0'	
35		SB	12	10	30	25	100		

CLASSIFICATION VISUAL

METHOD OF INVESTIGATION SEE PREFACE NOTES

DATE
STARTED 2-1-88
FINISHED 2-1-88
SHEET 1 OF 1

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-5 (HF-5)
SURFACE ELEV.
G.W. DEPTH

PROJECT HANNA FURNACE SITE INVESTIGATION; RECRA PROJECT #7C745

LOCATION HANNA FURNACE SITE BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0/6	BLOWS ON SAMPLER 6/12	BLOWS ON SAMPLER 12/18	BLOWS ON SAMPLER 18/24	DESCRIPTION	NOTES
		SB	1	6	9	9	10	Medium dense, brown, fine to coarse GRAVEL, some fine to medium Sand, trace Silt, trace Cinders, moist. [Misc. Fill]	Boring augers advanced with 3-3/4 in. I.D. HSA truck mounted Diedrich drill rig. 2 in. diam. I.D. sch 40 PVC flush joint casing with 5 ft. screen installed to 10 ft. and grouted on 2-1-88.
		SB	2	3	8	12	12	Grades to ... wet. 4.0'	
5		SB	3	5	9	20	33	Stiff, brown, Silty CLAY, moist, medium plasticity. [Silty CLAY] 7.0'	
		SB	4	6	9	12	16		
		SB	5	3	12	20	17	Dark brown, organic, Clayey SILT and fine to medium SAND, moist, low plasticity. [Organic Clayey SILT and fine to medium SAND] 9.0'	Initial boring grouted with cement/bentonite mixture to ground surface.
10		SB	6	5	5	8	13		
	9"	SB	7	5	8	11	17		
		SB	8	6	12	14	20	Brown, fine to medium SAND, moist. [Fine to Medium SAND] 10.5'	Sampled at 5.0 ft intervals. Sample SB-9 lost in bore hole.
15								Stiff, gray, Silty CLAY, low to medium plasticity, moist. [Silty CLAY]	
		SB	9	3	3	4	6	No sample.	Initial boring completed at 34.0 ft.
20									Monitoring well installed approximately 10 feet from initial boring.
		SB	10	WOH	WOH	3	3	Grades to .... Soft, gray, wet, high plasticity.	Top of rock at 34.0 ft. Auger refusal at 34.0 ft.
25									No. 4 sand pack placed around screen from bottom of hole to 3.0 ft.
		SB	11	100 5"	-	-	-	Grades to .... Very hard, Silty CLAY and SHALE fragments, wet. [Silty CLAY and SHALE fragments] 34.0'	
30									
		SB	12	100 2"	-				
35									

CLASSIFICATION VISUAL

METHOD OF INVESTIGATION SEE PREFACE NOTES

DATE
STARTED 2-3-88
FINISHED 2-3-88
SHEET 1 OF 1

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-6 (HF-6)
SURFACE ELEV. ____
G.W. DEPTH ____

PROJECT HANNA FURNACE SITE INVESTIGATION; RECRA PROJECT #7C745

LOCATION HANNA FURNACE SITE BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER 0/6 | 6/12 | 12/18 | 18/24	DESCRIPTION
	2"	SS	1	14 | 30 | 34 | 53	Very dense, brown GRAVEL and fine to coarse SAND, some Silt, damp. [Misc. Fill]
		SS	2	8 | 5 | 3 | 3	Grades to .... Some Gravel.
5		SS	3	17 | 43 | 59 | 50	Grades to .... Very dense, orange coloring. 6.0'
		SS	4	WOH | WOH | 1 | 1	Soft, black to brown, organic, Clayey SILT and fine to medium SAND, little Gravel, trace Cinders, wet.
		SS	5	1 | WOH | 1 | WOH	[Clayey SILT and fine to medium SAND]
10		SS	6	2 | 1 | 2 | 2	12.0'
	9"	SS	7	1 | 3 | 4 | 11	Medium, grey, Silty CLAY, wet, medium plasticity. [Silty CLAY] 14.0'
15					
20					
25					
30					
35					

NOTES

Boring advanced with 3-3/4 in. I.D. HSA truck mounted Diedrich-50 drill rig.

Sampler spoon broke, no sample recovered at SS-3.

Sampler is saturated with water.

Drill rig relocated approx. 50 ft. northwest of original boring.

Auger refusal at 7.0 ft. Drill rig relocated to second location. Samples collected from 6 ft. to boring completion.

Boring completed at 12.0 ft.

Lacustrine clay unit at 12 ft. 2 in. diam. I.D. sch 40 PVC flush joint casing with 5 ft. screen, installed to 8.0 ft. and grouted on 2-3-88.

HNu photoionization analyzer. No readings.

No. 4 sand pack placed around screen from 10.5 ft. to 3.0 ft.

CLASSIFICATION VISUAL

METHOD OF INVESTIGATION SEE PREFACE NOTES

DATE
STARTED 1-25-88
FINISHED 1-28-88
SHEET 1 OF 2

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-7 (HF-7)
SURFACE ELEV.
G.W. DEPTH

PROJECT HANNA FURNACE SITE INVESTIGATION; RECRA PROJECT #7C745

LOCATION HANNA FURNACE SITE BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER (0/6, 6/12, 12/18, 18/24)	DESCRIPTION	NOTES
	2"	SB	1	6 / 12 / 20 / 42	Dense, dark brown, fine to coarse SAND and GRAVEL, some Silt, moist [Misc. Fill]	Boring augers advanced with 3-3/4 in. I.D. HSA truck mounted Diedrich-50 drill rig.
		SB	2	6 / 7 / 3 / 4	Grades to .... Loose.	
5		SB	3	2 / 2 / 2 / 2	Grades to .... and Silty Clay, some Gravel, wet.	
		SB	4	2 / - / 1 / 3	Grades to .... Soft, brown to gray, and GRAVEL, some fine to coarse Sand. 8.0'	HNu photoionization analyzer. No reading.
		SB	5	4 / 4 / 4 / 4		
10		SB	6	1 / 1 / 1 / 1	Loose, dark brown, organic Clayey SILT and fine to medium Sand.	2 in. diam. I.D. sch 40 PVC flush joint casing with 5 ft long screen installed to 9.0 ft. and grouted on 1-28-88.
	9"	SB	7	2 / 4 / 8 / 14	Grades to .... organic Silty CLAY, medium plesticity. 12.0'	
15		SB	8	2 / 5 / 5 / 10	Medium to stiff, gray to light brown, Clayey SILT and fine to medium SAND, little Gravel, moist, low to moderate plesticity. [Clayey SILT and fine to medium SAND]	No. 4 sand pack placed around screen from 9.5 ft. to 3.0 ft.
		SB	9	4 / 8 / 8 / 18		
		SB	10	8 / 9 / 5 / 7		
20		SB	11	70 / 12 / 10 / 35	22.0'	
		SB	12	100 3" / - / - / -	Very dense, black, SHALE fragments, some brown Silty CLAY, wet. [SHALE]	
25		SB	13	100 2" / - / - / -		
		SB	14	100 3" / - / - / -		
		SB	15	100 3" / - / - / -		
30		SB	16	100 3" / - / - / -		
		SB	17	100 2" / - / - / -		
35						

CLASSIFICATION VISUAL

METHOD OF INVESTIGATION SEE PREFACE NOTES

STARTED 1-25-88
FINISHED 1-29-88
SHEET 2 OF 2

RECRA ENVIRONMENTAL, INC.

SUBSURFACE LOG

HOLE NO. MW-7 (HF-7)
SURFACE ELEV.
G.W. DEPTH

PROJECT HANNA FURNACE SITE INVESTIGATION; RECRA PROJECT #7C745

LOCATION HANNA FURNACE SITE BUFFALO, NEW YORK

DEPTH-FT	LOG	SAMPLE TYPE	SAMPLE NO	BLOWS ON SAMPLER (0/6 6/12 12/18 18/24)	DESCRIPTION	NOTES
35		SS	18	100 3 - / - -	Grades to .... Black SHALE fragments, trace brown Silty Clay.	
		SS	19	100 4 - / - -		
		SS	20	100 4 - / - -		
40		SS	21	100 3 - / - -		
		SS	22	100 2 - / - -		
		SS	23	100 3 - / - -		
45		SS	24	100 4 - / - -	48.0'	Initial boring completed at 48.0 ft. and grouted with cement/bentonite mixture to ground surface. Monitoring well installed approximately 5 feet from initial boring.

CLASSIFICATION VISUAL

METHOD OF INVESTIGATION SEE PREFACE NOTES

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

APPENDIX B

BUFFALO DRILLING COMPANY, INC.
TEST BORING LOGS B-201 TO B-215

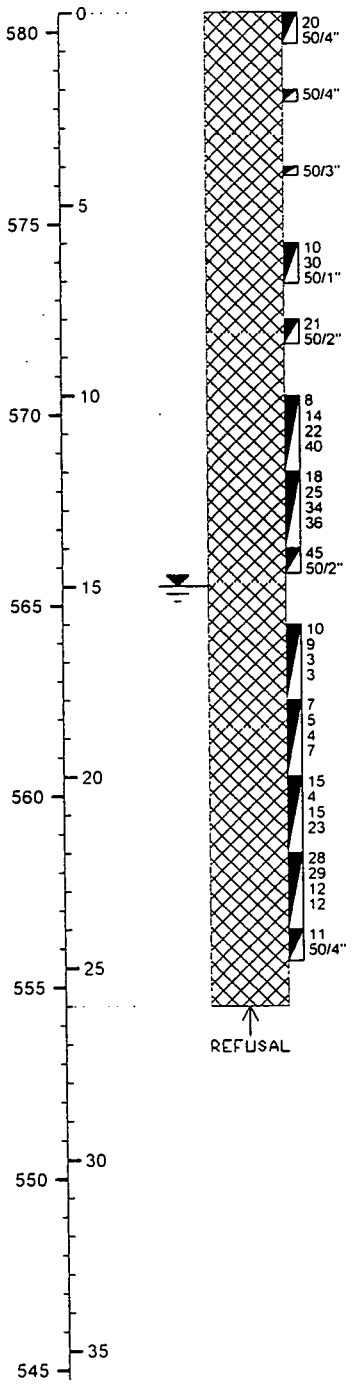
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-201B

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/14/01	**SURFACE ELEVATION (ft):**	580.5 est.
DATE COMPLETED:	2/14/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	15.0



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 0.8'	50+	70	Red, v. dense f/c Sand and Brick, tr. Silt, moist (Fill)
S-2 : 2.0'- 2.3'	50+	100	...grade: Light gray, and Slag, tr. Brick
S-3 : 4.0'- 4.2'	50+	30	...grade: Brown, some Slag, saturated
S-4 : 6.0'- 7.1'	80+	50	...grade: Dark brown, some Cinders, tr. Slag, wet
S-5 : 8.0'- 8.7'	50+	50	...grade: Blue/green, and Slag, tr. Cinders
S-6 : 10.0'- 12.0'	36	60	...grade: dense, satuated
S-7 : 12.0'- 14.0'	59	70	...grade: v. dense, wet
S-8 : 14.0'- 14.7'	50+	90	Same as S-7
S-9 : 16.0'- 18.0'	12	25	...grade: m. dense
S-10 : 18.0'- 20.0'	9	25	...grade: loose
S-11 : 20.0'- 22.0'	19	15	...grade: m. dense, little Clay
S-12 : 22.0'- 24.0'	41	20	...grade: m. dense
S-13 : 24.0'- 24.8'	50+	100	...grade: v. dense, some Brick

Depth to Bottom of Hole: 26.0 feet

1. Two attempts were made adjacent and prior to advancing test boring B-201B. Boring No. (Depth): B-201 (2.0') and B-201A (5.5')
2. Surface elevation at B-201 location.

Logged by: A. Morse

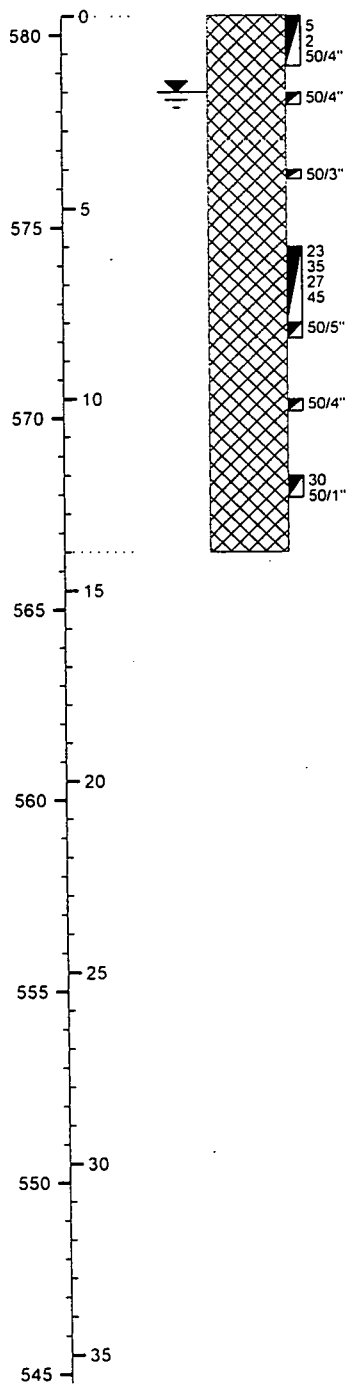
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-202C

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/15/01	**SURFACE ELEVATION (ft):**	580.5 est.
DATE COMPLETED:	2/15/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	2.0



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 1.3'	52+	25	Blue/green, v. dense f/c Sand, some Slag, little Gravel, tr. Silt, tr. Roots, wet (Fill)
S-2 : 2.0'- 2.3'	50+	50	...grade: Dark brown, litle Slag, little Silt
S-3 : 4.0'- 4.2'	50+	30	...grade: tr. Cinders
S-4 : 6.0'- 8.0'	62	65	...grade: little Cinders, tr. Slag
S-5 : 8.0'- 8.4'	50+	100	Same as S-4
S-6 : 10.0'- 10.3'	50+	100	Same as S-4
S-7 : 12.0'- 12.6'	50+	90	...grade: tr. Gravel
			Depth to Bottom of Hole: 14.0 feet

1. Three attempts were made adjacent and prior to advancing test boring B-202C. Boring No. (Depth): B-202 (5.5'), B-202A (2.5') and B-202B (10.0').
2. Surface elevation at B-202 location.

Logged by: A. Morse

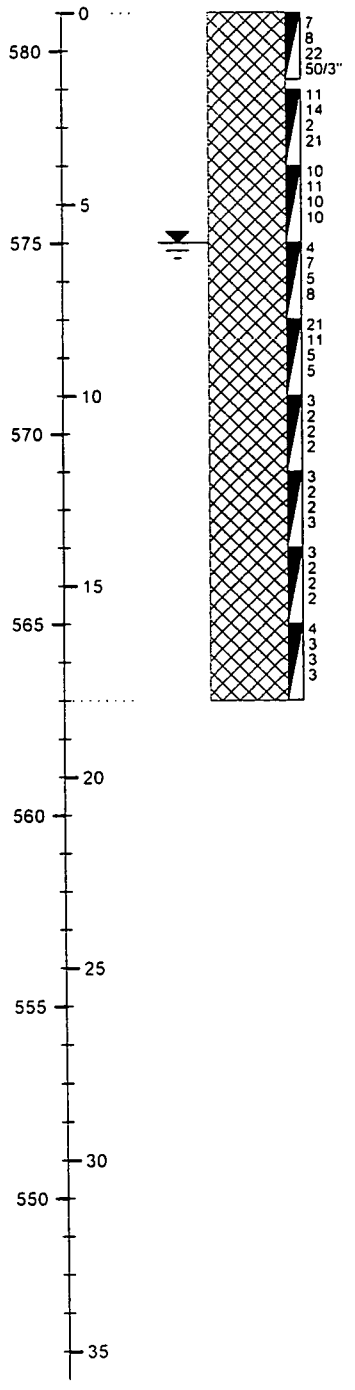
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-203

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/13/01	**SURFACE ELEVATION (ft):**	581.0 est.
DATE COMPLETED:	2/13/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	6.0



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 1.8'	30	50	Dark brown, dense f/c Sand, some Cinders, moist (Fill)
S-2 : 2.0'- 4.0'	34	80	...grade: Light gray, some Slag, tr. Cinders, wet
S-3 : 4.0'- 6.0'	21	70	...grade: m. dense
S-4 : 6.0'- 8.0'	12	50	...grade: Same as S-3
S-5 : 8.0'- 10.0'	16	50	...grade: Gray, and Slag
S-6 : 10.0'- 12.0'	4	60	...grade: some Slag, little Organic matter
S-7 : 12.0'- 14.0'	4	0	
S-8 : 14.0'- 16.0'	4	0	
S-9 : 16.0'- 18.0'	6	13	...grade: tr. Organic matter

Depth to Bottom of Hole: 18.0 feet

1. Boring was terminated at 18.0' due to oil.
2. Oily sheen was found on samples S-6 and S-9.

Logged by: A. Morse

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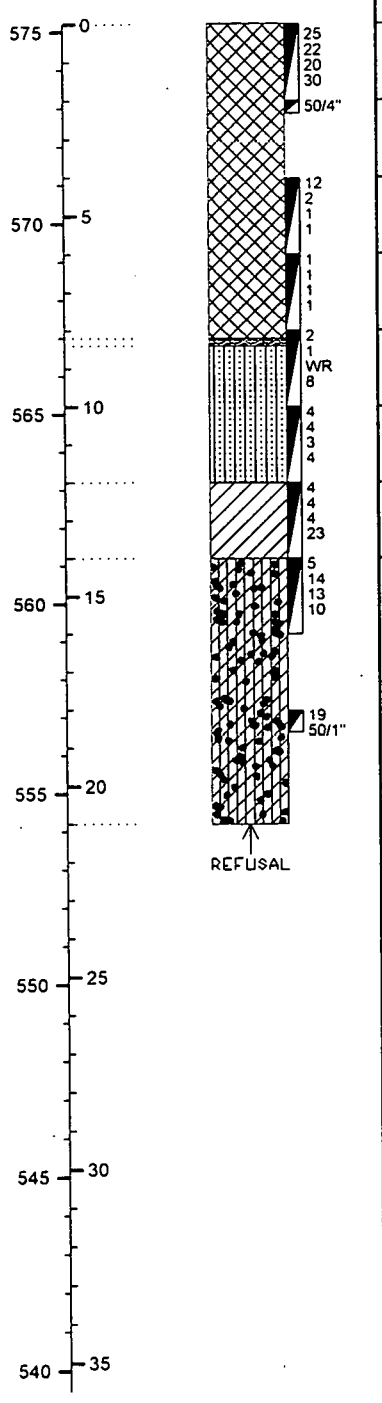
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-204

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/1/01	**SURFACE ELEVATION (ft):**	575.2
DATE COMPLETED:	2/1/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	42	70	Dark brown, dense f/c Sand, some Gravel, little Silt, tr. Slag, tr. Cinders, wet (Fill)
S-2 : 2.0'- 2.3'	50+	25	...grade: hard, and Brick
S-3 : 4.0'- 6.0'	3	25	...grade: v. loose
S-4 : 6.0'- 8.0'	2	30	Same as S-3
S-5 : 8.0'- 10.0'	2	40	Same as S-3 Dark brown, soft PEAT, little f/c Sand, tr. Silt, non-plastic, saturated (Pt)
S-6 : 10.0'- 12.0'	7	40	Gray, v.loose f/c SAND, little Silt, tr. Gravel, moist (SM) ...grade: loose
S-7 : 12.0'- 14.0'	8	50	Gray, m. stiff CLAY, some Silt, mod. plastic, moist (CL)
S-8 : 14.0'- 16.0'	27	40	Gray, v. stiff CLAY, some Silt, little f/c Sand, little Shale fragments, tr. Gravel, mod. plastic, wet (CL-Till)
S-9 : 18.0'- 18.6'	50+	100	...grade: hard, some Gravel, little Silt, tr. Shale fragments
			Depth to Bottom of Hole: 21.0 feet

Logged by: A. Morse

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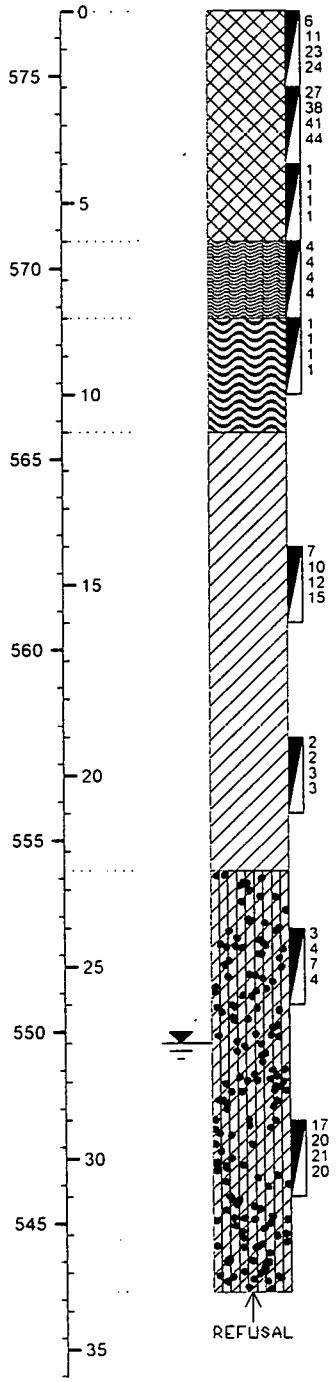
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-205

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/2/01	**SURFACE ELEVATION (ft):**	576.7'
DATE COMPLETED:	2/2/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	27.0'



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	34	80	Brown, v. dense f/c Sand, some Slag, little Silt, moist (Fill)
S-2 : 2.0'- 4.0'	79	50	...grade: dense, and Brick, wet
S-3 : 4.0'- 6.0'	2	40	...grade: some Slag, little Clay, tr. Brick
S-4 : 6.0'- 8.0'	8	25	Dark brown, m. stiff PEAT, little Silt, tr. f/c Sand, non-plastic, wet (Pt)
S-5 : 8.0'- 10.0'	2	60	Dark Brown, soft CLAY some Silt, little Peat, tr. f/m Sand, mod. plastic, wet (OH)
S-6 : 14.0'- 16.0'	22	60	Gray, v. stiff CLAY, little Silt, tr. f/c Sand, mod. plastic, moist (CL)
S-7 : 19.0'- 21.0'	5	75	...grade: m. stiff, tr. Silt, wet
S-8 : 24.0'- 26.0'	11	60	Gray, stiff CLAY, little Gravel, little Silt, tr. f/c Sand, mod. plastic, wet (CL-Till)
S-9 : 29.0'- 31.0'	41	10	...grade: hard, some Gravel, moist
			Depth to Bottom of Hole: 33.5 feet

Logged by: A. Morse

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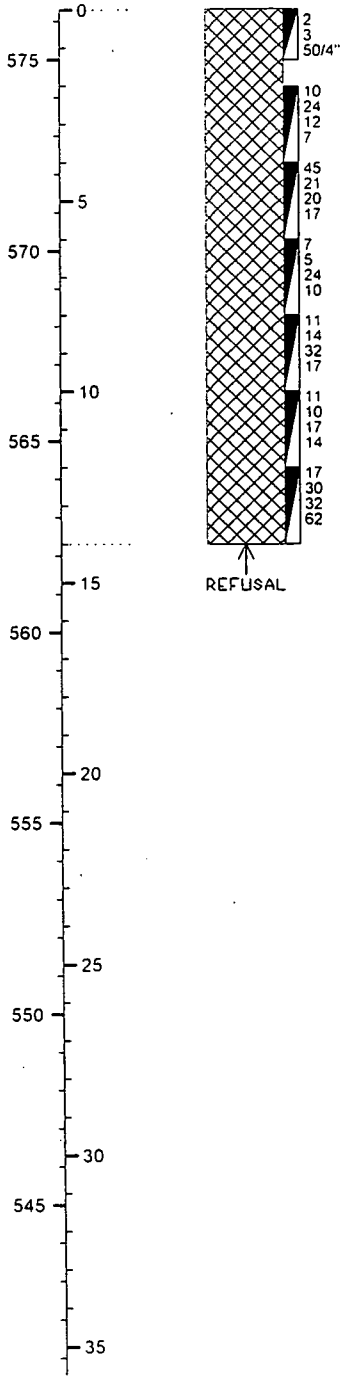
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-206E

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/5/01	**SURFACE ELEVATION (ft):**	576.3 est.
DATE COMPLETED:	2/6/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 1.3'	53+	25	Red, v. dense Brick, tr. f/c Sand, moist (Fill)
S-2 : 2.0'- 4.0'	36	20	...grade: dense, some Gravel, little f/c Sand, tr. Brick, tr. Slag
S-3 : 4.0'- 6.0'	41	45	...grade: little Concrete
S-4 : 6.0'- 8.0'	29	20	...grade: m. dense
S-5 : 8.0'- 10.0'	46	50	...grade: dense, some f/c Sand, wet
S-6 : 10.0'- 12.0'	27	75	...grade: m. dense
S-7 : 12.0'- 14.0'	62	60	...grade: v. dense, tr. Silt Note 1.
			Depth to Bottom of Hole: 14.0 feet

1. Five attempts were made adjacent and prior to advancing test boring B-206E. Boring No. (Depth): B-206 (2.5'), B-206A (2.0'), B-206B (2.0'), B-206C (2.0') and B-206D (6.0').
2. Surface elevation at B-206 location.

Logged by: A. Morse

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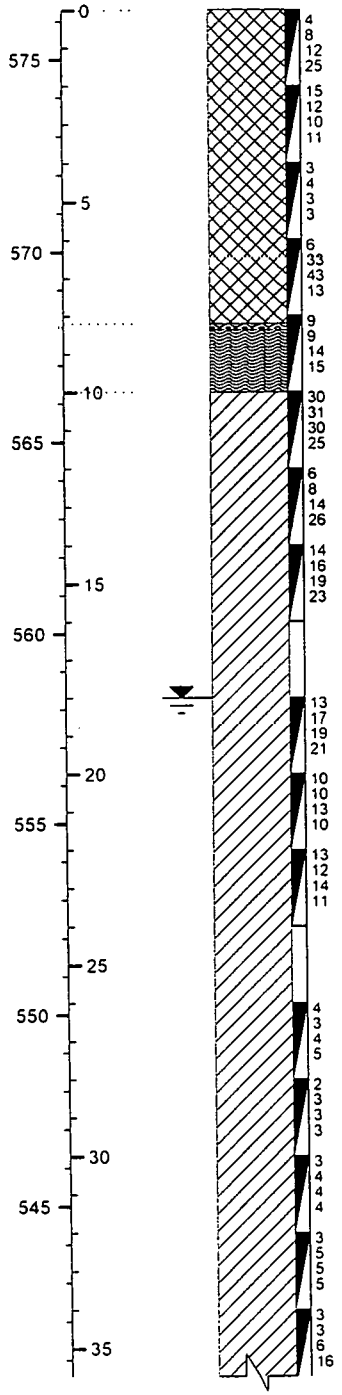
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-206G

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/12/01	**SURFACE ELEVATION (ft):**	576.3 est.
DATE COMPLETED:	2/12/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	18.0



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	20	70	Brown, m. dense f/c Sand, some Silt, little Slag, tr. Roots, moist (Fill)
S-2 : 2.0'- 4.0'	22	0	
S-3 : 4.0'- 6.0'	7	20	...grade: loose, some Slag, little Silt, wet
S-4 : 6.0'- 8.0'	76	60	...grade: Red, v. dense, tr. Slag
S-5 : 8.0'- 10.0'	23	80	...grade: dense Dark brown, v. stiff PEAT, non-plastic, moist (Pt)
S-6 : 10.0'- 12.0'	61	90	Gray, hard CLAY, some Silt, little Wood, mod. plastic, moist (CL)
S-7 : 12.0'- 14.0'	22	50	...grade: v. stiff, little Silt
S-8 : 14.0'- 16.0'	35	30	...grade: hard
U-1 : 16.0'- 18.0'	-	55	
S-9 : 18.0'- 20.0'	36	100	Same as S-8
S-10 : 20.0'- 22.0'	23	5	...grade: v. stiff, wet
S-11 : 22.0'- 24.0'	26	100	Same as S-10
U-2 : 24.0'- 26.0'	-	100	
S-12 : 26.0'- 28.0'	7	90	...grade: m. stiff, tr. Silt
S-13 : 28.0'- 30.0'	6	100	Same as S-12
S-14 : 30.0'- 32.0'	8	100	Same as S-12
S-15 : 32.0'- 34.0'	10	100	...grade: stiff
S-16 : 34.0'- 36.0'	9	100	Same as S-15

1. Boring B-206F drilled to a depth of 5.0' and prior to boring B-206G. 2. Boring moved 30' north and 100' east of boring B-206. 3. Groundwater measurements may be inaccurate due to water introduced during the coring process. 4. Surface elevation at B-206 location.

Logged by: A. Morse

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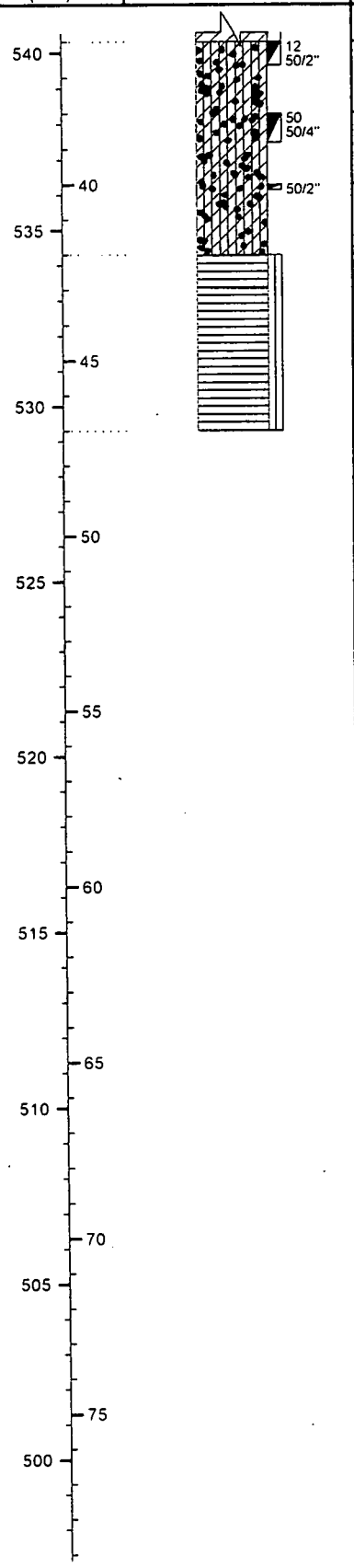
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG (CONTINUATION)

JOB No.: 01-510 **BORING No.:** B-206G

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-17 : 36.0'- 36.7'	50+	100	Gray, hard CLAY, some Silt, little Gravel, tr. f/c Sand, mod. plastic, wet (CL-Till)
S-18 : 38.0'- 38.8'	50+	80	...grade: little f/c Sand, tr. Gravel
S-19 : 40.0'- 40.2'	50+	50	Same as S-18
C-1 : 42.0'- 47.0'	-	48 (0)	SKANEATELES FORMATION: dark gray, very finely crystalline, thin bedded, SHALE porous, calcareous, moderately weathered, moderately hard (LEVANNA SHALE MEMBER)
			Depth to Bottom of Hole: 47.0 feet

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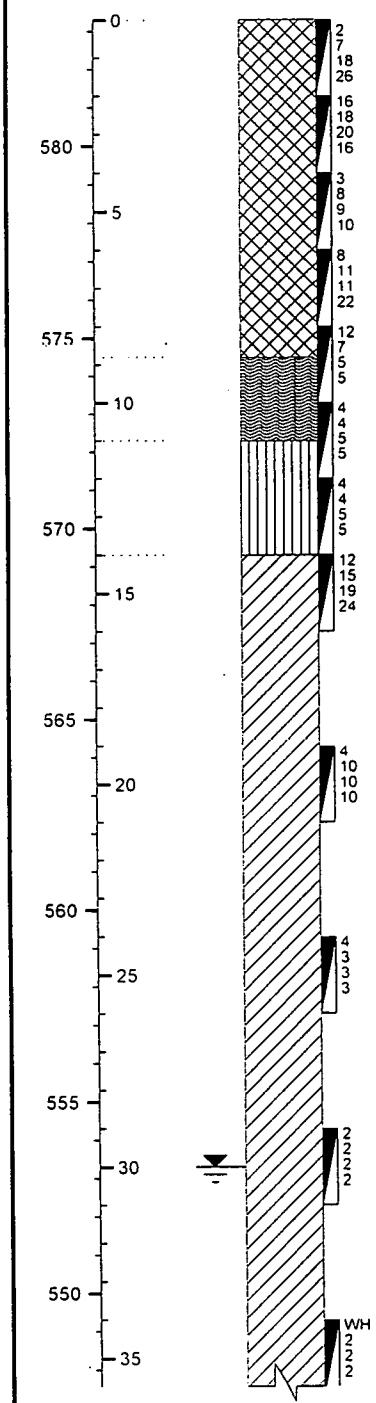
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-207

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	1/25/01	**SURFACE ELEVATION (ft):**	583.3
DATE COMPLETED:	1/25/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	30.0'



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	25	75	Brown, m. dense f/c Sand, little Gravel, tr. Silt, tr. Slag, moist (Fill)
S-2 : 2.0'- 4.0'	38	90	...grade: dense, wet
S-3 : 4.0'- 6.0'	17	70	...grade: m. dense
S-4 : 6.0'- 8.0'	22	90	...grade: Blue/green, little Slag
S-5 : 8.0'- 10.0'	12	50	Same as S-4
S-6 : 10.0'- 12.0'	9	0	Dark Brown, stiff PEAT, non-plastic, wet (Pt)
S-7 : 12.0'- 14.0'	9	15	Brown, m. stiff SILT, little Clay, little Gravel, tr. f/c Sand, tr. Organics, non-plastic, saturated (ML)
S-8 : 14.0'- 16.0'	32	80	Brown, hard CLAY, some Silt, mod. plastic, moist (CL)
S-9 : 19.0'- 21.0'	20	65	...grade: Gray, v. stiff, little Silt, wet
S-10 : 24.0'- 26.0'	6	75	...grade: m. stiff
S-11 : 29.0'- 31.0'	4	90	...grade: some Silt
S-12 : 34.0'- 36.0'	4	100	Same as S-11

Logged by: A. Morse

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(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG (CONTINUATION)

JOB No.: 01-510 **BORING No.:** B-207

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
545					
40	7 16 23 49	S-13 : 39.0'- 41.0'	39	90	...grade: hard
	REFUSAL				Gray, hard CLAY, some Silt, little f/c Sand, tr. Gravel, mod. plastic, moist (CL-Till)
					Depth to Bottom of Hole: 41.0 feet
540					
45					
535					
50					
530					
55					
525					
60					
520					
65					
515					
70					
510					
75					
505					

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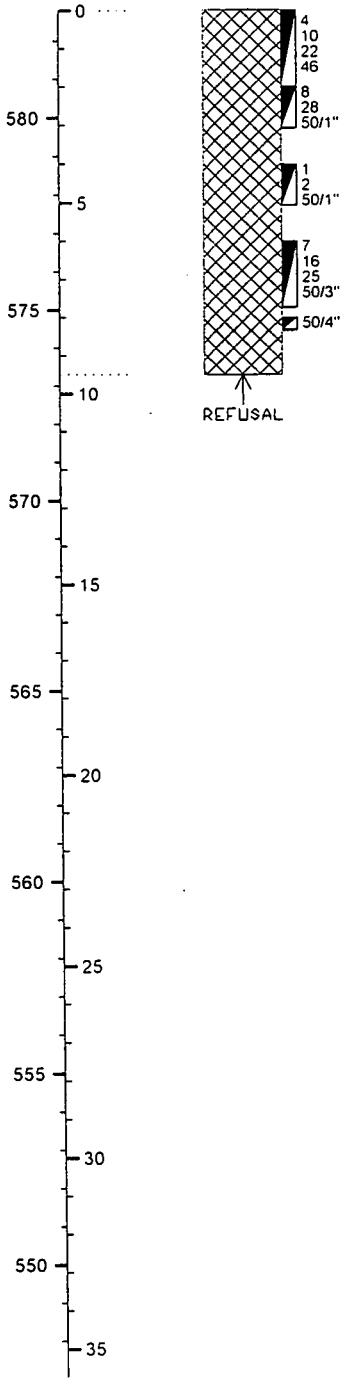
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-208D

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/5/01	**SURFACE ELEVATION (ft):**	582.8 est.
DATE COMPLETED:	2/5/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Dark gray, dense f/c Sand, some Cinders, little Silt, wet (Fill)
S-1 : 0.0'- 2.0'	32	70	
S-2 : 2.0'- 3.1'	78+	95	...grade: v. dense, and Cinders, saturated
S-3 : 4.0'- 5.1'	52+	0	
S-4 : 6.0'- 7.8'	41	80	...grade: dense, wet
S-5 : 8.0'- 8.3'	50+	100	...grade: v. dense, saturated Note 1.
			Depth to Bottom of Hole: 9.5 feet

1. Five attempts were made adjacent and prior to advancing test boring B-208D. Boring No. (Depth): B-208 (4.0'), B-208A (4.0'), B-208B (2.5') and B-208C (6.0').
2. Surface elevation at B-208 location.

Logged by: A. Morse

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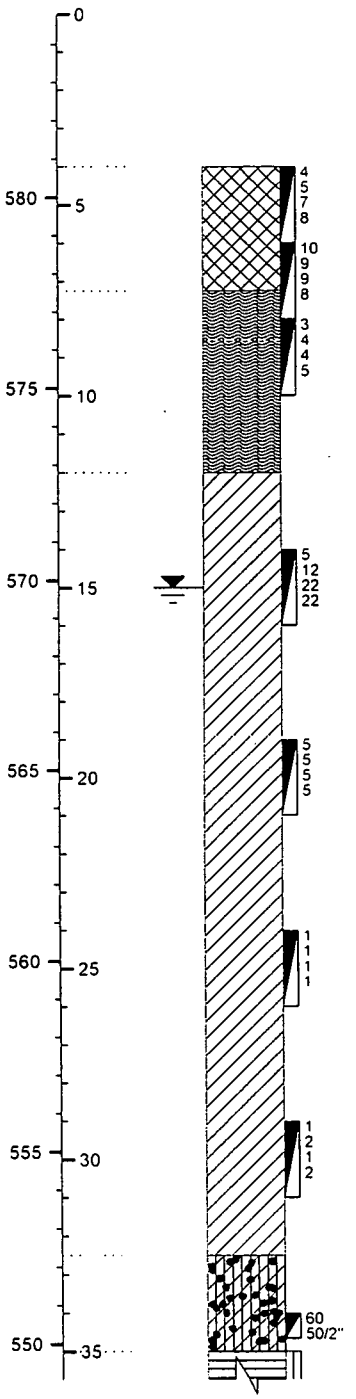
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-208E

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/6/01	**SURFACE ELEVATION (ft):**	584.8 est.
DATE COMPLETED:	2/6/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	15.0



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Augered through overburden soil from 0.0' to 4.0'.
S-1 : 4.0'- 6.0'	12	5	Gray, m. dense f/c Sand, some Silt, tr. Roots, tr. Glass, wet (Fill)
S-2 : 6.0'- 8.0'	18	80	...grade: little Clay, moist
S-3 : 8.0'- 10.0'	8	90	Dark brown, v. stiff PEAT, non-plastic, wet (Pt) ...grade: stiff, little Clay, sl. plastic
S-4 : 14.0'- 16.0'	34	70	Gray, hard CLAY, little Silt, mod. plastic, moist (CL)
S-5 : 19.0'- 21.0'	10	100	...grade: stiff, tr. Silt, wet
S-6 : 24.0'- 26.0'	2	100	...grade: soft
S-7 : 29.0'- 31.0'	3	100	...grade: some Silt, tr. Gravel, tr. f/c Sand
S-8 : 34.0'- 34.7'	50+	65	Dark gray, hard CLAY, some Gravel, little Silt, little f/c Sand, mod. plastic, wet (CL-Till)

1. Moved boring 60.0' east of boring B-208D.
2. Surface elevation at B-208 location.

Logged by: A. Morse

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(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG (CONTINUATION)

JOB No.: 01-510 **BORING No.:** B-208E

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
545 – 40		C-1 : 35.0'- 40.0'	-	52 (0)	SKANEATELES FORMATION: dark gray, very finely crystalline, thin bedded SHALE, porous, calcareous, moderately weathered, moderately hard (LEVANNA SHALE MEMBER)
540 – 45					
535 – 50					Depth to Bottom of Hole: 40.0 feet
530 – 55					
525 – 60					
520 – 65					
515 – 70					
510 – 75					

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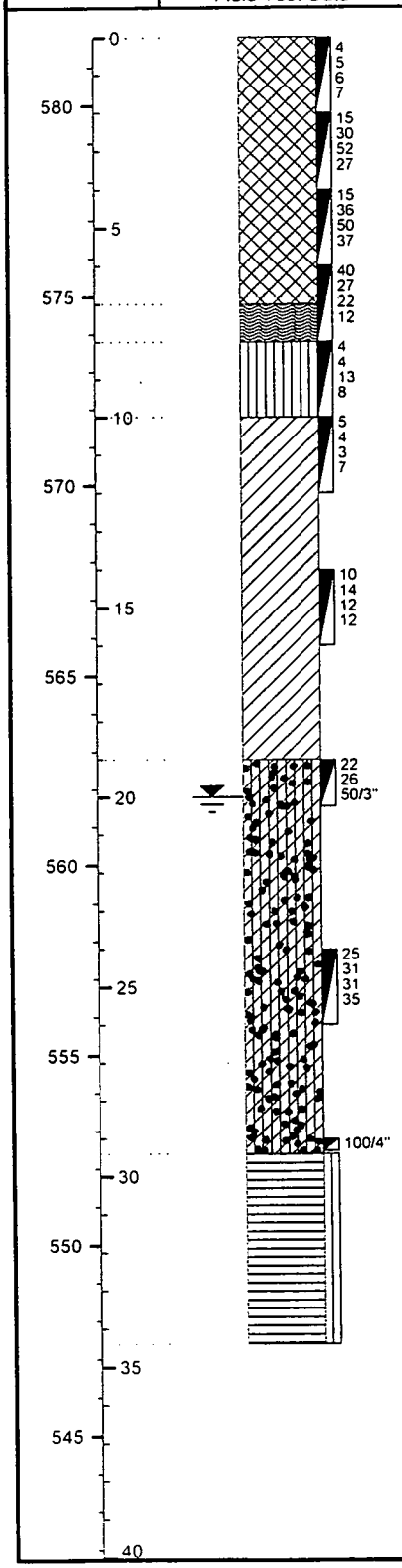
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-209

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	T. Bistoff	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	1/30/01	**SURFACE ELEVATION (FT):**	581.8
DATE COMPLETED:	1/30/01	**GROUNDWATER DEPTH (FT):** (measured at completion unless indicated below)	20.0'



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0' - 2.0'	11	55	Dark brown, m. dense f/c Sand, some Silt, little Slag, wet (Fill)
S-2 : 2.0' - 4.0'	82	80	...grade: Light brown, v. dense, some Slag
S-3 : 4.0' - 6.0'	86	85	...grade: Blue/green
S-4 : 6.0' - 8.0'	49	75	...grade: dense Dark brown, hard PEAT, tr. Silt, non-plastic, wet (Pt)
S-5 : 8.0' - 10.0'	17	60	Gray, v. stiff SILT, some f. Sand, tr. Clay, non-plastic, moist (ML)
S-6 : 10.0' - 12.0'	7	50	Gray, m. stiff CLAY, some Silt, mod. plastic, moist (CL)
S-7 : 14.0' - 16.0'	26	0	
S-8 : 19.0' - 20.2'	76+	80	Gray, hard CLAY, some Gravel, little Silt, little f/c Sand, mod. plastic, moist (CL-Till)
S-9 : 24.0' - 26.0'	62	60	Same as S-8
S-10 : 29.0' - 29.3'	100+	100	Same as S-8
C-1 : 29.4' - 34.4'	-	92 (27)	SKANEATELES FORMATION: dark gray, very finely crustalline, thin bedded, SHALE porous, calcareous, sl. to mod. weathered, mod. hard (LEVANNA SHALE MEMBER)

Depth to Bottom of Hole: 34.4 feet

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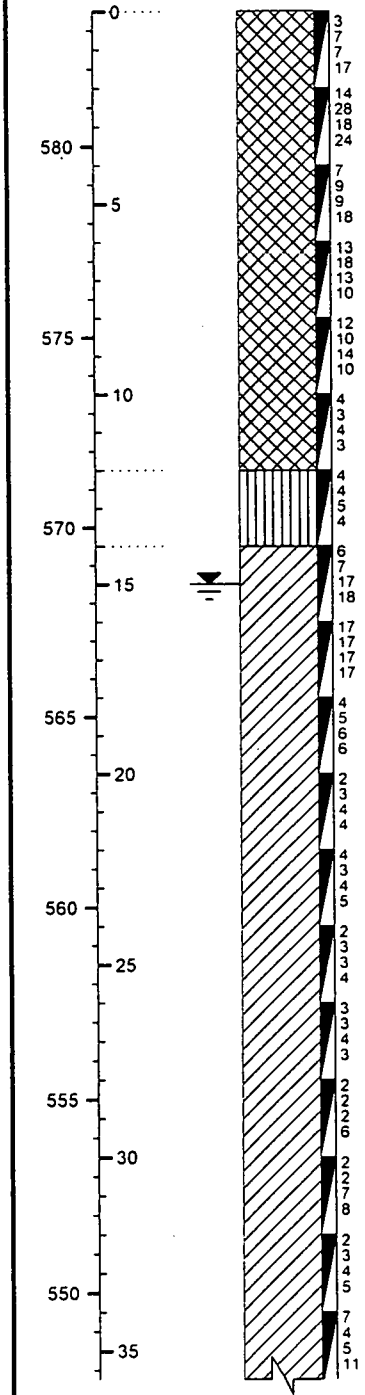
TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-210

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	1/23/01	**SURFACE ELEVATION (ft):**	583.5
DATE COMPLETED:	1/23/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	15.0'



Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
	3 7 7 17	S-1 : 0.0'- 2.0'	14	95	Brown, m. dense f/m Sand, little Silt, moist (Fill)
	14 28 18 24	S-2 : 2.0'- 4.0'	46	100	...grade: dense, little Slag, tr. Silt
	7 9 9 18	S-3 : 4.0'- 6.0'	18	85	...grade: m. dense, tr. c. Sand
	13 18 13 10	S-4 : 6.0'- 8.0'	31	70	...grade: dense, some Slag, little c. Sand, tr. Gravel, wet
	12 10 14 10	S-5 : 8.0'- 10.0'	24	75	...grade: Blue/green, m. dense, and Slag
	4 3 4 3	S-6 : 10.0'- 12.0'	7	20	...grade: Gray, loose, little Slag, little Silt, tr. Wood
	4 4 5 4	S-7 : 12.0'- 14.0'	9	70	Gray, stiff SILT, some f. Sand, tr. Clay, sl. plastic, wet (ML) Note 1.
	6 7 17 18	S-8 : 14.0'- 16.0'	24	70	Brown, v. stiff CLAY, some Silt, tr. f/c Sand, mod. plastic, moist (CL)
	17 17 17 17	S-9 : 16.0'- 18.0'	34	90	...grade: hard, little Silt, tr. Gravel
	4 5 6 6	S-10 : 18.0'- 20.0'	11	0	...grade: stiff
	2 3 4 4	S-11 : 20.0'- 22.0'	7	70	...grade: Gray, m. stiff, tr. Wood, wet
	4 3 4 5	S-12 : 22.0'- 24.0'	7	95	...grade: tr. Silt
	2 3 3 4	S-13 : 24.0'- 26.0'	6	95	Same as S-12
	3 3 4 3	S-14 : 26.0'- 28.0'	7	100	...grade: little Silt
	2 2 2 6	S-15 : 28.0'- 30.0'	4	35	Same as S-14
	2 2 7 8	S-16 : 30.0'- 32.0'	9	75	...grade: stiff
	2 3 4 5	S-17 : 32.0'- 34.0'	7	100	...grade: m. stiff
	7 4 5 11	S-18 : 34.0'- 36.0'	9	60	...grade: stiff

1. A 1" thick layer of peat was encountered near the top of the natural silt layer.

Logged by: A. Morse

BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG (CONTINUATION)

JOB No.: 01-510 **BORING No.:** B-210

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
	15 34 16 20	S-19 : 36.0'- 38.0'	50	85	Gray, hard CLAY, some Silt, little Gravel, little f/c Sand, mod. plastic, moist (CL-Till)
545	26 36 50/4"	S-20 : 38.0'- 39.3'	86	15	Gray, v. dense gravel sized SHALE fragments, moist (SHALE FRAGMENTS)
40	REFUSAL				Depth to Bottom of Hole: 39.3 feet
540					
45					
535					
50					
530					
55					
525					
60					
520					
65					
515					
70					
510					
75					
505					

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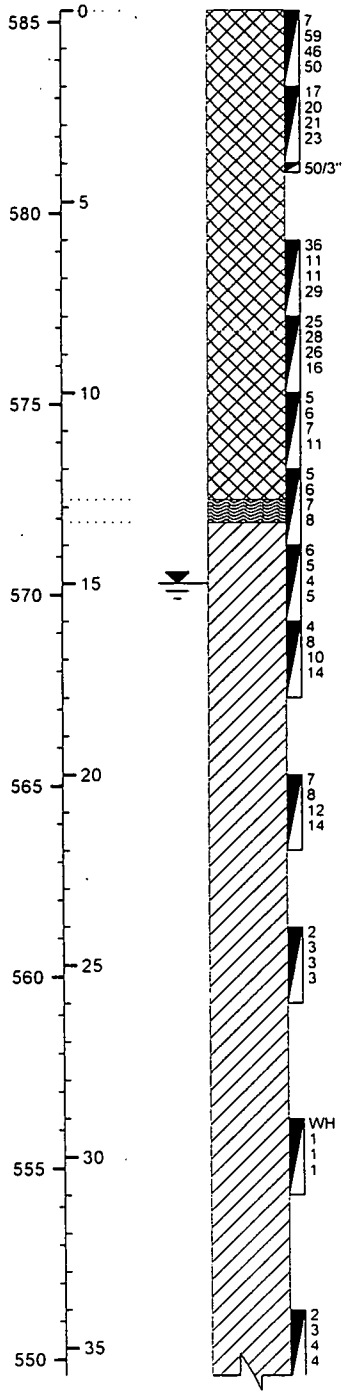
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-211

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	1/24/01	**SURFACE ELEVATION (ft):**	585.3
DATE COMPLETED:	1/24/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	15.0'



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	100+	65	Dark brown, v. dense sand to gravel sized Slag, little Silt, tr. Wood, moist (Fill)
S-2 : 2.0'- 4.0'	41	60	...grade: dense
S-3 : 4.0'- 4.2'	50+	100	...grade: tr. Silt
S-4 : 6.0'- 8.0'	22	85	...grade: Light brown, m. dense, and f/c Sand, wet
S-5 : 8.0'- 10.0'	54	85	...grade: v. dense
S-6 : 10.0'- 12.0'	13	65	...grade: Blue/green, m. dense
S-7 : 12.0'- 14.0'	13	70	Same as S-6 Dark brown, stiff PEAT, little f/c Sand, non-plastic, wet (Pt)
S-8 : 14.0'- 16.0'	9	45	Gray, v. stiff CLAY some Silt, sl. to mod. plastic, wet (CL) ...grade: stiff
S-9 : 16.0'- 18.0'	18	75	...grade: v. stiff
S-10 : 20.0'- 22.0'	20	75	Same as S-9
S-11 : 24.0'- 26.0'	6	90	...grade: m. stiff, little Silt
S-12 : 29.0'- 31.0'	2	100	...grade: soft, tr. Silt, saturated
S-13 : 34.0'- 36.0'	7	100	...grade: m. stiff, tr. f/c Sand, wet

Logged by: A. Morse

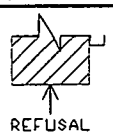
BUFFALO DRILLING COMPANY, INC.

10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG (CONTINUATION)

JOB No.: 01-510 **BORING No.:** B-211

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
	 REFUSAL				
545 — 40					Depth to Bottom of Hole: 37.0 feet
540 — 45					
535 — 50					
530 — 55					
525 — 60					
520 — 65					
515 — 70					
510 — 75					

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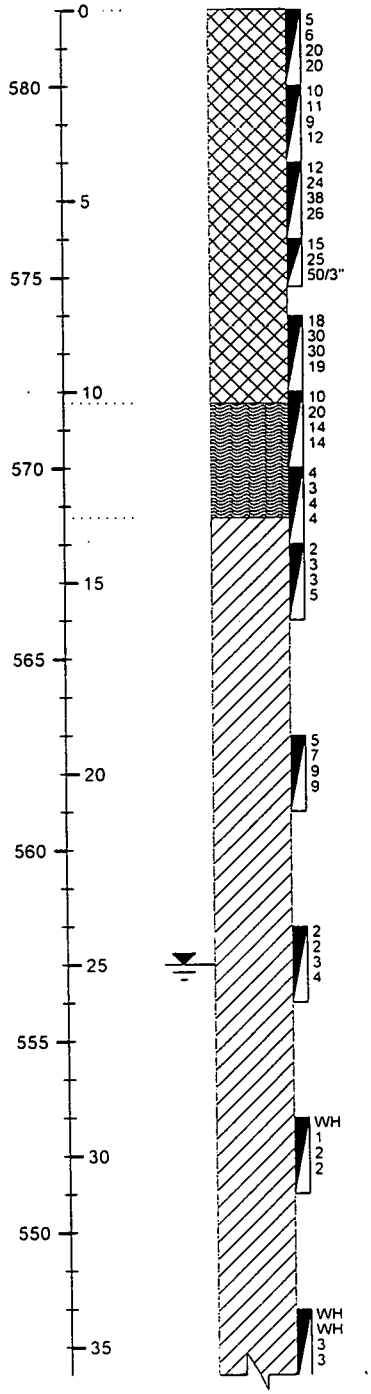
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-212

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	1/25/01	**SURFACE ELEVATION (ft):**	582.0
DATE COMPLETED:	1/25/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	25.0'



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	26	55	Dark brown, m. dense f/m Sand and Silt, some Organic matter, wet (Fill)
S-2 : 2.0'- 4.0'	20	100	...grade: Blue/green Slag, little f/c Sand, tr. Silt, wet
S-3 : 4.0'- 6.0'	62	95	...grade: v. dense
S-4 : 6.0'- 7.2'	75+	70	Same as S-3
S-5 : 8.0'- 10.0'	60	55	Same as S-3
S-6 : 10.0'- 12.0'	34	70	...grade: dense Dark brown, hard PEAT, some Silt, little f/c Sand, non-plastic, wet (Pt) Note 1.
S-7 : 12.0'- 14.0'	7	90	...grade: m. stiff
S-8 : 14.0'- 16.0'	6	75	Gray, m. stiff CLAY, some Silt, mod. plastic, wet (CL) ...grade: little Silt, little f. Sand
S-9 : 19.0'- 21.0'	16	75	...grade: v. stiff, some Silt, tr. f. Sand
S-10 : 24.0'- 26.0'	5	75	...grade: m. stiff, tr. Silt
S-11 : 29.0'- 31.0'	3	85	...grade: soft
S-12 : 34.0'- 36.0'	3	95	...grade: tr. f/c Sand

1. An approximate one foot thick layer was encountered between peat layers.

Logged by: A. Morse

BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG (CONTINUATION)

JOB No.: 01-510 **BORING No.:** B-212

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
545					
40	34 6 6 12	S-13 : 39.0'- 41.0'	12	40	Gray, stiff CLAY, some Silt, little f/c Sand, tr. Gravel, mod. plastic, wet (CL-Till)
540					
45	31 19 26 30	S-14 : 44.0'- 46.0'	45	25	...grade: hard, little Gravel
535	REFUSAL				
50					Depth to Bottom of Hole: 48.5 feet
530					
55					
525					
60					
520					
65					
515					
70					
510					
75					
505					

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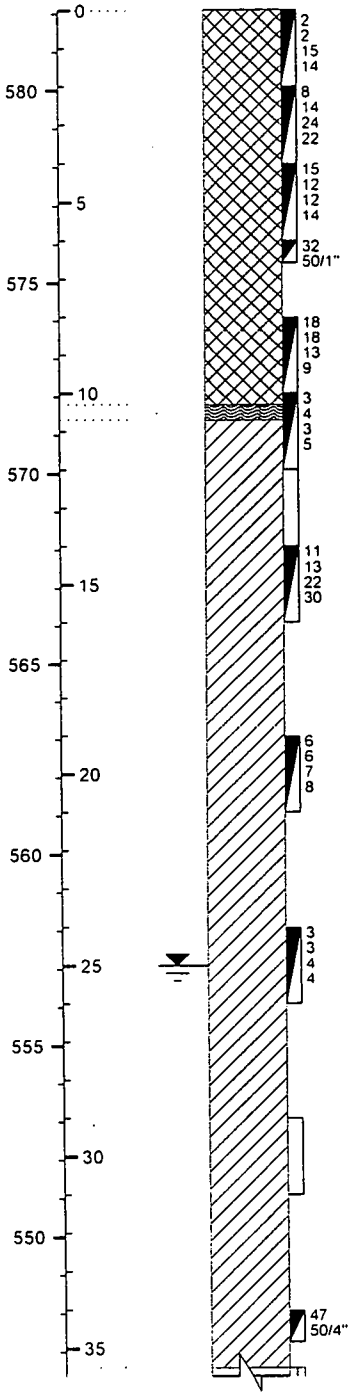
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-213

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	1/26/01	**SURFACE ELEVATION (ft):**	582.1
DATE COMPLETED:	1/26/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	25.0'



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	17	50	Brown, m. dense f/c Sand, little Organic matter, tr. Silt, tr. Slag, wet (Fill)
S-2 : 2.0'- 4.0'	38	95	...grade: dense, little Slag, tr. Organic matter
S-3 : 4.0'- 6.0'	24	100	...grade: m. dense, some Slag, tr. Clay
S-4 : 6.0'- 6.6'	50+	100	...grade: Gray, dense, and Slag
S-5 : 8.0'- 10.0'	31	80	Same as S-4
S-6 : 10.0'- 12.0'	7	55	...grade: loose Brown, m. stiff PEAT, non-plastic, wet (Pt) Note 1. Gray, m. stiff CLAY, little Silt, mod. plastic wet (CL)
U-1 : 12.0'- 14.0'	-	80	Same as S-6
S-7 : 14.0'- 16.0'	35	80	...grade: Brown, hard, some Silt, tr. Gravel, moist
S-8 : 19.0'- 21.0'	13	70	...grade: Gray, stiff, little Silt, wet
S-9 : 24.0'- 26.0'	7	20	...grade: m. stiff, tr. Silt
U-2 : 29.0'- 31.0'	-	42	...grade: little Silt, tr. f/c Sand, moist
S-10 : 34.0'- 34.8'	50+	100	...grade: hard, little Shale fragments, tr. f/c Sand

1. Approximately three inches of fill were encountered above the peat at sample S-6.

Logged by: A. Morse

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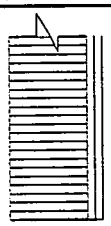
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG (CONTINUATION)

JOB No.: 01-510 **BORING No.:** B-213

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

Elevation/ Depth (feet)	Soil Symbols Sampler Symbols Field Test Data	Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
545		C-1 : 35.5'- 40.5'	-	59 (18)	SKANEATELES FORMATION: medium dark gray, very finely crystalline, thin bedded, SHALE porous, calcareous, slightly weathered, moderately hard (LEVANNA SHALE MEMBER)
40					
540					Depth to Bottom of Hole: 40.5 feet
45					
535					
50					
530					
55					
525					
60					
520					
65					
515					
70					
510					
75					
505					

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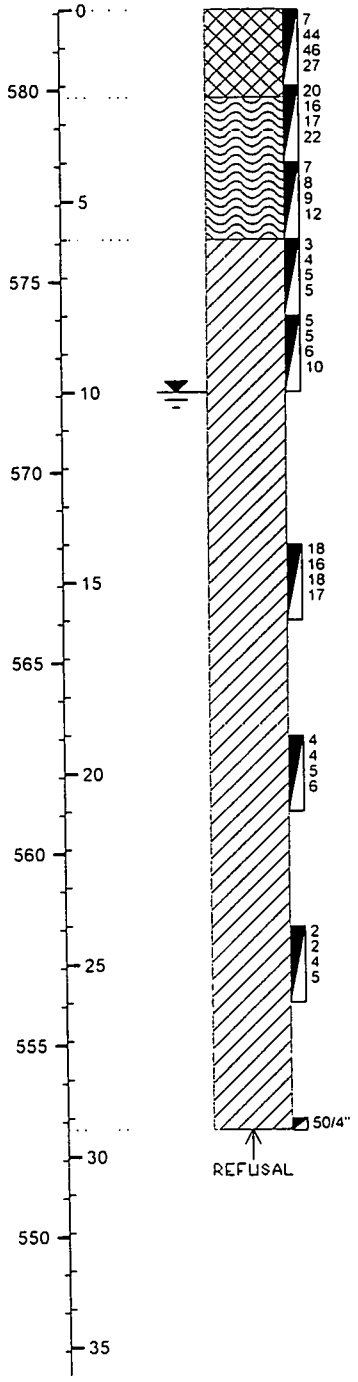
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-214

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/7/01	**SURFACE ELEVATION (ft):**	582.1
DATE COMPLETED:	2/8/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	10.0'



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
S-1 : 0.0'- 2.0'	90	70	Gray, v. dense Gravel, little f/c Sand, tr. Slag, wet (Fill)
			...grade: dense
S-2 : 2.0'- 4.0'	33	35	Brown/gray, hard CLAY, some Silt, tr. f/c Sand, mod. plastic, moist (OL) Note 1.
S-3 : 4.0'- 6.0'	17	20	...grade: v. stiff
S-4 : 6.0'- 8.0'	9	30	Brown/gray, stiff CLAY, some Silt, tr. f/c Sand, mod. plastic, moist (CL)
S-5 : 8.0'- 10.0'	11	65	...grade: Gray, little Silt, wet
S-6 : 14.0'- 16.0'	34	45	...grade: Brown, hard, tr. gravel
S-7 : 19.0'- 21.0'	9	95	...grade: Gray, stiff
S-8 : 24.0'- 26.0'	6	90	...grade: m. stiff
S-9 : 29.0'- 29.3'	50+	100	...grade: hard, some sand to gravel sized Shale fragments
			Depth to Bottom of Hole: 29.3 feet

1. Samples S-2 and S-3 have interbedded layers of peat.

Logged by: A. Morse

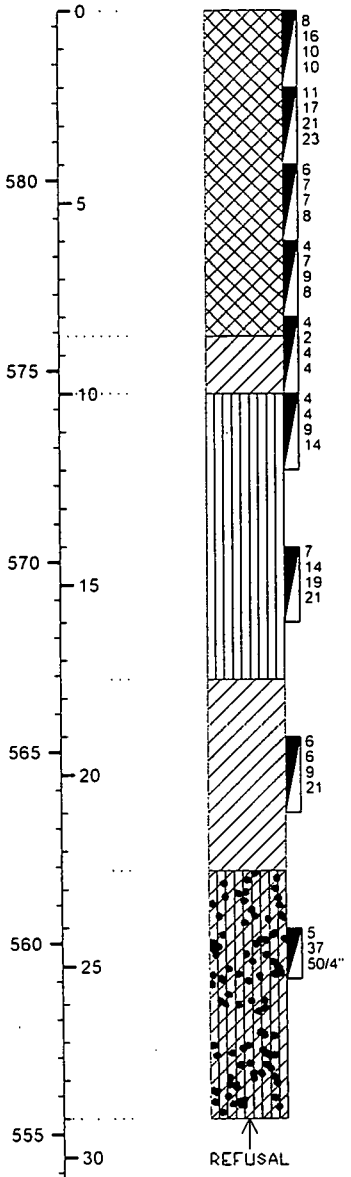
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, NEW YORK 14031
(716) 759-7821 FAX: (716) 759-7823

TEST BORING LOG

JOB No.: 01-510 **BORING No.:** B-215

PROJECT: South Buffalo Redevelopemnt Plan, Phase I, Union Ship Canal, Buffalo, New York

DRILLER:	L. Schroeder	**TYPE OF DRILL RIG:**	Diedrich D-50
SAMPLING METHODS:	ASTM D1586	**SIZE AND TYPE OF BIT:**	4 1/4" Hollow Stem Auger
DATE STARTED:	2/8/01	**SURFACE ELEVATION (ft):**	584.4
DATE COMPLETED:	2/8/01	**GROUNDWATER DEPTH (ft):** (measured at completion unless indicated below)	None



Sample No. : Range	N-Value	% REC (RQD)	Soil and Rock Description / Remarks
			Dark gray, m. dense f/c Sand, some Cinders, tr. Slag, wet (Fill)
S-1 : 0.0'- 2.0'	26	95	...grade: dense, little Slag, little Cinders
S-2 : 2.0'- 4.0'	38	70	...grade: Blue/gray, m. dense, some Slag, tr. Cinders
S-3 : 4.0'- 6.0'	14	95	Same as S-3
S-4 : 6.0'- 8.0'	16	95	...grade: loose
S-5 : 8.0'- 10.0'	6	55	Gray, m. stiff CLAY, some Silt, tr. Organic matter, mod. plastic, wet (CL)
S-6 : 10.0'- 12.0'	13	45	Light brown, stiff SILT, little Clay, tr. f. Sand, sl. plastic, wet (ML)
S-7 : 14.0'- 16.0'	33	75	...grade: hard
S-8 : 19.0'- 21.0'	15	100	Gray, v. stiff CLAY, little Silt, mod. plastic, wet (CL)
S-9 : 24.0'- 25.3'	87+	50	Gray, hard CLAY, some Silt, little Gravel, tr. f/c Sand, mod. plastic, wet (CL-Till)
			Depth to Bottom of Hole: 29.0 feet

Logged by: A. Morse

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

APPENDIX C

GEOTECHNICAL REFERENCE STANDARDS

GEOTECHNICAL REFERENCE STANDARDS
SUMMARY OF LOGGING TECHNIQUES

Depth (feet)	Blows per 0.5 foot	Sample No.	N	% REC (RQD)	SOIL AND ROCK DESCRIPTION	Remarks

DEPTH:
This column provides the verticle scale of the boring log in feet below ground surface.

BLOWS:
The number of blows obtained from each of the 0.5-foot intervals of sampler penetration.

Note:
WR = static weight of drill rods.
WH = static weight of rods and hammer.

SAMPLE IDENTIFICATION NUMBER:
An "S" preceding the sample number identifies a Disturbed Sample.
A "U" preceding the sample number identifies an Undisturbed Sample (Shelby tube).
A "C" preceding the sample number identifies a Rock Core Sample.

% RECOVERY:
The length of sample recovered divided by the total length sampled. The result is a numerically-expressed percentage.

(RQD):
"Rock Quality Designation"
The total length of pieces > 4 inches divided by the total length of core run.

N-VALUE:
The Standard Penetration Test N-Value, as specified by ASTM D1586 is defined as the number of blows required by a 140-pound hammer falling 30 inches per blow to drive a 2-inch outside diameter split spoon sampler 12 inches.

TERMINOLOGY USED FOR SOIL DESCRIPTION

Density Description of Granular Soil

Number of Blows per foot, N	Relative Density
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium
30 - 50	Dense
Over 50	Very Dense

Consistency Description of Cohesive Soil

Number of Blows per foot, N	Consistency
Below 2	Very soft
2 - 4	Soft
4 - 8	Medium
8 - 15	Stiff
15 - 30	Very Stiff
Over 30	Hard

Grain Size

Boulder	-	greater than 12-inch diameter
Cobble	-	passing 12-inch, retained on 3-inch.
Gravel	-	passing 3-inch, retained on No. 4 sieve
Sand	- Coarse	passing No. 4 sieve, retained on No. 10 sieve
	- Medium	passing No. 10 sieve, retained on No. 40 sieve
	- Fine	passing No. 40 sieve, retained on No. 200 sieve
Silt	-	0.074 mm to 0.005 mm
Clay	-	smaller than 0.005 mm

Description of Percentage or Proportions Used in Soil Sample Classification

Trace	0 - 10 %
Little	10 - 20 %
Some	20 - 35 %
And	35 - 50 %

Abbreviations Used In Soil Sample Classification

f	- fine	v	- very
m	- medium	gr	- gray
c	- coarse	bn	- brown
f/m	- fine to medium	yel	- yellow
f/c	- fine to coarse	sl	- slight
tr	- trace		

Plasticity

Non-plastic	- A 1/8-inch thread cannot be rolled at any water content.
Slight Plasticity	- The thread can barely be rolled.
Moderate Plasticity	- Thread is easy to roll and little time is required to reach plastic limit.
Plastic	- Considerable time is required to reach plastic limit. Thread can be re-rolled several times after reaching the plastic limit.

Moisture

Dry	- Absence of moisture, dusty, dry to the touch.
Moist	- Small quantity of moisture. Soil usually above groundwater level.
Wet	- Moisture noticeable to the touch. Soil may be below groundwater level.
Saturated	- Visible free water. Usually soil is below groundwater level.

TERMINOLOGY USED FOR ROCK DESCRIPTION

Bedding

Parting	Less than 0.02 ft.
Band	0.02 to 0.2 ft.
Thin Bed	0.2 to 0.5 ft.
Medium Bed	0.5 to 1.0 ft.
Thick Bed	1.0 to 2.0 ft.
Massive	Over 2.0 ft.

Hardness

Very Soft or Plastic	- Can be indented with thumb.
Soft	- Can be scratched with fingernail.
Moderately Hard	- Can be scratched easily with knife. Cannot be scratched with fingernail.
Hard	- Difficult to scratch with knife.
Very Hard	- Cannot be scratched with knife.

Crystallinity or Texture

Dense	- Crystals are so small they cannot be distinguished with the naked eye.
Very Fine Crystalline	- Crystals barely discernible with the naked eye.
Crystalline	- Crystals are medium size; up to 1/8-inch diameter.
Very Coarsely Crystalline	- Crystals larger than 1/8-inch diameter.

Voids

Pourous	- Smaller than a pinhead. Their presence is indicated by the degree of absorbancy.
Pitted	- Pinhead size to 1/4-inch. If only thin walls separate the individual pits, the core may be described as honeycombed.
Vug	- 1/4-inch to the diameter of the core. The upper limit will vary with core size.
Cavity	- Larger than the diameter of the core.

REMARKS:
Denotes exact depth of receovery and general documentation of drilling efforts.

Notes:
Description and classification are based on visual inspection of samples and boring operations.

The stratum lines shown on the boring logs are based upon interpretation and may not represent precise subsurface conditions.

Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the water level may occur due to other factors than those present at the time measurments are taken.

SOIL CLASSIFICATION CHART
(Unified Soil Classification System)

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material larger than No. 200 sieve	GRAVELS More than 50% of coarse fraction larger than No. 4 sieve	Clean Gravels (little or no fines)		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		Gravels with appreciable amounts of fines		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS Less than 50% of coarse fraction larger than No. 4 sieve	Clean sands (little or no fines)		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sands, little or no fines
		Sands with appreciable amounts of fines		SM	Silty sands, silt-sand mixture
				SC	Clayey sands, sand-clay mixture
FINE-GRAINED SOILS Less than 50% of material larger than No. 200 sieve	SILTS AND CLAYS Low plasticity Liquid Limit less than 50%			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS High plasticity Liquid Limit greater than 50%			MH	Inorganic silts, micaceous or diatomaceous fine sand or silt soils
				CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays of medium to high plasticity, organic silts
	Highly Organic Soils			Pt	Peat, humus, swamp soils with organic contents
	Miscellaneous Fill			FILL	Miscellaneous fill may belong in any division but is identified as FILL

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

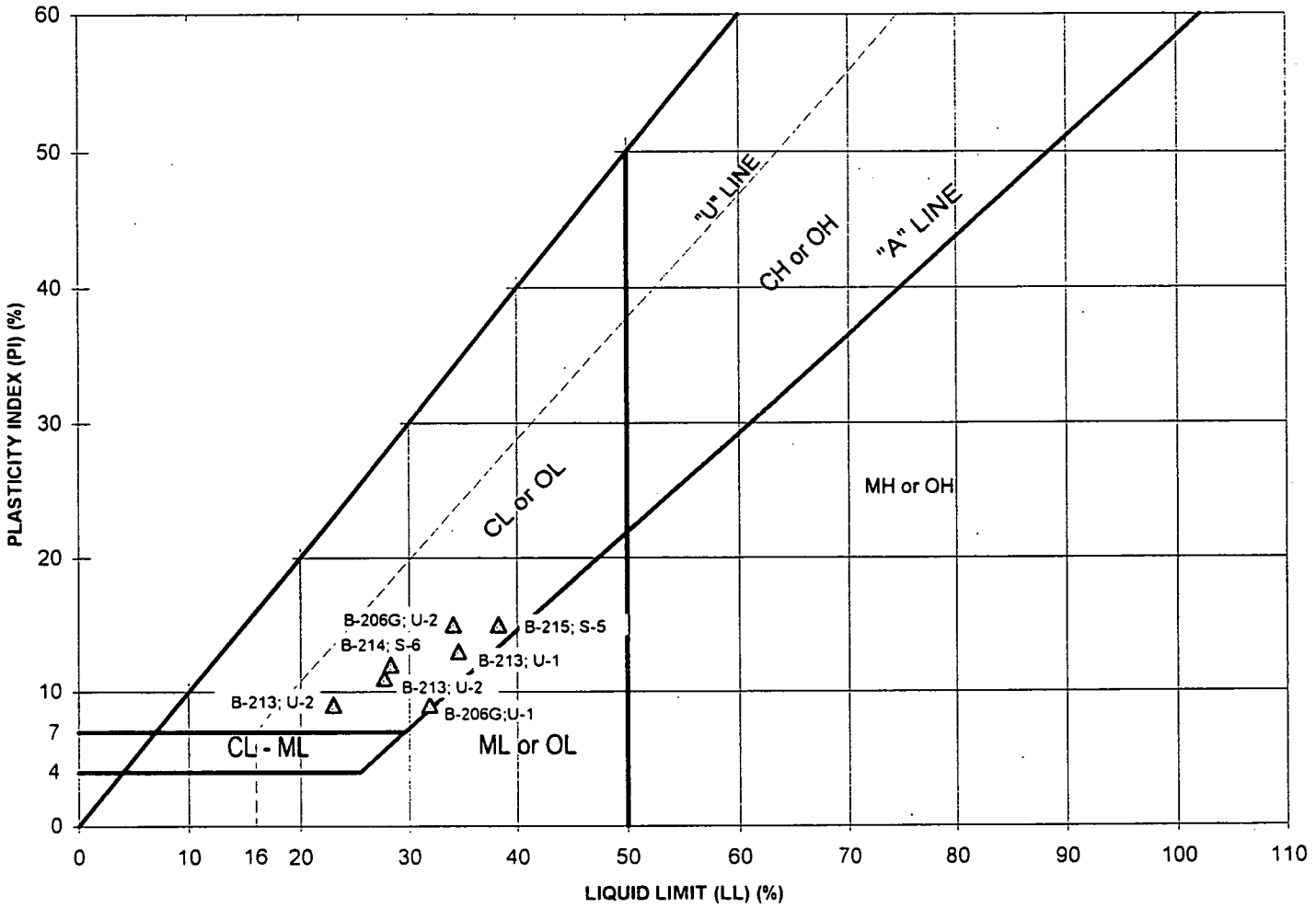
APPENDIX D

LABORATORY SOIL TEST RESULTS

BARRON & ASSOCIATES, P.C.
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

Job No: 01-510
Project: South Buffalo Redevelopment Plan
Phase I, Union Ship Canal
Buffalo, New York

Plasticity Chart
ASTM D4318 & D2487



Boring No.	Sample No.	Depth (ft.)	LL (%)	PL (%)	PI (%)
B-206G	U-1	16-17	32	23	19
B-206G	U-2	25-26	34	19	15
B-213	U-1	12-13	35	22	13
B-213	U-2	29-29.6	28	16	12
B-213	U-2	29.6-29.8	23	14	9
B-214*	S-6	14-16	28	17	11
B-215*	S-5	8-10	38	23	15
B-215	S-5	8-10	31	-	-

* Atterberg Limits tested using as received moisture contents.

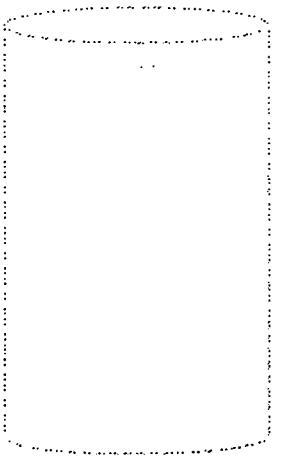
BARRON & ASSOCIATES, P.C.
BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

Job No: 01-510
Project: South Buffalo Redevelopment Plan,
Phase I, Union Ship Canal
Buffalo, New York

UNCONFINED COMPRESSIVE STRENGTH TEST
ASTM D2166

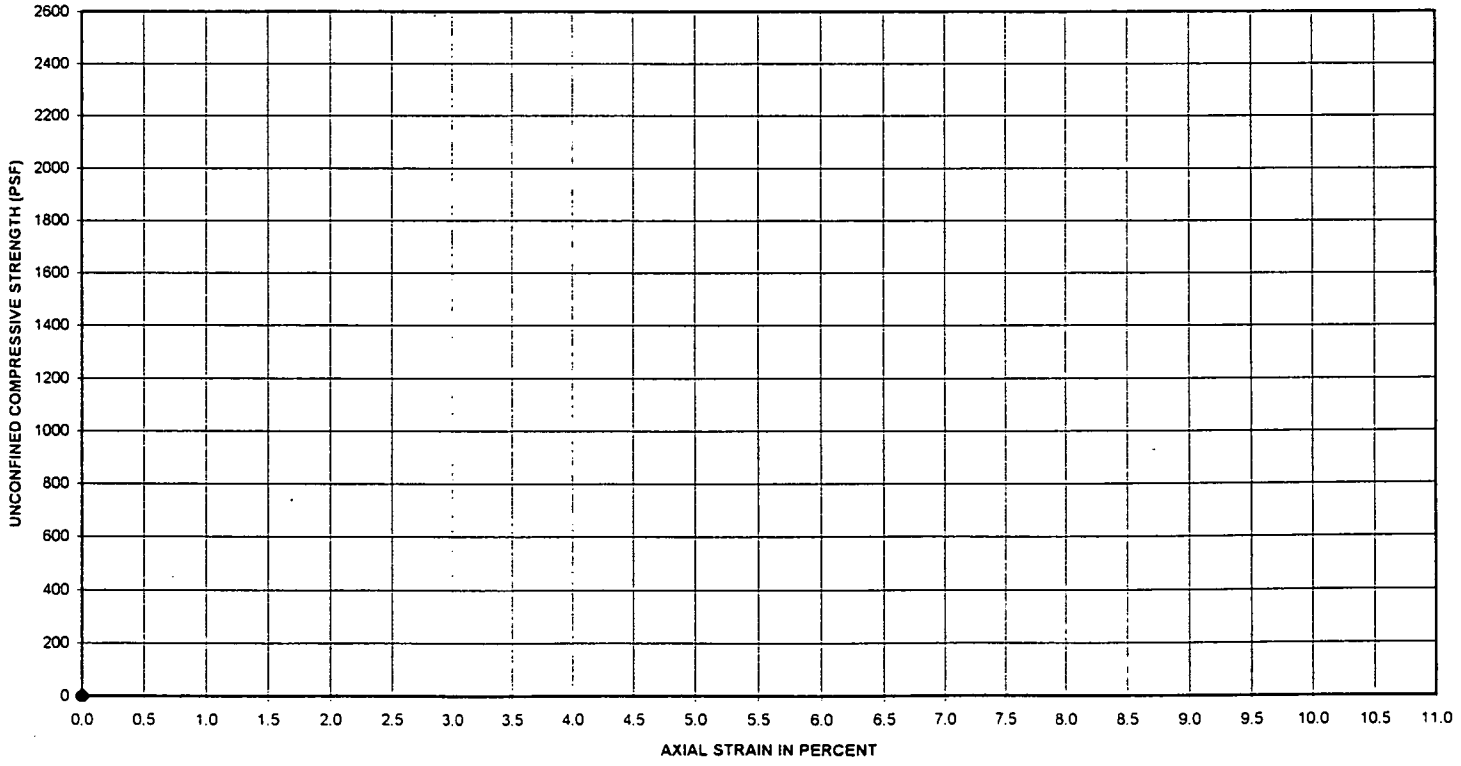
Boring No.:	B-206G
Sample No:	U-1
Depth (ft.):	16-17
Sample Method:	ASTM D1587
Sample Description:	Brown CLAY, some Silt, tr. f/c Sand, mod. plastic, wet (CL)
Test Date:	2/15/2001
Sample Height (in.):	1.36
Sample Diameter (in.):	2.87
Rate of Strain (%/min.):	3.67
Initial Water Content (%):	20.9
Initial Wet Density (pcf):	127.2
Initial Dry Density (pcf):	105.2

SKETCH AT FAILURE
(Dashed lines represent original shape)



	ASTM D2166	Pocket Penetrometer	Torvane Shear Tester
Max. Unconfined Stength (psf)	0	4000	-
Max. Unconfined Stength (psi)	0.0	-	-
Cohesion (psf)	0	2000	1410

Observations: Maximum Unconfined Strength not tested due to disturbed sample.



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(716) 759-7821
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e-mail: Buffalo_Drilling@Buffalo.com
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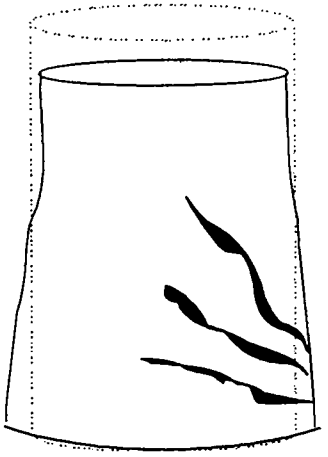
Buffalo, New York

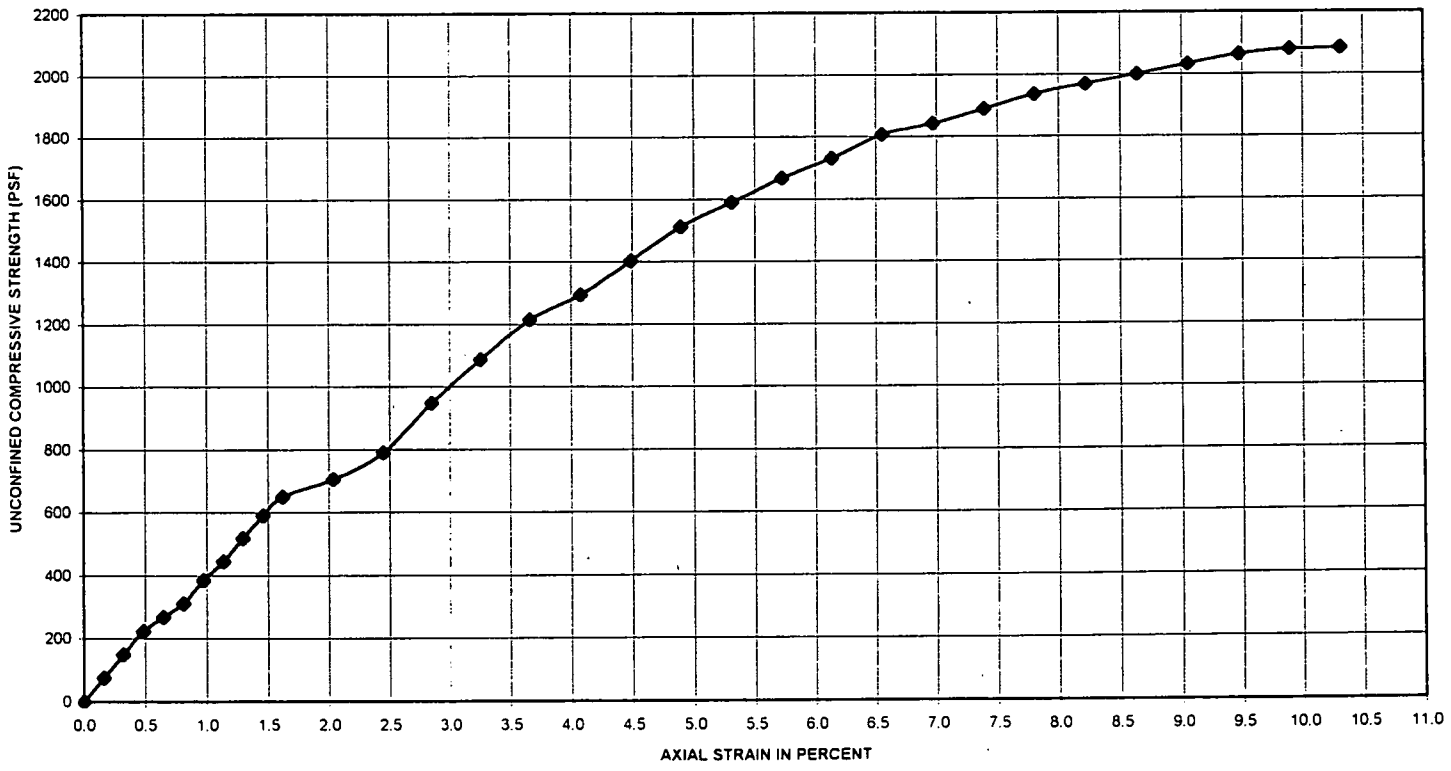
UNCONFINED COMPRESSIVE STRENGTH TEST
ASTM D2166

Boring No.:	B-206G
Sample No:	U-2
Depth (ft.):	25-26
Sample Method:	ASTM D1587
Sample Description:	Gray CLAY, little Silt, tr. f/c Sand, mod. plastic, wet (CL)
Test Date:	2/15/2001
Sample Height (in.):	5.91
Sample Diameter (in.):	2.86
Rate of Strain (%/min.):	0.85
Initial Water Content (%):	24.8
Initial Wet Density (pcf):	125.0
Initial Dry Density (pcf):	100.2

	ASTM D2166	Pocket Penetrometer	Torvane Shear Tester
Max. Unconfined Stength (psf)	2080	1500	-
Max. Unconfined Stength (psi)	14.4	-	-
Cohesion (psf)	1040	750	1880

SKETCH AT FAILURE
(Dashed lines represent original shape)





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BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
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Job No: 01-510
Project: South Buffalo Redevelopment Plan,
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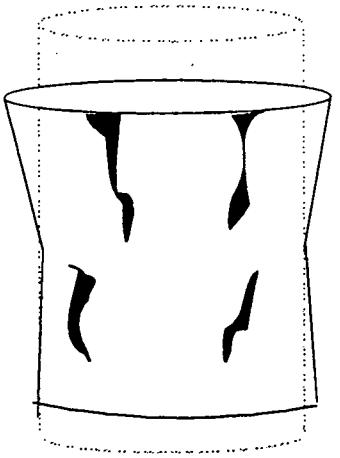
Buffalo, New York

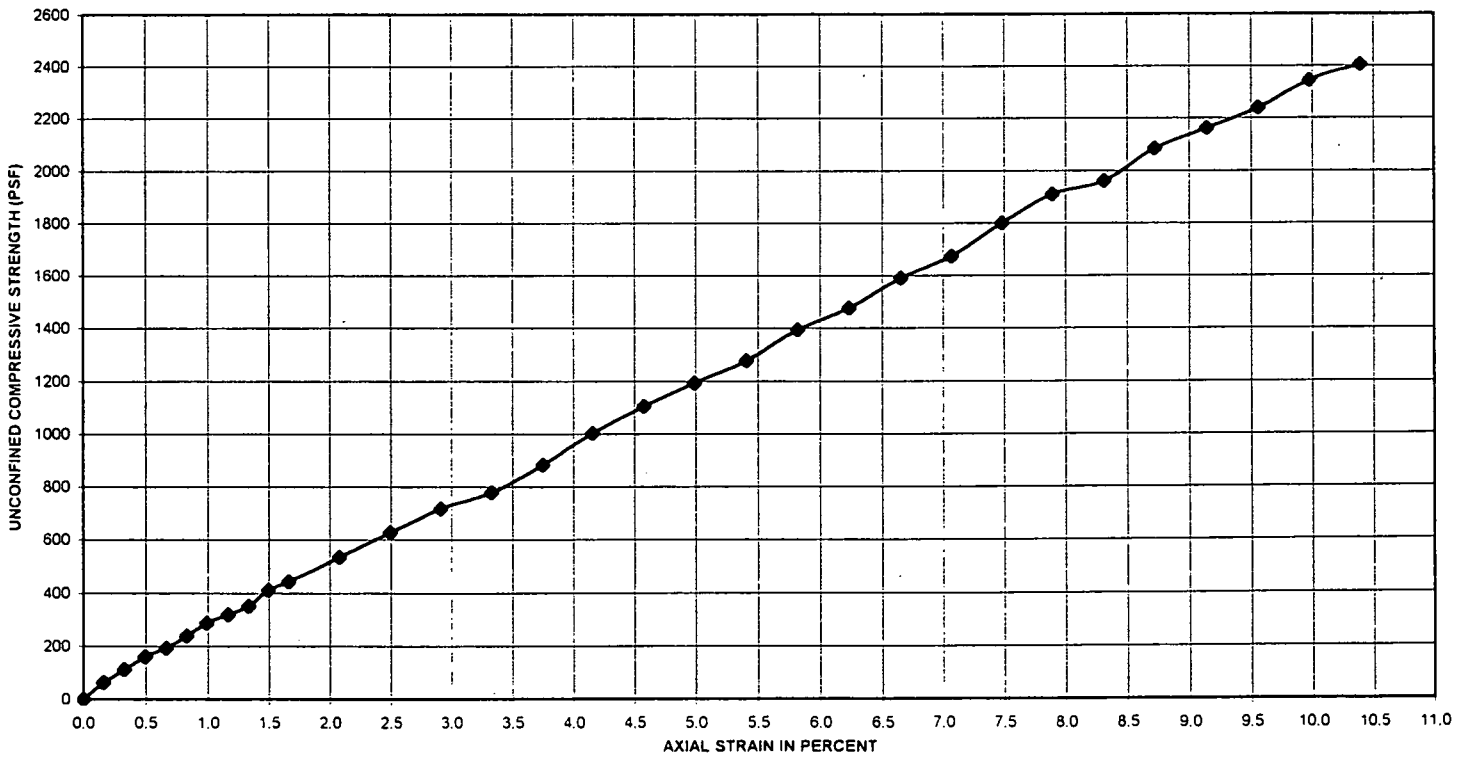
UNCONFINED COMPRESSIVE STRENGTH TEST
ASTM D2166

Boring No.:	B-213
Sample No:	U-1
Depth (ft.):	12-13
Sample Method:	ASTM D1587
Sample Description:	
	Gray CLAY, little Silt, mod. plastic, wet (CL)
Test Date:	1/29/2001
Sample Height (in.):	5.85
Sample Diameter (in.):	2.76
Rate of Strain (%/min.):	0.85
Initial Water Content (%):	20.9
Initial Wet Density (pcf):	124.1
Initial Dry Density (pcf):	102.7

SKETCH AT FAILURE
(Dashed lines represent original shape)



	ASTM D2166	Pocket Penetrometer	Torvane Shear Tester
Max. Unconfined Stength (psf)	2410	2333	-
Max. Unconfined Stength (psi)	16.7	-	-
Cohesion (psf)	1205	1167	940



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BUFFALO DRILLING COMPANY, INC.
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CLARENCE, N.Y. 14031
(716) 759-7821
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e-mail: Buffalo_Drilling@Buffalo.com
BarronandAssociates@Buffalo.com

Project: South Buffalo Redevelopment Plan,
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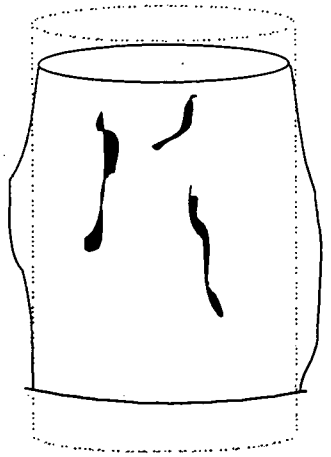
Buffalo, New York

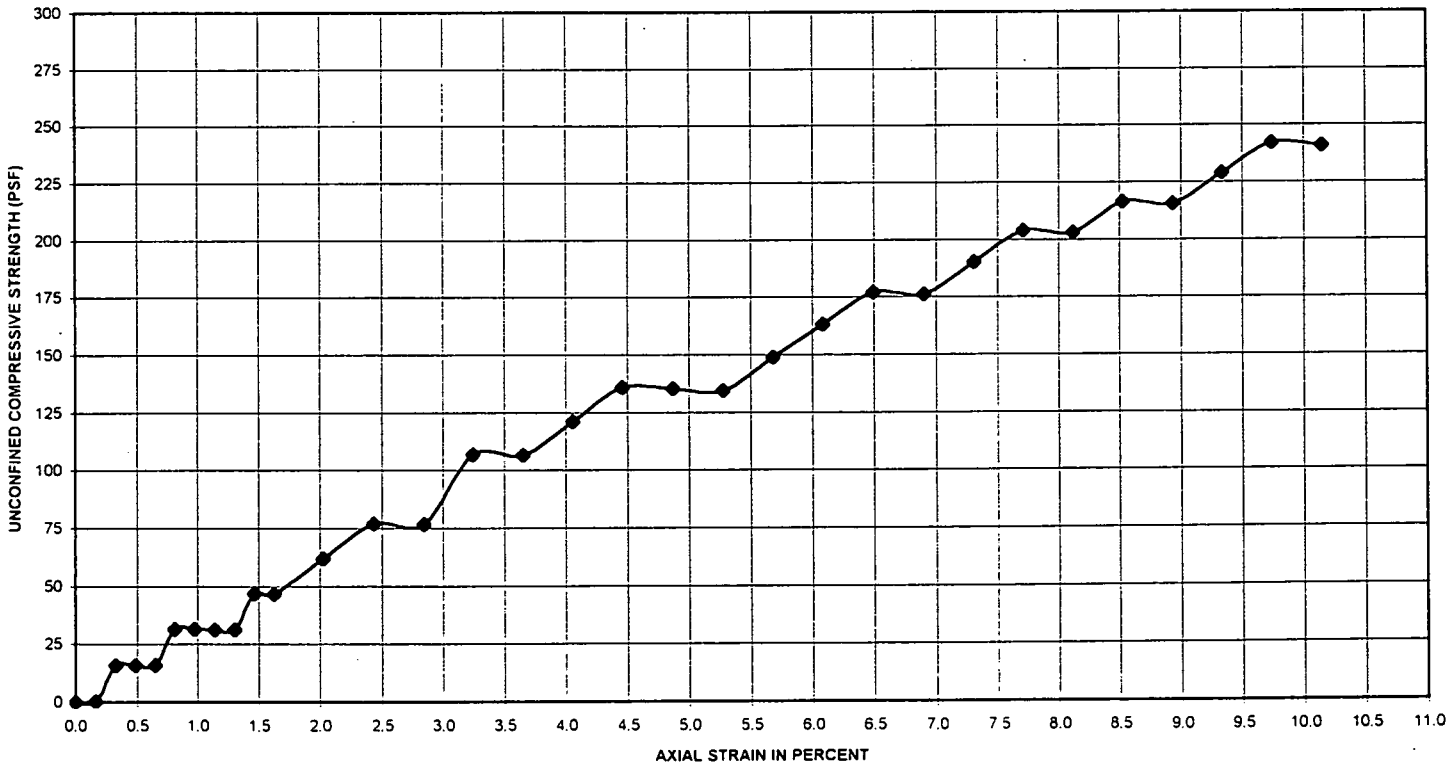
UNCONFINED COMPRESSIVE STRENGTH TEST
ASTM D2166

Boring No.:	B-213
Sample No:	U-2
Depth (ft.):	29-30
Sample Method:	ASTM D1587
Sample Description:	Gray CLAY, little Silt, tr. f/c Sand, tr. Gravel, mod. plastic, wet (CL)
Test Date:	1/30/2001
Sample Height (in.):	6.14
Sample Diameter (in.):	2.79
Rate of Strain (%/min.):	0.81
Initial Water Content (%):	10.1
Initial Wet Density (pcf):	130.1
Initial Dry Density (pcf):	118.2

	ASTM D2166	Pocket Penetrometer	Torvane Shear Tester
Max. Unconfined Stength (psf)	240	323	-
Max. Unconfined Stength (psi)	1.7	-	-
Cohesion (psf)	120	162	430

SKETCH AT FAILURE
(Dashed lines represent original shape)





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BUFFALO DRILLING COMPANY, INC.
10440 MAIN STREET
CLARENCE, N.Y. 14031
(716) 759-7821
FAX (716) 759-7823
e-mail: Buffalo_Drilling@Buffalo.com
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APPENDIX E

GENERAL EARTHWORK SPECIFICATION

Barron & Associates, P.C.
GENERAL EARTHWORK SPECIFICATION

PART 1 GENERAL

1.1 SITE AND SUBSURFACE CONDITIONS

1.1.1 Overview

This specification is included as a courtesy to the clients of Barron & Associates, P.C., and addresses earthwork site preparation. Additions and modifications are necessary to create a job-specific specification. This specification may serve as a basis for the development of a technical specification under Division 2, *Site Work*.

1.1.2 Site Conditions

The site-specific conditions are described under separate cover or may be available from the OWNER.

1.1.3 Subsurface Conditions

The site-specific subsurface conditions are described under separate cover or may be available from the OWNER.

1.2 REFERENCES

American Standard for Testing and Measurement (ASTM):

ASTM C136	Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C2922	Density of Soil and Soil-Aggregate in Place by Nuclear Methods
ASTM D422	Test Method for Particle-Size Analysis of Soils
ASTM D1140	Amount of Material in Soils Finer Than the No. 200 Sieve
ASTM D1557	Laboratory Compaction Characteristics of Soil Using Modified Effort ($56{,}000$ ft-lb/ft^3)
ASTM D2216	Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock
ASTM D2487	1990 Classification of Soils for Engineering Purposes
ASTM D4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

1.3 DEFINITIONS

1.3.1 Unacceptable Material

Soil material containing debris, wood, scrap material, vegetation, refuse, soft unsound particles, and other organic, frozen, deleterious, or objectionable materials. Contaminated soils shall be properly documented and removed or remediated on site. If necessary, remediation procedures will be defined by the OWNER.

1.3.2 Unsuitable Material

Brown, organic topsoil and underlying soft pockets of organic silt or wet, reworked silty clay.

1.3.3 Ordinary Fill

Friable soil containing no stone greater than two-thirds loose lift thickness and no unacceptable or unsuitable materials. In general, existing random fill is expected to be acceptable for reuse as ordinary fill given proper sorting, blending, drying, and controlled placement methods.

1.3.4 Granular Fill

Ordinary fill meeting the designation of ASTM D2487 classification of GW with a maximum of 10 percent by weight passing ASTM D1140, No. 200 sieve.

1.3.5 Select Granular Fill

Clean, uncoated soil which contains no unacceptable materials and conforms to the gradation requirements defined in *Table A: Select Granular Fill.*

Table A: Select Granular Fill	
Sieve Size	Percent Finer by Weight
2/3 of the loose lift thickness	100
No. 10	30 – 95
No. 40	10 – 70
No. 200	0 – 15

1.3.6 Sand and Gravel

Clean, hard, durable, uncoated particles of sand and gravel, free from lumps of clay, containing no unacceptable matter, and conforming to gradation requirements of *Table B: Sand and Gravel.*

Table B: Sand and Gravel	
Sieve Size	Percent Finer by Weight
*	100
No. 4	50 – 85
No. 10	—
No. 40	10 – 35
No. 100	—
No. 200	0 – 8

* Job-Specific. To be determined by the ENGINEER.

1.3.7 Crushed Stone

Clean, durable, sharp-angled fragments of rock or crushed gravel stone of uniform quality, containing no unacceptable matter, free from coatings, and conforming to gradation requirements of *Table C: Crushed Stone.*

Table C: Crushed Stone		
Sieve Size	Percent Passing	
	¾-inch Stone	1¼-inch Stone
1½-inch	—	100
1¼-inch	—	85 – 100
1-inch	100	—
¾-inch	99 – 100	10 – 40
⅝-inch	—	—
½-inch	10 – 50	0 – 8
⅜-inch	0 – 20	—
#4	0 – 5	—

1.3.8 Flowable Fill

Also known as Controlled Low Strength Material - Controlled Density Fill (CLSM-CDF), this material is available under a variety of producer names (e.g., K-Krete®, M-Crete, Flash Fill®, Flowable Mortar, Unshrinkable Fill, etc.). This non-settling backfill mixture is most commonly used for its flowable characteristics, its support strength under traffic loads, and its removability at a later date. The material may be produced on-site or off-site. In either case, the producer of such materials and the product must meet certain certification criteria. Such information is beyond the scope of this specification and will be considered on a site-specific basis.

Flowable fill may be acceptable for use as a backfill for utility trenches or other low-lying areas which require a compacted granular fill. Its use and warranty of performance is left to the CONTRACTOR in such applications.

The use of flowable fill under load-bearing structural components in place of properly placed and compacted granular fill is NOT common and is questionable. The localized use of such material may have profound affects on the performance of a foundation system. Site-specific conditions and the extent of anticipated use of flowable fill must be examined by a geotechnical engineer. Cost of such consultation shall be borne by the CONTRACTOR unless specifically directed by the OWNER to seek such consultation. Without such consultation, warranty of performance for such use is left to the CONTRACTOR.

1.4 SUBMITTALS

The following submittals shall be provided in accordance with approved submittal procedures.

1. Fill Source: Provide name and source locations of fill material.

2. Field Test Reports: Field tests will be performed by OWNER's Representative as needed. CONTRACTOR may be required to perform such tests on proposed off-site fill materials.
   a. Fill material grain size analyses per ASTM C136, D422, D1140, D2487
   b. Moisture / Density test results per ASTM D2216
   c. Liquid limit, plastic limit, and plasticity index per ASTM D4318
   d. Compaction / Density test results per ASTM C2922 and D1557

3. Sample: Geotextile fabric

PART 2 PRODUCTS

Geotextile Fabric: Mirafi 600X or equal. (Also referred to as synthetic fabric).

PART 3 EXECUTION

3.1 PROTECTION

3.1.1 General

Manner of excavation shall minimize disturbance of underlying natural ground. If deemed necessary by the Engineer, alter construction procedures to reduce subgrade disturbance. Excavate areas which have been excessively disturbed to firm ground and backfill with properly compacted granular fill.

3.1.2 Roads and Walks

Keeps roads and walks free of dirt and debris at all times.

3.1.3 Trees, Shrubs, and Existing Facilities

Protect from any damage all vegetation and facilities identified to remain.

3.1.4 Utility Lines

Locate all utilities within the area of disturbance prior to the start of work. Show locations on initial plans. Protect utility lines from damage. Notify the ENGINEER immediately of damage to or an encounter with an unknown utility. Damage to utility lines are to be repaired by the CONTRACTOR at no additional cost. The CONTRACTOR shall have underground utility owners stake out utility locations prior to the start of clearing and excavation operations.

3.2 VERIFICATION OF CONDITIONS / PROOF-ROLLING

Prior to placement of the initial layer of fill over the natural ground, proof-roll the exposed natural ground above the groundwater table elevation by making two passes with a fully-loaded ten-wheel truck. Excavate unstable areas detected by this process and replace with compacted granular fill.

3.3 PREPARATION

3.3.1 Surface Preparation

Within the site limits indicated on the drawings, excavate all unsuitable material to firm natural ground in the manner specified herein. Follow a construction procedure which permits visual identification of firm natural ground. In the event that groundwater is encountered, the ENGINEER may require that the size of the open excavation be limited to that which can be handled by open pumping to allow visual inspection of the excavation bottom and the performance of backfill operations to be conducted in a dry state.

Excavation of unsuitable material shall be limited to the greater of the following:

- A distance of 5 feet beyond building lines or
- The area defined by a one-horizontal to one-vertical line sloping down from the outside bottom edge of exterior footings to firm natural ground.

3.4 PLACEMENT AND COMPACTION

3.4.1 General

Place fill in accordance with *Table D: Compaction Alternatives*. These alternatives are provided as minimum compaction standards only and in no way relieve the CONTRACTOR of his obligation to achieve any specified degree of compaction by whatever means may be necessary.

Grade to provide positive drainage and a smooth surface which will readily shed water. To the extent practicable, compact each layer to the specified density on the same day placed. Place fill in horizontal layers. Where horizontal layers meet a natural slope, key layer into slope by cutting a bench.

Fill that is too wet for proper compaction: Disc, harrow, or otherwise dry to proper moisture content for compaction to the required density.

Fill that is too dry for proper compaction: Uniformly apply water over the surface of the loose layer in sufficient quantity to allow compaction to the required density.

Table D: Compaction Alternatives

Compaction Method	Max. Stone Size	Maximum Loose Lift Thickness (inches)		Maximum Number of Passes	
		Below Structure and Pavements	Less Critical Areas	Below Structure And Pavements	Less Critical Areas
Hand operated vibratory plate or light roller in confined areas	3	4	4	4	4
Hand operated vibratory drum rollers weighing at least 1,000 pounds in confined areas	4	6	8	4	4
Loaded 10-wheel truck or D-8 crawler	6	10	12	4	2
Light vibratory drum roller: Min. weight at drum 8,000 lbs.: Min. dynamic force 10,000 lbs.	8	12	12	6	2
Medium vibratory drum: Min. weight at drum 10,000 lbs.: Min. dynamic force 20,000 lbs.	8	18	18	6	4

3.4.2 Dewatering

Provide adequate pumping and drainage facilities to keep excavated areas sufficiently dry of groundwater and surface run-off. Dewatering shall avoid adversely affecting construction procedures or causing excessive disturbance of underlying natural ground. Drain all pumped water in such a manner as to avoid damage to adjacent property.

If requested by the ENGINEER, place a 6-inch to 12-inch layer of sand and gravel or crushed stone over the natural underlying soil to stabilize areas which have been disturbed due to groundwater

seepage pressures and to expedite dewatering operations. Particular attention shall be given areas under proposed foundations.

3.5 FIELD QUALITY CONTROL

3.5.1 Compaction Requirements

Allow the ENGINEER sufficient time to make necessary observations and tests. Base the degree of compaction on maximum dry density as determined by ASTM D1557. The minimum degree of compaction for placed fill shall be as indicated in *Table E: Compaction Requirements*.

3.5.2 Testing

The owner will retain a geotechnical ENGINEER to perform on-site observations and testing during this phase of construction operations. The geotechnical ENGINEER will:

- Observe excavation and dewatering of building and controlled fill areas;
- Observe backfill and compaction within building and controlled fill areas;
- Laboratory test and analyze fill material; and
- Observe construction — performing water content, gradation, and compaction tests.

Frequency and locations of tests will be determined by the geotechnical ENGINEER. On a timely basis, the CONTRACTOR will receive copies of test results submitted to the OWNER. In addition, during construction the geotechnical ENGINEER will advise the OWNER and CONTRACTOR in writing of conditions which fail to conform to the Contract Documents. The CONTRACTOR shall take immediate action to remedy indicated deficiencies.

The geotechnical ENGINEER will not supervise or direct the actual work of the CONTRACTOR or employees and representatives of the CONTRACTOR. The presence of, observations by, and testing performed by the geotechnical ENGINEER shall not excuse the CONTRACTOR from defects discovered in the work.

Table E: Compaction Requirements

Area	Minimum Degree of Compaction (%)
Below foundation	95
Pavement and building subbase and base courses	95
Below building slab base course and above bottom of foundation	92
Below pavement subbase and base courses	90
Trench backfill outside of building	90
Trench backfill inside of building	Refer to one of the above-listed categories
Ordinary fill within 5 feet of grade	90
Vegetated areas below 5 feet of grade	85

BARRON & ASSOCIATES, P.C. &
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FAX (716) 759-7823
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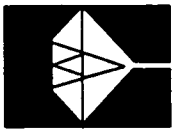
BarronandAssociates@Buffalo.com

APPENDIX F

LIMITATIONS

BARRON & ASSOCIATES, P.C. &
BUFFALO DRILLING COMPANY, INC.



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CLARENCE, N.Y. 14031
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LIMITATIONS

1. This preliminary report is based on the data that was obtained from the subsurface explorations and on the design of the proposed preliminary structures as submitted to the geotechnical engineer. A geotechnical engineer, who is experienced in foundation construction and earthwork, should be engaged to review the preliminary and final design and specifications in order to determine whether any change in concept may have any effect on the validity of the conclusions presented herein, and whether these conclusions have, in fact, been implemented in the design and specifications.

2. The preliminary subsurface conditions, including thicknesses, between the exploration locations are approximate and simplified representations of the strata and transitions. There is the possibility that variations in soil and rock conditions and boundaries will be encountered during construction. In order to permit correlation between the preliminary exploratory soil data and the actual soil conditions encountered during construction and so as to assess conformance with the plans and specifications as originally contemplated, it is recommended that a geotechnical engineer, who is experienced in foundation construction and earthwork monitoring, should be retained to perform continuous construction review during the site preparation and foundation construction operations.

3. The preliminary subsurface exploration logs and subsurface conditions may aid in estimating material quality and quantities, such as topsoil/organic matter, fills, natural soils, and rock, but are not to be relied upon as the exclusive means for bid preparation purposes. It is the responsibility of the contractor to perform any additional site examinations and explorations and to prepare an accurate bid.

4. Disclaimers:

   a. In the event that any changes in the nature, design or location of the preliminary structures are planned, the preliminary conclusions that are contained in this report shall not be considered valid unless the changes are reviewed and the preliminary conclusions of this report are modified or verified in writing.

   b. The preliminary geotechnical engineering report has been prepared for this project by Barron & Associates, P.C. This preliminary report is for assistance in design only and is not a sufficient basis on which to prepare an accurate bid.

   c. This preliminary report has been prepared for the exclusive use of Ciminelli Development Company, Inc. of Williamsville, New York, their client, and their designated design representatives, for specific application of the proposed preliminary one-story to multi-story, slab-on-grade, office, retail, manufacturing, and/or industrial structures, without basements, that is identified as the South Buffalo Redevelopment Plan – Phase I Union Ship Canal, with a range of approximately 18,000 to 470,000 square feet in total individual building footprint area on approximately 68 acres of unaddressed land that is bounded by the Hamburg Turnpike (NYS Route 5) and is identified as the former railroad yard of Hanna Furnace, City of Buffalo, Erie County, New York, and in accordance with generally accepted geotechnical engineering practice. No other warranty, expressed or implied, is made.

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

MEMORANDUM

TO: File

FROM: David Locey

SUBJECT: Hanna Furnace, Site #915029, Subparcel 2, Buffalo, Erie County

DATE: April 4, 2002

A copy of the attached draft analytical results, for soil and groundwater samples collected by Malcolm Pirnie Inc during the geotechnical investigation of the Hanna Furnace property, has been added to the end of the bound copy of the previously submitted report for that geotechnical investigation:

PRELIMINARY SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING RECOMMENDATIONS REPORT FOR PROPOSED SOUTH BUFFALO REDEVELOPMENT PLAN-PHASE I

APRIL 3, 2001
BARRON & ASSOCIATES, P.C.

DPL

From: "Riker, Dan" <DRiker@PIRNIE.COM>
To: 'Chris Pawenski' <pawenskc@bflo.co.erie.ny.us>, 'Corey Stewart' <cstewart@ciminelli.com>, 'Craig Slater' <CSLATER@hselaw.com>, 'Dave Chiazza' <dchiazza@ciminelli.com>, 'David Locey' <dplocey@gw.dec.state.ny.us>, 'John Black' <jblack@escva.com>, 'John Heffron' <Jheffron@berc.org>, 'Martin Doster' <mldoster@gw.dec.state.ny.us>, 'Matt Forcucci' <MJF13@health.state.ny.us>, 'Morgan Graham' <mgraham@phillipslytle.com>, 'Paul Kranz' <paul@cdbg.co.erie.ny.us>, 'Peter Cammarata' <pcammarata@berc.org>, 'Rich Stanton' <rstanton@ch.ci.buffalo.ny.us>, 'Sandy Nasca' <snasca@ch.ci.buffalo.ny.us>
Date: 05/04/01 15:00
Subject: Hanna Furnace Subparcel 2 - Draft Anaytical Results

For your information, I have attached the draft analytical results for the soil and groundwater samples collected during the geotechnical investigation of the Former Manufacturing Area (Subparcel 2) of the Hanna Furnace Site. These concentrations appear to be consistent with those detected during the investigation of the Former Railroad Yard (Subparcel 1). These tables will be finalized following receipt of the Data Usability Summary Report that will be prepared by Chemworld Environmental.

Please let Kent or me know if you have any questions.

<<Subparcel 2 Sampling Results.xls>>

Daniel E. Riker, P.G.
Project Hydrogeologist
Malcolm Pirnie, Inc.
P.O. Box 1938
Buffalo, NY 14219
Phone: 716-667-0900
Facsimile: 716-667-0279

CC: "McManus, Kent" <KMcManus@PIRNIE.COM>, "Riker, Dan" <DRiker@PIRNIE.COM>

Table 1
Draft Summary of Analytical Results - Surface Soil Samples
Hanna Furnace Site - Subparcel 2

Sample Location	SS 201	SS 203	SS 205	SS 207	SS 209	SS 212	SS 213	NYSDEC
Sampling Depth	0-2	0-2	0-2	0-2	0-2	0-2	0-2	TAGM
Collection Date	01/30	02/01	02/02	02/05	02/06	02/07	02/08	4046
Volatile Organic Compounds (ug/kg)								
Methylene chloride	5 J	3 J	8 J	7 J	13	8 J	9 J	100
Acetone	16 B	13 B		18 B		6 J B	10 JB	200
Carbon disulfide					5 J	4 J		2700
Trichloroethene							3 J	700

Notes:
Analytical results table will be finalized following receipt of DUSR.
Only analytes detected in at least one sample are shown in the table.
Blank space denotes analyte was not detected.
B - Analyte detected in associated method blank.
J - Estimated Concentration.

Table 2
Draft Summary of Analytical Results - Surface Soil Samples
Hanna Furnace Site - Subparcel 2

Sample Location	SS201/202	SS203/204	SS205/206	SS207/208	SS209/210	SS211/212	SS511/512	SS213/214	NYSDEC	Eastern USA
Sampling Depth	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	TAGM	Background
Collection Date	01/30	02/01	02/02	02/05	02/06	02/07	02/07	02/08	4046	Concentrations
Semivolatile Organic Compounds (ug/kg)										
Naphthalene	210 J	45 J							1300	-
2-Methylnaphthalene	200 J								36400	-
Acenaphthylene	150 J								41000	-
Diethyl phthalate								77 J	7100	-
Phenanthrene	1300	130 J	50 J	410 J	71 J			55 J	50000	-
Anthracene	260 J								50000	-
Carbazole	170 J								-	-
Fluoranthene	4000	190 J	79 J	1100	100 J			89 J	50000	-
Pyrene	2500	270 J		600	130 J				50000	-
Benzo(a)anthracene	2100	160 J	52 J	430 J	69 J			60 J	225	-
Chrysene	2500	210 J	76 J	810	110 J			68 J	400	-
Bis-2-ethylhexyl phthalate	170 J	69 J						48 J	50000	-
Benzo(b)fluoranthene	4100	410	110 J	1000	150 J			91 J	1100	-
Benzo(k)fluoranthene	1500	160 J		370 J	56 J				1100	-
Benzo(a)pyrene	1900	190 J	59 J	270 J	73 J				1100	-
Indeno(1,2,3-cd)pyrene	1500	150 J	57 J	390 J	62 J				3200	-
Dibenzo(a,h)anthracene	340 J			100 J					14	-
Benzo(g,h,i)perylene	140 J		51 J		57 J				50000	-
Pesticides/PCBs (ug/kg)										
PCB 1260							62	310	1000	-
Metals (mg/kg)										
Cyanide, Total	4.23	6.46	16	8.68	22.9	2.75	1.18	6.48	NA	NA
Aluminum	19600	14700	22000	8750	11500	25100	29800	23400	SB	33000
Antimony				4.8 B					SB	NA
Arsenic	7.4	4.2	7.7	4.9	7.4	1.6	3.3	5.2	7.5 or SB	3 - 12
Barium	228	154	220	96.2	137	173	267	193	300 or SB	15 - 600

Table 2
Draft Summary of Analytical Results - Surface Soil Samples
Hanna Furnace Site - Subparcel 2

Sample Location	SS201/202	SS203/204	SS205/206	SS207/208	SS209/210	SS211/212	SS511/512	SS213/214	NYSDEC	Eastern USA
Sampling Depth	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	TAGM	Background
Collection Date	01/30	02/01	02/02	02/05	02/06	02/07	02/07	02/08	4046	Concentrations
Metals (cont'd) (mg/kg)										
Beryllium	3.92	3.13	3.99	1.21	2.03	6.16	6.66	4.83	.016 or SB	0 - 1.75
Cadmium				1.17		0.956	1.16		1 or SB	0.1 - 1
Calcium	106000	89100	146000	34900	53700	173000	201000	144000	SB	130-35000
Chromium	26.2	56.7	10	16.8	59.3	5.43	6.74	9.15	10 or SB	1.5 - 40
Cobalt	6.6	6.69	4.05 B	3.85 B	6.86	1.49 B	2.42 B	4.75 B	30 or SB	2.5 - 60
Copper	30.2	72.7	36.5	44.1	76.2	19.8	21.9	41.1	25 or SB	1 - 50
Iron	133000	138000	43700	24600	118000	13300	14400	48100	2000 or SB	2000 - 550000
Lead	111	57	110	648	248	47	83	138	30 or SB	4 - 500
Magnesium	16800	18100	14700	9130	5830	37800	40900	21400	SB	100 - 5000
Manganese	3050	2190	2920	912	2110	2510	3230	2370	SB	50 - 5000
Mercury	0.13	1.4		0.15					0.1	0.001 - 0.2
Nickel	22.8	34.9	20	17.3	114	13.2	16.5	17	13 or SB	0.5 - 25
Potassium	1190	1890	1490	1240	1160	1460	1520	1460	SB	8500 - 43000
Selenium	0.3 WB	W				0.55 WB	0.56 B	W	2 or SB	0.1 - 3.9
Silver							0.872 B		SB	NA
Sodium	510 B	526 B	490 B	357 B	243 B	796	859	793	SB	6000 - 8000
Thallium	0.63 B	0.75 WB	0.88 WB	0.81 WB		0.26 WB	0.58 WB	0.78 WB	SB	NA
Vanadium	27.4 B	36.9 B	8.17	15.3	39.7 B	5.51 B	6.51	19.6 B	150 or SB	1 - 300
Zinc	336	234	181	259	695	99.2	107	286	20 or SB	9 - 50

Notes:
Analytical results table will be finalized following receipt of DUSR.
Only analytes detected in at least one sample are shown in the table.
Blank space denotes analyte was not detected.
Shaded areas indicate that detected concentration exceeds guidelines.
B - Analyte detected in associated method blank.
J - Estimated Concentration.
W - Post spike recovery is out of limits. Since the sample result is less than half the post spike level, the result is valid.

Table 3
Draft Summary of Analytical Results - Subsurface Soil Samples
Hanna Furnace Site - Subparcel 2

Sample Location	SB 202	SB 203	SB 206	SB 208	SB 210	SB 212	SB 213	SB 513	NYSDEC
Sampling Depth	4 - 6	8 - 10	4 - 6	4 - 6	6 - 8	2 - 4	2 - 4	2 - 4	TAGM
Collection Date	01/30	02/01	02/02	02/06	02/06	02/07	02/08	02/08	4046
Volatile Organic Compounds (ug/kg)									
Methylene chloride	6 J	5 J	13 J	8 J	9 J	8 J	12 J	12	100
Acetone	26 B	35 B	160	20 B	19 B	16 B	29 B	24 B	200
Carbon disulfide					5 J		13 J	8 J	2700

Notes:
Analytical results table will be finalized following receipt of DUSR.
Only analytes detected in at least one sample are shown in the table.
Blank space denotes analyte was not detected.
B - Analyte detected in associated method blank.
J - Estimated Concentration.

Table 4
Draft Summary of Analytical Results - Subsurface Soil Samples
Hanna Furnace Site - Subparcel 2

Sample Location	SB 201/202	SB 203/204	SB 205/206	SB 207/208	SB 209/210	SB 211/212	SB 213/214	NYSDEC	Eastern USA
Sampling Depth	2 - 10	2 - 12	2 - 9	2 - 14	2 - 10	2 - 7	2 - 9	TAGM	Background
Collection Date	01/30	02/01	02/02	02/06	02/06	02/07	02/08	4046	Concentrations
Naphthalene			67 J	57 J				13000	-
Acenaphthene				120 J				41000	-
Dibenzofuran				93 J				6200	-
Fluorene				130 J				50000	-
Phenanthrene			120 J	1500	430 J			50000	-
Anthracene				270 J	130 J			50000	-
Carbazole				180 J				-	-
Fluoranthene	180 J		180 J	1900	670			50000	-
Pyrene	220 J		170 J	2200	610			50000	-
Benzo(a)anthracene	110 J	71 J	120 J	930	260 J			225	-
Chrysene	130 J	79 J	160 J	1100	330 J			400	-
Bis-2-ethylhexyl phthalat	76 J	110 J		140 J			77 J	50000	-
Benzo(b)fluoranthene	190 J	80 J	390 J	1200	290 J			1100	-
Benzo(k)fluoranthene	67 J		120 J	520	100 J			1100	-
Benzo(a)pyrene	110 J		160 J	800	160 J			1100	-
Indeno(1,2,3-cd)pyrene	97 J		210 J	540	64 J			3200	-
Dibenzo(a,h)anthracene				130 J				14	-
Benzo(g,h,i)perylene			210 J	350 J				50000	-
Pesticides/PCBs (ug/kg)									
PCB 1254				630				10000	-
Metals (mg/kg)									
Cyanide, Total	40.5	24	1.86	7.93	16.2	1.23	10.3	NA	NA
Aluminum	35600	37900	10200	14000	22200	9300	43100	SB	33000
Antimony						6.37 B		SB	NA
Arsenic	5.2	4.1	32	3.3	5.3	4.6	7.6	7.5 or SB	3 - 12
Barium	428	225	155	134	184	83.7	202	300 or SB	15 - 600

Table 4
Draft Summary of Analytical Results - Subsurface Soil Samples
Hanna Furnace Site - Subparcel 2

Sample Location	SB 201/202	SB 203/204	SB 205/206	SB 207/208	SB 209/210	SB 211/212	SB 213/214	NYSDEC	Eastern USA
Sampling Depth	2 - 10	2 - 12	2 - 9	2 - 14	2 - 10	2 - 7	2 - 9	TAGM	Background
Collection Date	01/30	02/01	02/02	02/06	02/06	02/07	02/08	4046	Concentrations
Metals (cont'd) (mg/kg)									
Beryllium	7.79	6.41	1.94	2.21	3.5	1.65	7.45	.016 or SB	0 - 1.75
Cadmium	1.33	1.07					0.957 B	1 or SB	0.1 - 1
Calcium	181000	146000	48800	126000	113000	43800	162000	SB	130-35000
Chromium	2.85	6.45	53.8	12.2	42.9	13.8	1.88	10 or SB	1.5 - 40
Cobalt	2.75 B	4.71 B	6.23 B	4.04 B	5.7 B	5.72 B	5.27 B	30 or SB	2.5 - 60
Copper	16.8	18.9	69.6	37.9	62.3 B	14.5	31.9	25 or SB	1 - 50
Iron	33700	22400	124000	14700	65600	65600	40000	2000 or SB	2000 - 550000
Lead	13	12	66.3	58.7	259	12	201	30 or SB	4 - 500
Magnesium	14900	13900	8730	15600	11000	11200	10700	SB	100 - 5000
Manganese	1310	1570	4970	1310	2350	1140	1580	SB	50 - 5000
Mercury	R							0.1	0.001 - 0.2
Nickel	8.53	10.9	43.7	13.5	26.5	14.9	12.5	13 or SB	0.5 - 25
Potassium	693 B	2590	794	1080	1350	787	1410	SB	8500 - 43000
Selenium	W	1.8 BW	W	W		W	0.62 WB	2 or SB	0.1 - 3.9
Silver								SB	NA
Sodium	205 B	480 B	214 B	489 B	379 B	180 B	416 B	SB	6000 - 8000
Thallium	0.59 B	0.46 WB	0.96 WB	0.48 WB	1 WB	0.82 WB	0.68 WB	SB	NA
Vanadium	11.4	14.4	36.3 B	12	31.5 B	23.9	15.4	150 or SB	1 - 300
Zinc	110	32.2	295	136	672	142	249	20 or SB	9 - 50

Notes:
Analytical results table will be finalized following receipt of DUSR.
Only analytes detected in at least one sample are shown in the table.
Blank space denotes analyte was not detected.
Shaded areas indicate that detected concentration exceeds guidelines.
B - Analyte detected in associated method blank.
J - Estimated Concentration.
W - Post spike recovery is out of limits. Since the sample result is less than half the post spike level, the result is considered valid.

Table 5
Development Downtown, Inc.
Hanna Furnace - Subparcel 2
Draft Summary of Deep Groundwater Analytical Results - Full TCL Parameters[1]

Sample Location	SB-206A	SB-506A (Dup - SB-206A)	SB-210A	NYSDEC WQS[2]
Collection Date	02/16	02/16	02/07	
Volatile Organic Compounds (µg/L)				
TCL VOCs				
Acetone			8 JB	50
Semivolatile Organic Compounds (µg/L)				
Phenol			2J	1
4-Methylphenol	2 J	2 J		1
Phenanthrene			1 J	50
bis(2-Ethylhexyl)phthalate			2 J	5
Pesticides/PCBs (µg/L)				
TCL Pest/PCBs				
Metals (µg/L)				
Aluminum	9480	7700	427000	NA
Antimony	215 B			3
Arsenic	8	6	150	25
Barium	1400	1270	2250	1000
Beryllium	2.7 B	2.3 B	23.4	3
Cadmium			92.3 B	5
Calcium	1360000	1230000	2450000	NA
Chromium	22.9	24.2	779	50
Cobalt	12.5 B		353	NA
Copper	80	76.2	1140	200
Iron	50500	44700	997000	300
Lead	60	68	1300	25
Magnesium	75200	68100	618000	35000
Manganese	6170	5480	19600	300
Mercury			0.7	0.7
Nickel	39.9 B	34.6 B	1080	100
Potassium	25200	24600	74900	NA
Sodium	89200	87800	54300	20000
Thallium	2 B	3 B	10	0.5
Vanadium	25.8 B	20.3 B	746	NA
Zinc	105	82.1	5400	2000
Cyanide	143	123	98.9	200

Notes:
(1) Groundwater samples collected directly from inside augers, causing high turbidity in the samples. Therefore, the results are considered screening level only.
(2) NYSDEC WQS - NYSDEC Water Quality Standard for Class GA Waters.
Analytical results table will be finalized following receipt of DUSR.
Only analytes detected in at least one sample are shown in the table.
Blank space denotes analyte was not detected.
B - Indicates analyte result is between IDL and CRDL.
J - Reported value is estimated due to variance from quality control limits.
NA - No standard or guidance value available.
Shading indicates that concentration exceeds Standard or Guidance Value.

DPL—

MALCOLM PIRNIE

RECEIVED

LETTER OF TRANSMITTAL

JUL 2 3 2002

NYSDEC - REG. 9

FOIL

REL UNREL

To: NY State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

Date: July 24, 2002
Re: Hanna Furnace Site
Parcel 2 Sampling Locations

Attention: David Locey

We are sending you ✓ Enclosed ☐ Under separate cover via ☐ Mail ☐ Messenger, the following items:

☐ shop drawings ☐ prints ☐ data sheets ☐ _____

☐ specifications ☐ sketches ☐ brochures ☐ _____

COPIES	PREPARED BY	REFERENCE NO.	DESCRIPTION
1	MPI		Parcel 2 Geotech/Environmental Investigation Locations

THESE ARE TRANSMITTED AS CHECKED BELOW:

✓ As requested
☐ For your use
☐ For review & comment
☐ For your information
☐ Approved
☐ Approved as Corrected
☐ Revise and Resubmit
☐ Not Approved
☐ Resubmit _____ copies for approval
☐ Submit _____ copies for distribution
☐ Return _____ corrected prints
☐ _____

Remarks: I have attached the figure you requested. The DUSR is presently being finalized and I hope to have it early next week. I will forward a copy as soon as I receive it. Please let me know if you have any questions or comments.

Copies to:

Very truly yours,

MALCOLM PIRNIE, INC.

Daniel E. Riker, P.G.
Project Hydrogeologist

40 Centre Drive, Orchard Park, NY 14127 P.O. Box 1938, Buffalo, New York 14219 TEL: 716-667-0900 FAX: 716-667-0279

RECEIVED
JUL 26 2002
NYSDEC - REG. 9
FOIL
REL UNREL

PARCEL 4

UNION SHIP CANAL

PARCEL 3

PARCEL 2

PARCEL 1

METAL BUILDING

BRICK BUILDING

2-STORY BRICK

2-STORY BRICK

1-STORY METAL

SB-209

SB-210 (B-208)

SB-212 (B-214)

SB-211

SB-213

SB-214 (B-215)

SB-207

MW-005

SB-208 (B-206)

SB-206A

SB-206 (B-205)

SB-205

SB-205A (B-203)

SB-204 (B-204)

SB-203

SB-201

SB-202 (B-209)

MW-001

MW-002

MW-003

MW-004

MW-004

MW-105

MW-106

MW-107

MW-104

MALCOLM PIRNIE SAMPLING LOCATIONS

(BUFFALO DRILLING NOMENCLATURE IN PARENTHESES)

LEGEND

- PROPERTY LINE
- PARCEL BOUNDARY
- EXISTING BUILDING
- MW-004 PROPOSED MONIORING WELL
- MW-004 EXISTING MONIORING WELL
- PROPOSED BORING

250' 0' 250' 500'

SCALE: 1 INCH = 250 FEET

SCALE: 1" = 250'

8108 ADMIN F:\PROJECTS\4080001\CADD\4080F001 Scale: 1:1 Date: 08/03/2000 Time: 10:37

MALCOLM PIRNIE

4080F001

HANNA FURNACE SITE
FORMER PRODUCTION AREA
VOLUNTARY CLEANUP INVESTIGATION
PROPOSED SAMPLE LOCATONS

HANNA FURNACE AUGUST 2000

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

MEMORANDUM

TO: File

FROM: David Locey

SUBJECT: Hanna Furnace-Subparcel 2, #V00435-9, Buffalo, Erie County

DATE: January 16, 2003

The complete, original copy of the attached Data Usability Summary Report (Chemworld Environmental Inc., Dec. 27 2002), for soil and groundwater samples collected by Malcolm Pirnie Inc. during the 2001 geotechnical investigation of the Hanna Furnace property, has been attached to the previously submitted geotechnical investigation report:

PRELIMINARY SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING RECOMMENDATIONS REPORT FOR PROPOSED SOUTH BUFFALO REDEVELOPMENT PLAN-PHASE I

APRIL 3, 2001
BARRON & ASSOCIATES, P.C.

DPL

DPL—

LETTER OF TRANSMITTAL

To: New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203

Attention: David Locey

Date: January 13, 2003
Re: Data Usability Summary Report

RECEIVED
JAN 14 2003
NYSDEC - REG. 9
EQUIL - UNREL

We are sending you ✓ Enclosed ☐ Under separate cover via ☐ Mail ☐ Messenger the following items:

☐ shop drawings ☐ prints ☐ data sheets ✓ DUSR _____

☐ specifications ☐ sketches ☐ brochures ☐ _____

Our action relative to items submitted for approval has been noted on the drawings.

COPIES	PREPARED BY	REFERENCE NO.	DESCRIPTION
1	Chemworld Environmental		Subparcel 2 Data Summary Usability Report (DUSR)

THESE ARE TRANSMITTED AS CHECKED BELOW:

✓ As requested
☐ For your use
☐ For review & comment
☐ For your information

☐ Approved
☐ Approved as Corrected
☐ Revise and Resubmit
☐ Not Approved

☐ Resubmit _____ copies for approval
☐ Submit _____ copies for distribution
☐ Return _____ corrected Prints
☐ _____

Remarks: Hello Dave. I apologize for the amount of time that this took to get to you. I hope that you still find it useful. Please let me know if you have any questions or comments.

Malcolm Pirnie, Inc.
P.O. Box 1958
Buffalo, New York 14219

Very truly yours,

Daniel E. Riker, P.G.
Project Hydrogeologist

Copies:

RECEIVED
JAN 14 2003
N.Y.S. DEPT. OF
ENVIRONMENTAL CONSERVATION
REGION 9

CW CHEMWORLD ENVIRONMENTAL, INC.
Environmental Consulting Services

RECEIVED
JAN 14 2003
NYSDEC - REG. 9
FOIL
REL UNREL

December 27, 2002

Mr. Dan Riker
Malcolm Pirnie, Inc.
40 Centre Drive
Buffalo, New York 14219

RE: Data Usability Summary Report (DUSR)
Hanna Furnace Project
Friend Laboratory Inc.
Lab Project Nos. L63965, L63967 and L64033
Analyses for Volatile Organics; Base/Neutral and Acid Extractable Organics, Pesticides/PCBs and Inorganics

Dear Mr. Riker:

Data Usability Summary Report (DUSR) technical services were performed by ChemWorld Environmental, Inc. for the Hanna Furnace Project for the sampling event of February 6-8, 2001. The analytical data from the Laboratory Project Nos. referenced above were reviewed (screened) for the parameters noted. The data screening consisted of a review of the Quality Control (QC) Summary Forms and a brief review of various chromatograms and quantitation reports. The QC Forms were reviewed to determine whether any data required qualification based upon QC deviations noted on the Forms. The associated Analytical Data Result Forms are included as Attachment A. These Forms include data qualifiers as described within this letter report.

The DUSR review items include the following, as method appropriate:

- Holding Times from Verified Time of Sample Receipt (VTSR)
- Surrogate Recovery
- GC/MS Instrument Performance Check
- Initial and Continuing Calibration
- Matrix Spike / Matrix Spike Duplicates (MS/MSD)
- Matrix Spike Blanks (MSB)
- Internal Standards
- Method and Field Blanks
- Tentatively Identified Compounds (TICs)
- CRDL Standards for ICP
- Laboratory Duplicate Samples
- Laboratory Control Samples (LCS)
- ICP Interference Check
- ICP Serial Dilutions

The QC Summary Forms included various deviations based upon the acceptable limits for quality control. The following should be noted regarding qualification of the data set for the review items above.

The Case narrative states that the samples collected on 2/6/2001 (six samples and a trip blank) were transported in a truck that slid off the road on 2/8/2001, due to an ice storm. The New York State Thruway Authority winched the truck out on 2/9/2001. The samples were secure and safety locked at all times. The Laboratory Director received these samples at his home on 2/9 and transferred them to the laboratory walk in cooler on 2/9. Documentation regarding this information was included in the data package.

Volatiles

Surrogate Recovery: High surrogate recovery was generated for sample SS209-RE. This sample was qualified as 'J', estimated, for the positive results, only.

Internal Standards: Samples, SS213, SB213, SS213-RE, SB213-RE, SB513, SS209 and SS209-RE generated low reported area counts for Chlorobenzene-d5. In addition, sample SS209 and SS209-RE also exhibited low internal standard reported area counts for 1 to 2 of the other internal standards. These samples were qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results, for the compounds associated with the particular internal standard affected.

Trip *Blanks*: Four trip blanks were analyzed for the samples. Acetone was detected in all of the trip blanks at concentrations from 5 to 17 ug/L (ppb). Ten times the highest trip blank result was used for review and qualification of the samples. Acetone results which were found to be less than the trip blank limit and reported at less than the Contract Required Quantitation Limit (CRQL) were qualified as 'U', not detected, at the CRQL. Acetone results that were found to be less than the trip blank limit and reported over the CRQL were qualified as 'U', not detected.

Initial and Continuing Calibrations: The initial calibration analyzed on 2/1/2001 generated a Percent Relative Standard Deviation (%RSD) of greater than 30% for acetone and 2-Butanone. The associated samples were qualified as 'J', estimated, for the positive results, only. The continuing calibrations analyzed on 2/9/2001 at 1:55 and 2/16/2001 at 10:13 generated a Percent Difference (%D) of greater than 25% for 1,1-Dichloroethene, Acetone, Carbon Disulfide and 2-Butanone. The associated samples were qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results for these compounds.

Semi-Volatiles

Surrogate Recovery: Low surrogate recovery was generated for the base-neutral compounds, only, for samples SB210A and SB210A MS/MSD. Sample SB210A was qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results, for the base-neutral compounds, only. In addition, samples SS213/4, SS213/4 MS, SB213/4, SB207/8, SB207/8 RE and SB213/4 RE were found to generate low percent recovery for the phenol surrogates, with some recoveries at less than 10%. Samples SB213/4 and SB207/8 were qualified as 'J', estimated, for the positive results and 'R', unusable, for the non-detectable results for the acid phenol compounds, only. Samples SS213/4, SB207/8 RE and SB213/4 RE were qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results, for the acid phenol compounds, only.

MS/MSD: The compounds Acenaphthene and Pyrene generated low recovery for both the site-specific MS and MSD. Sample SB210A was qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results for these two compounds, due to a possible matrix effect.

In addition, it should be noted that it appears that there was a problem with the extractions for SS213/4 MS and the associated MSB. Very poor recovery was generated for these two samples. The laboratory states in the corresponding Case Narrative that these problems may be associated with the GPC extraction.

Percent Solids: Samples SB213/4 and SB213/4-RE were found to be comprised of less than 50% solids. Therefore, these samples were qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results.

Continuing Calibrations: Continuing calibrations analyzed on 2/15/2001 at 2:19 and 3/15/2001 at 07:53 generated %D's of greater than 25% for 4-Chloroaniline. The associated samples were qualified as 'UJ, estimated, for the non-detectable results for this compound. Positive results were not detected for 4-Chloroaniline. In addition, the compounds 4-Chloroaniline and n-Nitrosodiphenylamine generated %D's of greater than 25% for the continuing calibration on 2/20/2001 at 10:15. The associated samples

were qualified as 'UJ, estimated, for the non-detectable results for these compounds. Positive results were not detected for 4-Chloroaniline or n-Nitrosodiphenylamine.

Internal Standards: Samples SB207/8, SB213/4 RE and SB207/8 RE generated low reported area counts for Perylene-d12. These samples were qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results, for the compounds associated with the particular internal standard affected.

Pesticides / PCB's

Surrogate Recovery: Low surrogate recovery was generated for TCX and DCB for sample SB210A. This sample was qualified as 'UJ', estimated, for the non-detectable results. Positive results were not detected for the sample.

Linearity: Beta-BHC and Methoxychlor generated %RSD which exceeded the 20% limit for the calibration on 2/27/01. Methoxychlor, only, exceeded the %RSD on 3/08/01. The associated samples were qualified as 'UJ', estimated, for the non-detectable results for the two compounds noted. Positive results were not detected for the affected compounds.

GPC Calibration: Low recovery was generated for endrin for the GPC Calibration on 3/01/01. The associated sample SB210A was previously qualified through surrogate recovery above, therefore, additional qualification is not required.

Inorganics

Percent Solids: Sample SB213/214 was found to be comprised of less than 50% solids. Therefore, this sample was qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results.

CRDL Standards: Chromium and Silver generated low and high recovery for the CRDL Standards. Sample results found to be within the affected range for these two inorganics were qualaified as 'J', estimated.

Matrix Spike Recovery: Slightly low percent recovery was generated for Cobalt, Nickel and Cyanide for the water sample, SB210A. This sample was qualified as 'J', estimated, for the positive results detected for these three inorganics. Soil sample SS211/212 generated low recovery at 44.1% recovery for cyanide (Limit 75-125). The associated soil samples were qualified as 'J', estimated, for the positive results for cyanide.

Laboratory Duplicates: Poor precision was noted for the soil samples for cyanide at 82.2% Relative Percent Difference (RPD). The associated soil samples were qualified as 'J', estimated, for the positive results for cyanide.

Please contact me by telephone at 301-294-6144, should you require additional information or clarification regarding this Letter Report.

Sincerely,

Andrea P. Schuessler

Andrea P. Schuessler, CHMM
ChemWorld Environmental, Inc.

c: MP-2002.2A file

ORGANIC DATA QUALIFIERS

U - Indicates that the compound was analyzed for, but not detected at or above the Contract Required Quantitation Limit (CRQL), or the compound is not detected due to qualification through the method or field blank.

J - The associated numerical value is an estimated quantity.

JN - Tentatively identified with approximated concentrations (Volatile and Semi-Volatile Organics). Presumptively present at an approximated quantity (Pesticides/PCBs).

UJ - The compound was analyzed for, but not detected. The sample quantitation limit is an estimated quantity due to variance from quality control limits.

C - Applies to Pesticide results where the identification has been confirmed by GC/MS.

E - Reported value is estimated due to quantitation above the calibration range.

D - Reported result taken from diluted sample analysis.

A - Aldol condensation product.

R - Reported value is unusable and rejected due to variance from quality control limits.

NA - Not Analyzed.

INORGANIC DATA QUALIFIERS

U - Indicates analyte not detected at or above the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

B - Indicates analyte result is between Instrument Detection Limit (IDL) and CRDL.

J - The reported value is estimated due to variance from quality control limits.

UJ - The element was analyzed for, but not detected. The sample quantitation limit is an estimate due to variance from quality control limits.

E - Reported value is estimated because of the presence of interference.

R - Reported value is unusable and rejected due to variance from quality control limits.

NA - Not analyzed.

ATTACHMENT A

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS 212

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-2

Sample wt/vol: 5.4 (g/ml) G Lab File ID: C4029.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 15.6 Date Analyzed: 02/09/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	~~6~~	~~JB~~ 11 U
75-15-0	Carbon Disulfide	4	J
75-35-4	1,1-Dichloroethene	11	UJ
75-34-3	1,1-Dichloroethane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	MEK (2-Butanone)	11	UJ
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	MIBK (4-Methyl-2-pentanone)	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
106-42-3/108-38-3	p-Xylene/m-Xylene	11	U
95-47-6	o-Xylene	11	U

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SB 212

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-4

Sample wt/vol: 5.2 (g/ml) G Lab File ID: C4047.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 20.6 Date Analyzed: 02/12/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	16	~~J~~ U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	MEK (2-Butanone)	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	MIBK (4-Methyl-2-pentanone)	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
106-42-3/108-38-3	p-Xylene/m-Xylene	12	U
95-47-6	o-Xylene	12	U

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLK #1

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) WATER Lab Sample ID: L63965-6

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C4061.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. _____ Date Analyzed: 02/13/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	13	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	MEK (2-Butanone)	10	U J
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	MIBK (4-Methyl-2-pentanone)	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
106-42-3/108-38-3	p-Xylene/m-Xylene	10	U
95-47-6	o-Xylene	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 213

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-7

Sample wt/vol: 5.4 (g/ml) G Lab File ID: C4048.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 17.3 Date Analyzed: 02/12/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	9	J
67-64-1	Acetone	~~10~~	~~J~~ 11 U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	MEK (2-Butanone)	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	MIBK (4-Methyl-2-pentanone)	11	U J
591-78-6	2-Hexanone	11	U J
127-18-4	Tetrachloroethene	11	U J
79-34-5	1,1,2,2-Tetrachloroethane	11	U J
108-88-3	Toluene	11	U J
108-90-7	Chlorobenzene	11	U J
100-41-4	Ethylbenzene	11	U J
100-42-5	Styrene	11	U J
106-42-3/108-38-3	p-Xylene/m-Xylene	11	U J
95-47-6	o-Xylene	11	U J

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 213 RE

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-7

Sample wt/vol: 5.2 (g/ml) G Lab File ID: C4031.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 17.3 Date Analyzed: 02/09/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	10	J
67-64-1	Acetone	20	~~J~~ U
75-15-0	Carbon Disulfide	4	J
75-35-4	1,1-Dichloroethene	12	UJ
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	MEK (2-Butanone)	12	UJ
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	7	J
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	MIBK (4-Methyl-2-pentanone)	12	UJ
591-78-6	2-Hexanone	12	UJ
127-18-4	Tetrachloroethene	12	UJ
79-34-5	1,1,2,2-Tetrachloroethane	12	UJ
108-88-3	Toluene	12	UJ
108-90-7	Chlorobenzene	12	UJ
100-41-4	Ethylbenzene	12	UJ
100-42-5	Styrene	12	UJ
106-42-3/108-38-3	p-Xylene/m-Xylene	12	UJ
95-47-6	o-Xylene	12	UJ

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SB 213

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-8

Sample wt/vol: 5.2 (g/ml) G Lab File ID: C4049.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 28.9 Date Analyzed: 02/12/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	12	J
67-64-1	Acetone	29	J B U
75-15-0	Carbon Disulfide	13	J
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
156-59-2	cis-1,2-Dichloroethene	13	U
156-60-5	trans-1,2-Dichloroethene	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	MEK (2-Butanone)	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	MIBK (4-Methyl-2-pentanone)	13	U J
591-78-6	2-Hexanone	13	U J
127-18-4	Tetrachloroethene	13	U J
79-34-5	1,1,2,2-Tetrachloroethane	13	U J
108-88-3	Toluene	13	U J
108-90-7	Chlorobenzene	13	U J
100-41-4	Ethylbenzene	13	U J
100-42-5	Styrene	13	U J
106-42-3/108-38-3	p-Xylene/m-Xylene	13	U J
95-47-6	o-Xylene	13	U J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SB 213 RE

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-8

Sample wt/vol: 5.4 (g/ml) G Lab File ID: C4032.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 28.9 Date Analyzed: 02/09/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	12	J
67-64-1	Acetone	39	J B LL
75-15-0	Carbon Disulfide	18	J
75-35-4	1,1-Dichloroethene	13	UJ
75-34-3	1,1-Dichloroethane	13	U
156-59-2	cis-1,2-Dichloroethene	13	U
156-60-5	trans-1,2-Dichloroethene	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	MEK (2-Butanone)	13	UJ
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	MIBK (4-Methyl-2-pentanone)	13	UJ
591-78-6	2-Hexanone	13	UJ
127-18-4	Tetrachloroethene	13	UJ
79-34-5	1,1,2,2-Tetrachloroethane	13	UJ
108-88-3	Toluene	13	UJ
108-90-7	Chlorobenzene	13	UJ
100-41-4	Ethylbenzene	13	UJ
100-42-5	Styrene	13	UJ
106-42-3/108-38-3	p-Xylene/m-Xylene	13	UJ
95-47-6	o-Xylene	13	UJ

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SB 513

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-11

Sample wt/vol: 5.7 (g/ml) G Lab File ID: C4050.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 26.8 Date Analyzed: 02/12/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	
67-64-1	Acetone	24	J B LL
75-15-0	Carbon Disulfide	8	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	MEK (2-Butanone)	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	MIBK (4-Methyl-2-pentanone)	12	UJ
591-78-6	2-Hexanone	12	UJ
127-18-4	Tetrachloroethene	12	UJ
79-34-5	1,1,2,2-Tetrachloroethane	12	UJ
108-88-3	Toluene	12	UJ
108-90-7	Chlorobenzene	12	UJ
100-41-4	Ethylbenzene	12	UJ
100-42-5	Styrene	12	UJ
106-42-3/108-38-3	p-Xylene/m-Xylene	12	UJ
95-47-6	o-Xylene	12	UJ

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

TRIP BLK #2

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) WATER Lab Sample ID: L63965-12

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C4065.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. _____ Date Analyzed: 02/13/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	5	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	MEK (2-Butanone)	10	UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	MIBK (4-Methyl-2-pentanone)	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
106-42-3/108-38-3	p-Xylene/m-Xylene	10	U
95-47-6	o-Xylene	10	U

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SB 210A

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) WATER Lab Sample ID: L63967-1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C4062.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. _____ Date Analyzed: 02/13/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~8~~	~~J B~~ 10 U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	MEK (2-Butanone)	10	UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	MIBK (4-Methyl-2-pentanone)	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
106-42-3/108-38-3	p-Xylene/m-Xylene	10	U
95-47-6	o-Xylene	10	U

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLK #3

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) WATER Lab Sample ID: L63967-4

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C4060.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. _____ Date Analyzed: 02/13/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	17	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	MEK (2-Butanone)	10	UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	MIBK (4-Methyl-2-pentanone)	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
106-42-3/108-38-3	p-Xylene/m-Xylene	10	U
95-47-6	o-Xylene	10	U

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SB 208

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-1

Sample wt/vol: 5.1 (g/ml) G Lab File ID: C4067.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 19 Date Analyzed: 02/13/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	20	~~J~~ B U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	MEK (2-Butanone)	12	UJ
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	MIBK (4-Methyl-2-pentanone)	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
106-42-3/108-38-3	p-Xylene/m-Xylene	12	U
95-47-6	o-Xylene	12	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 209

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-3

Sample wt/vol: 5.3 (g/ml) G Lab File ID: C4122.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 20.7 Date Analyzed: 02/16/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	13	
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	4	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	MEK (2-Butanone)	12	U
71-55-6	1,1,1-Trichloroethane	12	U UJ
56-23-5	Carbon Tetrachloride	12	U UJ
75-27-4	Bromodichloromethane	12	U UJ
78-87-5	1,2-Dichloropropane	12	U UJ
10061-01-5	cis-1,3-Dichloropropene	12	U UJ
79-01-6	Trichloroethene	12	U UJ
124-48-1	Dibromochloromethane	12	U UJ
79-00-5	1,1,2-Trichloroethane	12	U UJ
71-43-2	Benzene	12	U UJ
10061-02-6	trans-1,3-Dichloropropene	12	U UJ
75-25-2	Bromoform	12	U UJ
108-10-1	MIBK (4-Methyl-2-pentanone)	12	U UJ
591-78-6	2-Hexanone	12	U UJ
127-18-4	Tetrachloroethene	12	U UJ
79-34-5	1,1,2,2-Tetrachloroethane	12	U UJ
108-88-3	Toluene	12	U UJ
108-90-7	Chlorobenzene	12	U UJ
100-41-4	Ethylbenzene	12	U UJ
100-42-5	Styrene	12	U UJ
106-42-3/108-38-3	p-Xylene/m-Xylene	12	U UJ
95-47-6	o-Xylene	12	U UJ

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS 209 RE

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-3

Sample wt/vol: 5.2 (g/ml) G Lab File ID: C4068.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 20.7 Date Analyzed: 02/13/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	Q
74-87-3	Chloromethane	12 UJ
74-83-9	Bromomethane	12 UJ
75-01-4	Vinyl Chloride	12 UJ
75-00-3	Chloroethane	12 UJ
75-09-2	Methylene Chloride	12 J
67-64-1	Acetone	~~11 JB~~ 12 U
75-15-0	Carbon Disulfide	4 J
75-35-4	1,1-Dichloroethene	12 UJ
75-34-3	1,1-Dichloroethane	12 UJ
156-59-2	cis-1,2-Dichloroethene	12 UJ
156-60-5	trans-1,2-Dichloroethene	12 UJ
67-66-3	Chloroform	12 UJ
107-06-2	1,2-Dichloroethane	12 UJ
78-93-3	MEK (2-Butanone)	12 UJ
71-55-6	1,1,1-Trichloroethane	12 UJ
56-23-5	Carbon Tetrachloride	12 UJ
75-27-4	Bromodichloromethane	12 UJ
78-87-5	1,2-Dichloropropane	12 UJ
10061-01-5	cis-1,3-Dichloropropene	12 UJ
79-01-6	Trichloroethene	12 UJ
124-48-1	Dibromochloromethane	12 UJ
79-00-5	1,1,2-Trichloroethane	12 UJ
71-43-2	Benzene	12 UJ
10061-02-6	trans-1,3-Dichloropropene	12 UJ
75-25-2	Bromoform	12 UJ
108-10-1	MIBK (4-Methyl-2-pentanone)	12 UJ
591-78-6	2-Hexanone	12 UJ
127-18-4	Tetrachloroethene	12 UJ
79-34-5	1,1,2,2-Tetrachloroethane	12 UJ
108-88-3	Toluene	12 UJ
108-90-7	Chlorobenzene	12 UJ
100-41-4	Ethylbenzene	12 UJ
100-42-5	Styrene	12 UJ
106-42-3/108-38-3	p-Xylene/m-Xylene	12 UJ
95-47-6	o-Xylene	12 UJ

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SB 210

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-5

Sample wt/vol: 5.5 (g/ml) G Lab File ID: C4069.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. 25.4 Date Analyzed: 02/13/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	9	J
67-64-1	Acetone	19	~~J~~ B U
75-15-0	Carbon Disulfide	5	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	MEK (2-Butanone)	12	UJ
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	MIBK (4-Methyl-2-pentanone)	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
106-42-3/108-38-3	p-Xylene/m-Xylene	12	U
95-47-6	o-Xylene	12	U

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLK #4

Lab Name: FRIEND LABORATORY, INC. Contract:

Lab Code: 10252 Case No.: SAS No.: SDG No.: HANNA

Matrix: (soil/water) WATER Lab Sample ID: L64033-7

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C4066.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: not dec. Date Analyzed: 02/13/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	6	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	MEK (2-Butanone)	10	U J
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	MIBK (4-Methyl-2-pentanone)	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
106-42-3/108-38-3	p-Xylene/m-Xylene	10	U
95-47-6	o-Xylene	10	U

1A

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

HOLD BLK

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) WATER Lab Sample ID: L64033-8

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C4123.D

Level: (low/med) LOW Date Received: 02/12/01

% Moisture: not dec. _____ Date Analyzed: 02/16/01

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	MEK (2-Butanone)	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	MIBK (4-Methyl-2-pentanone)	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
106-42-3/108-38-3	p-Xylene/m-Xylene	10	U
95-47-6	o-Xylene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 211/2

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-1

Sample wt/vol: 30.031 (g/ml) G Lab File ID: B1762.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 14.8 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.84

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethylether)	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-30	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-52	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxymethane)	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	UJ
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	980	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	980	U
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	980	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	980	U
100-02-7	4-Nitrophenol	980	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS 211/2

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-1

Sample wt/vol: 30.031 (g/ml) G Lab File ID: B1762.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 14.8 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.84

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	390	U
7005-72-3	4-Chlorophenylphenylether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	980	U
534-52-1	2-Methyl-4-6-dinitrophenol	980	U
86-30-6	n-Nitrosodiphenylamine	390	U J
101-55-3	4-Bromophenylphenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	980	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butylbenzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)anthracene	390	U
218-01-9	Chrysene	390	U
117-81-7	bis-2-Ethylhexyl phthalate	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	390	U
207-08-9	Benzo(k)fluoranthene	390	U
50-32-8	Benzo(a)pyrene	390	U
193-39-5	Indeno(1,2,3-cd)pyrene	390	U
53-70-3	Dibenzo(a,h)anthracene	390	U
191-24-2	Benzo(g,h,i)perylene	390	U

1B

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 211/2

Lab Name: FRIEND LABORATORY, INC. Contract:

Lab Code: 10252 Case No.: SAS No.: SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-3

Sample wt/vol: 30.063 (g/ml) G Lab File ID: A1408.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 22.4 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.89

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	430	U
111-44-4	bis(2-Chloroethylether)	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitrosodi-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-30	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-52	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	bis(2-Chloroethoxymethane)	430	U
120-83-2	2,4-Dichlorophenol	430	U
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	430	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethyl phthalate	430	U
208-96-8	Acenaphthylene	430	U
606-20-2	2,6-Dinitrotoluene	430	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	430	U
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	430	U
121-14-2	2,4-Dinitrotoluene	430	U

00495

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 211/2

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-3

Sample wt/vol: 30.063 (g/ml) G Lab File ID: A1408.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 22.4 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.89

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	430	U
7005-72-3	4-Chlorophenylphenylether	430	U
86-73-7	Fluorene	430	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	2-Methyl-4-6-dinitrophenol	1100	U
86-30-6	n-Nitrosodiphenylamine	430	U
101-55-3	4-Bromophenylphenylether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	430	U
120-12-7	Anthracene	430	U
86-74-8	Carbazole	430	U
84-74-2	Di-n-butyl phthalate	430	U
206-44-0	Fluoranthene	430	U
129-00-0	Pyrene	430	U
85-68-7	Butylbenzyl phthalate	430	U
91-94-1	3,3'-Dichlorobenzidine	430	U
56-55-3	Benzo(a)anthracene	430	U
218-01-9	Chrysene	430	U
117-81-7	bis-2-Ethylhexyl phthalate	430	U
117-84-0	Di-n-octyl phthalate	430	U
205-99-2	Benzo(b)fluoranthene	430	U
207-08-9	Benzo(k)fluoranthene	430	U
50-32-8	Benzo(a)pyrene	430	U
193-39-5	Indeno(1,2,3-cd)pyrene	430	U
53-70-3	Dibenzo(a,h)anthracene	430	U
191-24-2	Benzo(g,h,i)perylene	430	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 511/2

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-5

Sample wt/vol: 30.075 (g/ml) G Lab File ID: A1409.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 27.7 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.28

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	460	U
111-44-4	bis(2-Chloroethylether)	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitrosodi-n-propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-30	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-52	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	bis(2-Chloroethoxymethane)	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethyl phthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	460	U
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	460	U

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS 511/2

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-5

Sample wt/vol: 30.075 (g/ml) G Lab File ID: A1409.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 27.7 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.28

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	460	U
7005-72-3	4-Chlorophenylphenylether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	2-Methyl-4-6-dinitrophenol	1100	U
86-30-6	n-Nitrosodiphenylamine	460	U
101-55-3	4-Bromophenylphenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	460	U
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-n-butyl phthalate	460	U
206-44-0	Fluoranthene	460	U
129-00-0	Pyrene	460	U
85-68-7	Butylbenzyl phthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	U
56-55-3	Benzo(a)anthracene	460	U
218-01-9	Chrysene	460	U
117-81-7	bis-2-Ethylhexyl phthalate	460	U
117-84-0	Di-n-octyl phthalate	460	U
205-99-2	Benzo(b)fluoranthene	460	U
207-08-9	Benzo(k)fluoranthene	460	U
50-32-8	Benzo(a)pyrene	460	U
193-39-5	Indeno(1,2,3-cd)pyrene	460	U
53-70-3	Dibenzo(a,h)anthracene	460	U
191-24-2	Benzo(g,h,i)perylene	460	U

1B

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 213/4

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-9

Sample wt/vol: 30.05 (g/ml) G Lab File ID: B1761.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 55.6 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.82

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	750	~~UJ~~ R
111-44-4	bis(2-Chloroethylether)	750	UJ
95-57-8	2-Chlorophenol	750	~~UJ~~ R
541-73-1	1,3-Dichlorobenzene	750	UJ
106-46-7	1,4-Dichlorobenzene	750	UJ
95-50-1	1,2-Dichlorobenzene	750	UJ
95-48-7	2-Methylphenol	750	~~UJ~~ R
108-60-1	2,2'-oxybis(1-Chloropropane)	750	UJ
106-44-5	4-Methylphenol	750	~~UJ~~ R
621-64-7	N-Nitrosodi-n-propylamine	750	UJ
67-72-1	Hexachloroethane	750	UJ
98-95-30	Nitrobenzene	750	UJ
78-59-1	Isophorone	750	UJ
88-75-52	2-Nitrophenol	750	~~UJ~~ R
105-67-9	2,4-Dimethylphenol	750	~~UJ~~ R
111-91-1	bis(2-Chloroethoxymethane)	750	UJ
120-83-2	2,4-Dichlorophenol	750	~~UJ~~ R
120-82-1	1,2,4-Trichlorobenzene	750	UJ
91-20-3	Naphthalene	750	UJ
106-47-8	4-Chloroaniline	750	UJ
87-68-3	Hexachlorobutadiene	750	UJ
59-50-7	4-Chloro-3-methylphenol	750	~~UJ~~ R
91-57-6	2-Methylnaphthalene	750	UJ
77-47-4	Hexachlorocyclopentadiene	750	UJ
88-06-2	2,4,6-Trichlorophenol	750	~~UJ~~ R
95-95-4	2,4,5-Trichlorophenol	1900	~~UJ~~ R
91-58-7	2-Chloronaphthalene	750	UJ
88-74-4	2-Nitroaniline	1900	UJ
131-11-3	Dimethyl phthalate	750	UJ
208-96-8	Acenaphthylene	750	UJ
606-20-2	2,6-Dinitrotoluene	750	UJ
99-09-2	3-Nitroaniline	1900	UJ
83-32-9	Acenaphthene	750	UJ
51-28-5	2,4-Dinitrophenol	1900	~~UJ~~ R
100-02-7	4-Nitrophenol	1900	UJ
132-64-9	Dibenzofuran	750	UJ
121-14-2	2,4-Dinitrotoluene	750	UJ

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 213/4

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-9

Sample wt/vol: 30.05 (g/ml) G Lab File ID: B1761.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 55.6 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.82

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	750	UJ
7005-72-3	4-Chlorophenylphenylether	750	UJ
86-73-7	Fluorene	750	UJ
100-01-6	4-Nitroaniline	1900	UJ
534-52-1	2-Methyl-4-6-dinitrophenol	1900	~~UJ~~ R
86-30-6	n-Nitrosodiphenylamine	750	UJ
101-55-3	4-Bromophenylphenylether	750	UJ
118-74-1	Hexachlorobenzene	750	UJ
87-86-5	Pentachlorophenol	1900	~~UJ~~ R
85-01-8	Phenanthrene	750	UJ
120-12-7	Anthracene	750	UJ
86-74-8	Carbazole	750	UJ
84-74-2	Di-n-butyl phthalate	750	UJ
206-44-0	Fluoranthene	750	UJ
129-00-0	Pyrene	750	UJ
85-68-7	Butylbenzyl phthalate	750	UJ
91-94-1	3,3'-Dichlorobenzidine	750	UJ
56-55-3	Benzo(a)anthracene	750	UJ
218-01-9	Chrysene	750	UJ
117-81-7	bis-2-Ethylhexyl phthalate	77	J
117-84-0	Di-n-octyl phthalate	750	UJ
205-99-2	Benzo(b)fluoranthene	750	UJ
207-08-9	Benzo(k)fluoranthene	750	UJ
50-32-8	Benzo(a)pyrene	750	UJ
193-39-5	Indeno(1,2,3-cd)pyrene	750	UJ
53-70-3	Dibenzo(a,h)anthracene	750	UJ
191-24-2	Benzo(g,h,i)perylene	750	UJ

1B

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 213/4 RE

Lab Name: FRIEND LABORATORY, INC. Contract:

Lab Code: 10252 Case No.: SAS No.: SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-9

Sample wt/vol: 30.05 (g/ml) G Lab File ID: A1576.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 55.6 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 03/15/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.82

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	750	UJ
111-44-4	bis(2-Chloroethylether)	750	UJ
95-57-8	2-Chlorophenol	750	UJ
541-73-1	1,3-Dichlorobenzene	750	UJ
106-46-7	1,4-Dichlorobenzene	750	UJ
95-50-1	1,2-Dichlorobenzene	750	UJ
95-48-7	2-Methylphenol	750	UJ
108-60-1	2,2'-oxybis(1-Chloropropane)	750	UJ
106-44-5	4-Methylphenol	750	UJ
621-64-7	N-Nitrosodi-n-propylamine	750	UJ
67-72-1	Hexachloroethane	750	UJ
98-95-30	Nitrobenzene	750	UJ
78-59-1	Isophorone	750	UJ
88-75-52	2-Nitrophenol	750	UJ
105-67-9	2,4-Dimethylphenol	750	UJ
111-91-1	bis(2-Chloroethoxymethane)	750	UJ
120-83-2	2,4-Dichlorophenol	750	UJ
120-82-1	1,2,4-Trichlorobenzene	750	UJ
91-20-3	Naphthalene	750	UJ
106-47-8	4-Chloroaniline	750	UJ
87-68-3	Hexachlorobutadiene	750	UJ
59-50-7	4-Chloro-3-methylphenol	750	UJ
91-57-6	2-Methylnaphthalene	750	UJ
77-47-4	Hexachlorocyclopentadiene	750	UJ
88-06-2	2,4,6-Trichlorophenol	750	UJ
95-95-4	2,4,5-Trichlorophenol	1900	UJ
91-58-7	2-Chloronaphthalene	750	UJ
88-74-4	2-Nitroaniline	1900	UJ
131-11-3	Dimethyl phthalate	750	UJ
208-96-8	Acenaphthylene	750	UJ
606-20-2	2,6-Dinitrotoluene	750	UJ
99-09-2	3-Nitroaniline	1900	UJ
83-32-9	Acenaphthene	750	UJ
51-28-5	2,4-Dinitrophenol	1900	UJ
100-02-7	4-Nitrophenol	1900	UJ
132-64-9	Dibenzofuran	750	UJ
121-14-2	2,4-Dinitrotoluene	750	UJ

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 213/4 RE

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-9

Sample wt/vol: 30.05 (g/ml) G Lab File ID: A1576.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 55.6 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 03/15/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.82

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	120	J
7005-72-3	4-Chlorophenylphenylether	750	UJ
86-73-7	Fluorene	750	UJ
100-01-6	4-Nitroaniline	1900	UJ
534-52-1	2-Methyl-4-6-dinitrophenol	1900	UJ
86-30-6	n-Nitrosodiphenylamine	750	UJ
101-55-3	4-Bromophenylphenylether	750	UJ
118-74-1	Hexachlorobenzene	750	UJ
87-86-5	Pentachlorophenol	1900	UJ
85-01-8	Phenanthrene	750	UJ
120-12-7	Anthracene	750	UJ
86-74-8	Carbazole	750	UJ
84-74-2	Di-n-butyl phthalate	150	J
206-44-0	Fluoranthene	750	UJ
129-00-0	Pyrene	750	UJ
85-68-7	Butylbenzyl phthalate	750	UJ
91-94-1	3,3'-Dichlorobenzidine	750	UJ
56-55-3	Benzo(a)anthracene	750	UJ
218-01-9	Chrysene	750	UJ
117-81-7	bis-2-Ethylhexyl phthalate	750	UJ
117-84-0	Di-n-octyl phthalate	750	UJ
205-99-2	Benzo(b)fluoranthene	750	UJ
207-08-9	Benzo(k)fluoranthene	750	UJ
50-32-8	Benzo(a)pyrene	750	UJ
193-39-5	Indeno(1,2,3-cd)pyrene	750	UJ
53-70-3	Dibenzo(a,h)anthracene	750	UJ
191-24-2	Benzo(g,h,i)perylene	750	UJ

1B NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS 213/4

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-10

Sample wt/vol: 30.031 (g/ml) G Lab File ID: B1758.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 22.2 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.83

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	430	UJ
111-44-4	bis(2-Chloroethylether)	430	U
95-57-8	2-Chlorophenol	430	UJ
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	UJ
108-60-1	2,2'-oxybis(1-Chloropropane)	430	U
106-44-5	4-Methylphenol	430	UJ
621-64-7	N-Nitrosodi-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-30	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-52	2-Nitrophenol	430	UJ
105-67-9	2,4-Dimethylphenol	430	UJ
111-91-1	bis(2-Chloroethoxymethane)	430	U
120-83-2	2,4-Dichlorophenol	430	UJ
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	430	U
106-47-8	4-Chloroaniline	430	UJ
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-methylphenol	430	UJ
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	UJ
95-95-4	2,4,5-Trichlorophenol	1100	UJ
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethyl phthalate	430	U
208-96-8	Acenaphthylene	430	U
606-20-2	2,6-Dinitrotoluene	430	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	430	U
51-28-5	2,4-Dinitrophenol	1100	UJ
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	430	U
121-14-2	2,4-Dinitrotoluene	430	U

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS 213/4

Lab Name: FRIEND LABORATORY, INC. Contract:

Lab Code: 10252 Case No.: SAS No.: SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L63965-10

Sample wt/vol: 30.031 (g/ml) G Lab File ID: B1758.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 22.2 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.83

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	430	U
7005-72-3	4-Chlorophenylphenylether	430	U
86-73-7	Fluorene	430	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	2-Methyl-4-6-dinitrophenol	1100	UJ
86-30-6	n-Nitrosodiphenylamine	430	UJ
101-55-3	4-Bromophenylphenylether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	1100	UJ
85-01-8	Phenanthrene	55	J
120-12-7	Anthracene	430	U
86-74-8	Carbazole	430	U
84-74-2	Di-n-butyl phthalate	430	U
206-44-0	Fluoranthene	430	U
129-00-0	Pyrene	430	U
85-68-7	Butylbenzyl phthalate	430	U
91-94-1	3,3'-Dichlorobenzidine	430	U
56-55-3	Benzo(a)anthracene	60	J
218-01-9	Chrysene	68	J
117-81-7	bis-2-Ethylhexyl phthalate	48	J
117-84-0	Di-n-octyl phthalate	430	U
205-99-2	Benzo(b)fluoranthene	430	U
207-08-9	Benzo(k)fluoranthene	430	U
50-32-8	Benzo(a)pyrene	430	U
193-39-5	Indeno(1,2,3-cd)pyrene	430	U
53-70-3	Dibenzo(a,h)anthracene	430	U
191-24-2	Benzo(g,h,i)perylene	430	U

1B

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 210A

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) WATER Lab Sample ID: L63967-1

Sample wt/vol: 950 (g/ml) ML Lab File ID: A1382.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: _____ decanted:(Y/N) N Date Extracted: 02/13/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	2	J
111-44-4	bis(2-Chloroethylether)	11	UJ
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	UJ
106-46-7	1,4-Dichlorobenzene	11	UJ
95-50-1	1,2-Dichlorobenzene	11	UJ
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	UJ
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitrosodi-n-propylamine	11	UJ
67-72-1	Hexachloroethane	11	UJ
98-95-30	Nitrobenzene	11	UJ
78-59-1	Isophorone	11	UJ
88-75-52	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxymethane)	11	UJ
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	UJ
91-20-3	Naphthalene	11	UJ
106-47-8	4-Chloroaniline	11	UJ
87-68-3	Hexachlorobutadiene	11	UJ
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	UJ
77-47-4	Hexachlorocyclopentadiene	11	UJ
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	UJ
88-74-4	2-Nitroaniline	26	UJ
131-11-3	Dimethyl phthalate	11	UJ
208-96-8	Acenaphthylene	11	UJ
606-20-2	2,6-Dinitrotoluene	11	UJ
99-09-2	3-Nitroaniline	26	UJ
83-32-9	Acenaphthene	11	UJ
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	11	UJ
121-14-2	2,4-Dinitrotoluene	11	UJ

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 210A

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) WATER Lab Sample ID: L63967-1

Sample wt/vol: 950 (g/ml) ML Lab File ID: A1382.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: _____ decanted:(Y/N) N Date Extracted: 02/13/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
84-66-2	Diethyl phthalate	1	J
7005-72-3	4-Chlorophenylphenylether	11	UJ
86-73-7	Fluorene	11	UJ
100-01-6	4-Nitroaniline	26	UJ
534-52-1	2-Methyl-4-6-dinitrophenol	26	U
86-30-6	n-Nitrosodiphenylamine	11	UJ
101-55-3	4-Bromophenylphenylether	11	UJ
118-74-1	Hexachlorobenzene	11	UJ
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	1	J
120-12-7	Anthracene	11	UJ
86-74-8	Carbazole	11	UJ
84-74-2	Di-n-butyl phthalate	11	UJ
206-44-0	Fluoranthene	11	UJ
129-00-0	Pyrene	11	UJ
85-68-7	Butylbenzyl phthalate	11	UJ
91-94-1	3,3'-Dichlorobenzidine	11	UJ
56-55-3	Benzo(a)anthracene	11	UJ
218-01-9	Chrysene	11	UJ
117-81-7	bis-2-Ethylhexyl phthalate	11	UJ
117-84-0	Di-n-octyl phthalate	11	UJ
205-99-2	Benzo(b)fluoranthene	11	UJ
207-08-9	Benzo(k)fluoranthene	11	UJ
50-32-8	Benzo(a)pyrene	11	UJ
193-39-5	Indeno(1,2,3-cd)pyrene	11	UJ
53-70-3	Dibenzo(a,h)anthracene	11	UJ
191-24-2	Benzo(g,h,i)perylene	11	UJ

1B

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 207/8

Lab Name: FRIEND LABORATORY, INC. Contract:

Lab Code: 10252 Case No.: SAS No.: SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-2

Sample wt/vol: 30.033 (g/ml) G Lab File ID: A1417.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 25.6 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/22/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.69

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	450	~~U~~ R
111-44-4	bis(2-Chloroethylether)	450	U
95-57-8	2-Chlorophenol	450	~~U~~ R
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	~~U~~ R
108-60-1	2,2'-oxybis(1-Chloropropane)	450	U
106-44-5	4-Methylphenol	450	~~U~~ R
621-64-7	N-Nitrosodi-n-propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-30	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-52	2-Nitrophenol	450	~~U~~ R
105-67-9	2,4-Dimethylphenol	450	~~U~~ R
111-91-1	bis(2-Chloroethoxymethane)	450	U
120-83-2	2,4-Dichlorophenol	450	~~U~~ R
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	57	J
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-methylphenol	450	~~U~~ R
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	~~U~~ R
95-95-4	2,4,5-Trichlorophenol	1100	~~U~~ R
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethyl phthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	120	J
51-28-5	2,4-Dinitrophenol	1100	~~U~~ R
100-02-7	4-Nitrophenol	1100	~~U~~ R
132-64-9	Dibenzofuran	93	J
121-14-2	2,4-Dinitrotoluene	450	U

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 207/8

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-2

Sample wt/vol: 30.033 (g/ml) G Lab File ID: A1417.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 25.6 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/22/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.69

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	450	U
7005-72-3	4-Chlorophenylphenylether	450	U
86-73-7	Fluorene	130	J
100-01-6	4-Nitroaniline	1100	U
534-52-1	2-Methyl-4-6-dinitrophenol	1100	~~U~~ R
86-30-6	n-Nitrosodiphenylamine	450	U
101-55-3	4-Bromophenylphenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	1100	~~U~~ R
85-01-8	Phenanthrene	1500	
120-12-7	Anthracene	270	J
86-74-8	Carbazole	180	J
84-74-2	Di-n-butyl phthalate	450	U
206-44-0	Fluoranthene	1900	
129-00-0	Pyrene	2200	
85-68-7	Butylbenzyl phthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	450	U
56-55-3	Benzo(a)anthracene	930	
218-01-9	Chrysene	1100	
117-81-7	bis-2-Ethylhexyl phthalate	140	J
117-84-0	Di-n-octyl phthalate	450	U J
205-99-2	Benzo(b)fluoranthene	1200	J
207-08-9	Benzo(k)fluoranthene	520	J
50-32-8	Benzo(a)pyrene	800	J
193-39-5	Indeno(1,2,3-cd)pyrene	540	J
53-70-3	Dibenzo(a,h)anthracene	130	J
191-24-2	Benzo(g,h,i)perylene	350	J

1B

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 207/8 RE

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-2

Sample wt/vol: 30.033 (g/ml) G Lab File ID: A1579.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 25.6 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 03/15/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.69

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	450	UJ
111-44-4	bis(2-Chloroethylether)	450	U
95-57-8	2-Chlorophenol	450	UJ
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	UJ
108-60-1	2,2'-oxybis(1-Chloropropane)	450	U
106-44-5	4-Methylphenol	450	UJ
621-64-7	N-Nitrosodi-n-propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-30	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-52	2-Nitrophenol	450	UJ
105-67-9	2,4-Dimethylphenol	450	UJ
111-91-1	bis(2-Chloroethoxymethane)	450	U
120-83-2	2,4-Dichlorophenol	450	UJ
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	84	J
106-47-8	4-Chloroaniline	450	UJ
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-methylphenol	450	UJ
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	UJ
95-95-4	2,4,5-Trichlorophenol	1100	UJ
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethyl phthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	170	J
51-28-5	2,4-Dinitrophenol	1100	UJ
100-02-7	4-Nitrophenol	1100	UJ
132-64-9	Dibenzofuran	140	J
121-14-2	2,4-Dinitrotoluene	450	U

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 207/8 RE

Lab Name: FRIEND LABORATORY, INC. Contract:

Lab Code: 10252 Case No.: SAS No.: SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-2

Sample wt/vol: 30.033 (g/ml) G Lab File ID: A1579.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 25.6 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 03/15/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.69

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	450	U
7005-72-3	4-Chlorophenylphenylether	450	U
86-73-7	Fluorene	210	J
100-01-6	4-Nitroaniline	1100	U
534-52-1	2-Methyl-4-6-dinitrophenol	1100	UJ
86-30-6	n-Nitrosodiphenylamine	450	U
101-55-3	4-Bromophenylphenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	1100	UJ
85-01-8	Phenanthrene	1900	
120-12-7	Anthracene	360	J
86-74-8	Carbazole	260	J
84-74-2	Di-n-butyl phthalate	450	U
206-44-0	Fluoranthene	2600	
129-00-0	Pyrene	3900	E
85-68-7	Butylbenzyl phthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	450	U
56-55-3	Benzo(a)anthracene	1300	
218-01-9	Chrysene	1400	
117-81-7	bis-2-Ethylhexyl phthalate	220	J
117-84-0	Di-n-octyl phthalate	450	UJ
205-99-2	Benzo(b)fluoranthene	2800	J
207-08-9	Benzo(k)fluoranthene	850	J
50-32-8	Benzo(a)pyrene	1500	J
193-39-5	Indeno(1,2,3-cd)pyrene	1200	J
53-70-3	Dibenzo(a,h)anthracene	450	UJ
191-24-2	Benzo(g,h,i)perylene	790	J

1B

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS 209/10

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-4

Sample wt/vol: 30.085 (g/ml) G Lab File ID: A1416.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 27.8 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/22/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.75

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	460	U
111-44-4	bis(2-Chloroethylether)	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitrosodi-n-propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-30	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-52	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	bis(2-Chloroethoxymethane)	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethyl phthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	460	U
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	460	U

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS 209/10

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-4

Sample wt/vol: 30.085 (g/ml) G Lab File ID: A1416.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 27.8 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/22/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.75

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	460	U
7005-72-3	4-Chlorophenylphenylether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	2-Methyl-4-6-dinitrophenol	1200	U
86-30-6	n-Nitrosodiphenylamine	460	U
101-55-3	4-Bromophenylphenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	71	J
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-n-butyl phthalate	460	U
206-44-0	Fluoranthene	100	J
129-00-0	Pyrene	460	U
85-68-7	Butylbenzyl phthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	U
56-55-3	Benzo(a)anthracene	69	J
218-01-9	Chrysene	110	J
117-81-7	bis-2-Ethylhexyl phthalate	460	U
117-84-0	Di-n-octyl phthalate	460	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)fluoranthene	460	U
50-32-8	Benzo(a)pyrene	73	J
193-39-5	Indeno(1,2,3-cd)pyrene	460	U
53-70-3	Dibenzo(a,h)anthracene	460	U
191-24-2	Benzo(g,h,i)perylene	460	U

1B

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 209/10

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-6

Sample wt/vol: 30.044 (g/ml) G Lab File ID: A1410.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 39.3 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.06

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	550	U
111-44-4	bis(2-Chloroethylether)	550	U
95-57-8	2-Chlorophenol	550	U
541-73-1	1,3-Dichlorobenzene	550	U
106-46-7	1,4-Dichlorobenzene	550	U
95-50-1	1,2-Dichlorobenzene	550	U
95-48-7	2-Methylphenol	550	U
108-60-1	2,2'-oxybis(1-Chloropropane)	550	U
106-44-5	4-Methylphenol	550	U
621-64-7	N-Nitrosodi-n-propylamine	550	U
67-72-1	Hexachloroethane	550	U
98-95-30	Nitrobenzene	550	U
78-59-1	Isophorone	550	U
88-75-52	2-Nitrophenol	550	U
105-67-9	2,4-Dimethylphenol	550	U
111-91-1	bis(2-Chloroethoxymethane)	550	U
120-83-2	2,4-Dichlorophenol	550	U
120-82-1	1,2,4-Trichlorobenzene	550	U
91-20-3	Naphthalene	550	U
106-47-8	4-Chloroaniline	550	U
87-68-3	Hexachlorobutadiene	550	U
59-50-7	4-Chloro-3-methylphenol	550	U
91-57-6	2-Methylnaphthalene	550	U
77-47-4	Hexachlorocyclopentadiene	550	U
88-06-2	2,4,6-Trichlorophenol	550	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	550	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethyl phthalate	550	U
208-96-8	Acenaphthylene	550	U
606-20-2	2,6-Dinitrotoluene	550	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	550	U
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	550	U
121-14-2	2,4-Dinitrotoluene	550	U

1C

NYSDEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB 209/10

Lab Name: FRIEND LABORATORY, INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HANNA

Matrix: (soil/water) SOIL Lab Sample ID: L64033-6

Sample wt/vol: 30.044 (g/ml) G Lab File ID: A1410.D

Level: (low/med) LOW Date Received: 02/09/01

% Moisture: 39.3 decanted:(Y/N) N Date Extracted: 02/12/01

Concentrated Extract Volume: 500 (uL) Date Analyzed: 02/20/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.06

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
84-66-2	Diethyl phthalate	550	U
7005-72-3	4-Chlorophenylphenylether	550	U
86-73-7	Fluorene	77	J
100-01-6	4-Nitroaniline	1400	U
534-52-1	2-Methyl-4-6-dinitrophenol	1400	U
86-30-6	n-Nitrosodiphenylamine	550	U
101-55-3	4-Bromophenylphenylether	550	U
118-74-1	Hexachlorobenzene	550	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	430	J
120-12-7	Anthracene	130	J
86-74-8	Carbazole	550	U
84-74-2	Di-n-butyl phthalate	550	U
206-44-0	Fluoranthene	670	
129-00-0	Pyrene	610	
85-68-7	Butylbenzyl phthalate	550	U
91-94-1	3,3'-Dichlorobenzidine	550	U
56-55-3	Benzo(a)anthracene	260	J
218-01-9	Chrysene	330	J
117-81-7	bis-2-Ethylhexyl phthalate	550	U
117-84-0	Di-n-octyl phthalate	550	U
205-99-2	Benzo(b)fluoranthene	290	J
207-08-9	Benzo(k)fluoranthene	100	J
50-32-8	Benzo(a)pyrene	160	J
193-39-5	Indeno(1,2,3-cd)pyrene	550	U
53-70-3	Dibenzo(a,h)anthracene	550	U
191-24-2	Benzo(g,h,i)perylene	550	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L63965-1
SS-211/2

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP40

Matrix: (soil/water) SOIL Lab Sample ID: L63965-1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E3952831

% Moisture: 15 decanted: (Y/N) N Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/12/01

Concentrated Extract Volume: 5000(uL) Date Analyzed: 02/27/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U J
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.9	U
72-55-9	4,4'-DDE	3.9	U
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	3.9	U
72-43-5	Methoxychlor	20	U J
53494-70-5	Endrin ketone	3.9	U
7421-36-3	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	79	U
1114-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L63965-3
SB211/2

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP40

Matrix: (soil/water) SOIL Lab Sample ID: L63965-3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E3952832

% Moisture: 22 decanted: (Y/N) N Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/12/01

Concentrated Extract Volume: 5000(uL) Date Analyzed: 02/27/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	UJ
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	4.2	U
33213-65-9	Endosulfan II	4.2	U
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	22	UJ
53494-70-5	Endrin ketone	4.2	U
7421-36-3	Endrin aldehyde	4.2	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	86	U
1114-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L63965-5 SS 511/2

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP40

Matrix: (soil/water) SOIL Lab Sample ID: L63965-5

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E3952833

% Moisture: 28 decanted: (Y/N) N Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/12/01

Concentrated Extract Volume: 5000(uL) Date Analyzed: 02/28/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	U J
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	24	U J
53494-70-5	Endrin ketone	4.6	U
7421-36-3	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	2.4	U
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	93	U
1114-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	~~0.00~~	U2

FORM I PEST

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L63965-9
SB213/4

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP40

Matrix: (soil/water) SOIL Lab Sample ID: L63965-9

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E3952834

% Moisture: 56 decanted: (Y/N) N Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/12/01

Concentrated Extract Volume: 5000(uL) Date Analyzed: 02/28/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.8	U
319-85-7	beta-BHC	3.8	UJ
319-86-8	delta-BHC	3.8	U
58-89-9	gamma-BHC (Lindane)	3.8	U
76-44-8	Heptachlor	3.8	U
309-00-2	Aldrin	3.8	U
1024-57-3	Heptachlor epoxide	3.8	U
959-98-8	Endosulfan I	3.8	U
60-57-1	Dieldrin	7.4	U
72-55-9	4,4'-DDE	7.4	U
72-20-8	Endrin	7.4	U
33213-65-9	Endosulfan II	7.4	U
72-54-8	4,4'-DDD	7.4	U
1031-07-8	Endosulfan sulfate	7.4	U
50-29-3	4,4'-DDT	7.4	U
72-43-5	Methoxychlor	38	UJ
53494-70-5	Endrin ketone	7.4	U
7421-36-3	Endrin aldehyde	7.4	U
5103-71-9	alpha-Chlordane	3.8	U
5103-74-2	gamma-Chlordane	3.8	U
8001-35-2	Toxaphene	380	U
12674-11-2	Aroclor-1016	74	U
11104-28-2	Aroclor-1221	150	U
1114-16-5	Aroclor-1232	74	U
53469-21-9	Aroclor-1242	74	U
12672-29-6	Aroclor-1248	74	U
11097-69-1	Aroclor-1254	74	U
11096-82-5	Aroclor-1260	74	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L63965-10
SS213/4

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP40

Matrix: (soil/water) SOIL Lab Sample ID: L63965-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E3952835

% Moisture: 22 decanted: (Y/N) N Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/12/01

Concentrated Extract Volume: 5000(uL) Date Analyzed: 02/28/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	UJ
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	4.2	U
33213-65-9	Endosulfan II	4.2	U
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	22	UJ
53494-70-5	Endrin ketone	4.2	U
7421-36-3	Endrin aldehyde	4.2	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	86	U
1114-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	310	

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L63967-1
SB210-A

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP50

Matrix: (soil/water) WATER Lab Sample ID: L63967-1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E3952934

% Moisture: _____ decanted: (Y/N)___ Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 02/14/01

Concentrated Extract Volume: 10000(uL) Date Analyzed: 03/08/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U J
319-85-7	beta-BHC	0.050	U J
319-86-8	delta-BHC	0.050	U J
58-89-9	gamma-BHC (Lindane)	0.050	U J
76-44-8	Heptachlor	0.050	U J
309-00-2	Aldrin	0.050	U J
1024-57-3	Heptachlor epoxide	0.050	U J
959-98-8	Endosulfan I	0.050	U J
60-57-1	Dieldrin	0.10	U J
72-55-9	4,4'-DDE	0.10	U J
72-20-8	Endrin	0.10	U J
33213-65-9	Endosulfan II	0.10	U J
72-54-8	4,4'-DDD	0.10	U J
1031-07-8	Endosulfan sulfate	0.10	U J
50-29-3	4,4'-DDT	0.10	U J
72-43-5	Methoxychlor	0.50	U J
53494-70-5	Endrin ketone	0.10	U J
7421-36-3	Endrin aldehyde	0.10	U J
5103-71-9	alpha-Chlordane	0.050	U J
5103-74-2	gamma-Chlordane	0.050	U J
8001-35-2	Toxaphene	5.0	U J
12674-11-2	Aroclor-1016	1.0	U J
11104-28-2	Aroclor-1221	2.0	U J
1114-16-5	Aroclor-1232	1.0	U J
53469-21-9	Aroclor-1242	1.0	U J
12672-29-6	Aroclor-1248	1.0	U J
11097-69-1	Aroclor-1254	1.0	U J
11096-82-5	Aroclor-1260	1.0	U J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L64033-2
SB207/8

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP40

Matrix: (soil/water) SOIL Lab Sample ID: L64033-2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E3952844

% Moisture: 26 decanted: (Y/N) N Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/12/01

Concentrated Extract Volume: 5000(uL) Date Analyzed: 02/28/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	2.3	UJ
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	2.3	U
76-44-8	Heptachlor	2.3	U
309-00-2	Aldrin	2.3	U
1024-57-3	Heptachlor epoxide	2.3	U
959-98-8	Endosulfan I	2.3	U
60-57-1	Dieldrin	4.4	U
72-55-9	4,4'-DDE	4.4	U
72-20-8	Endrin	4.4	U
33213-65-9	Endosulfan II	4.4	U
72-54-8	4,4'-DDD	4.4	U
1031-07-8	Endosulfan sulfate	4.4	U
50-29-3	4,4'-DDT	4.4	U
72-43-5	Methoxychlor	23	UJ
53494-70-5	Endrin ketone	4.4	U
7421-36-3	Endrin aldehyde	4.4	U
5103-71-9	alpha-Chlordane	2.3	U
5103-74-2	gamma-Chlordane	2.3	U
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	90	U
1114-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	630	
11096-82-5	Aroclor-1260	44	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L64033-4
SS209/10

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP40

Matrix: (soil/water) SOIL Lab Sample ID: L64033-4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E3952845

% Moisture: 28 decanted: (Y/N) N Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/12/01

Concentrated Extract Volume: 5000(uL) Date Analyzed: 02/28/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	UJ
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	24	UJ
53494-70-5	Endrin ketone	4.6	U
7421-36-3	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	2.4	U
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	93	U
1114-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L64033-6
SB209/10

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: ASP40

Matrix: (soil/water) SOIL Lab Sample ID: L64033-6

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E3952860

% Moisture: 39 decanted: (Y/N) N Date Received: 02/09/01

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/12/01

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/01/01

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.1 Sulfur Cleanup: (N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.8	U
319-85-7	beta-BHC	2.8	UJ
319-86-8	delta-BHC	2.8	U
58-89-9	gamma-BHC (Lindane)	2.8	U
76-44-8	Heptachlor	2.8	U
309-00-2	Aldrin	2.8	U
1024-57-3	Heptachlor epoxide	2.8	U
959-98-8	Endosulfan I	2.8	U
60-57-1	Dieldrin	5.4	U
72-55-9	4,4'-DDE	5.4	U
72-20-8	Endrin	5.4	U
33213-65-9	Endosulfan II	5.4	U
72-54-8	4,4'-DDD	5.4	U
1031-07-8	Endosulfan sulfate	5.4	U
50-29-3	4,4'-DDT	5.4	U
72-43-5	Methoxychlor	28	UJ
53494-70-5	Endrin ketone	5.4	U
7421-36-3	Endrin aldehyde	5.4	U
5103-71-9	alpha-Chlordane	2.8	U
5103-74-2	gamma-Chlordane	2.8	U
8001-35-2	Toxaphene	280	U
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	110	U
1114-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	54	U
11096-82-5	Aroclor-1260	54	U

NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 211/212

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252_ Case No.: _____ SAS No.: _____ SDG No.: HF___

Matrix (soil/water): SOIL__ Lab Sample ID: L63965-1__

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: 85.2__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	25100			P
7440-36-0	Antimony	56.4	U		P
7440-38-2	Arsenic	1.6			F
7440-39-3	Barium	173			P
7440-41-7	Beryllium	6.2			P
7440-43-9	Cadmium	0.96			P
7440-70-2	Calcium	173000			P
7440-47-3	Chromium	5.4			P
7440-48-4	Cobalt	1.5	B		P
7440-50-8	Copper	19.8			P
7439-89-6	Iron	13300			P
7439-92-1	Lead	47.0			P
7439-95-4	Magnesium	37800			P
7439-96-5	Manganese	2510			P
7439-97-6	Mercury	0.068	U		CV
7440-02-0	Nickel	13.2			P
7440-09-7	Potassium	1460			P
7782-49-2	Selenium	0.55	B	W	F
7440-22-4	Silver	0.68	U		P
7440-23-5	Sodium	796			P
7440-28-0	Thallium	0.26	B	W	F
7440-62-2	Vanadium	5.5	B		P
7440-66-6	Zinc	99.2			P
	Cyanide	2.7	J	*N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SB 211/212

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252_ Case No.: _____ SAS No.: _____ SDG No.: HF___

Matrix (soil/water): SOIL__ Lab Sample ID: L63965-3__

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: 77.6__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9300			P
7440-36-0	Antimony	6.4	B		P
7440-38-2	Arsenic	4.6			F
7440-39-3	Barium	83.7			P
7440-41-7	Beryllium	1.6			P
7440-43-9	Cadmium	9.6	U		P
7440-70-2	Calcium	43800			P
7440-47-3	Chromium	13.8			P
7440-48-4	Cobalt	5.7	B		P
7440-50-8	Copper	14.5			P
7439-89-6	Iron	65600			P
7439-92-1	Lead	11.7			F
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	1140			P
7439-97-6	Mercury	0.051	U		CV
7440-02-0	Nickel	14.9			P
7440-09-7	Potassium	787			P
7782-49-2	Selenium	0.23	U	W	F
7440-22-4	Silver	14.5	U		P
7440-23-5	Sodium	180	B		P
7440-28-0	Thallium	0.82	B	W	F
7440-62-2	Vanadium	23.9			P
7440-66-6	Zinc	142			P
	Cyanide	1.2	J	*N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 511/512

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252_ Case No.: _____ SAS No.: _____ SDG No.: HF____

Matrix (soil/water): SOIL__ Lab Sample ID: L63965-5__

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: 72.3__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	29800			P
7440-36-0	Antimony	63.4	U		P
7440-38-2	Arsenic	3.3			F
7440-39-3	Barium	267			P
7440-41-7	Beryllium	6.7			P
7440-43-9	Cadmium	1.2			P
7440-70-2	Calcium	201000			P
7440-47-3	Chromium	6.7			P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	21.9			P
7439-89-6	Iron	14400			P
7439-92-1	Lead	83.0			F
7439-95-4	Magnesium	40900			P
7439-96-5	Manganese	3230			P
7439-97-6	Mercury	0.056	U		CV
7440-02-0	Nickel	16.5			P
7440-09-7	Potassium	1520			P
7782-49-2	Selenium	0.57	B		F
7440-22-4	Silver	0.87	~~B~~ J		P
7440-23-5	Sodium	859			P
7440-28-0	Thallium	0.58	B	~~W~~	F
7440-62-2	Vanadium	6.5			P
7440-66-6	Zinc	107			P
	Cyanide	1.2	J	~~*~~N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SB 213/214

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252_ Case No.: _____ SAS No.: _____ SDG No.: HF___

Matrix (soil/water): SOIL__ Lab Sample ID: L63965-9__

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: 44.4__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	43100	J		P
7440-36-0	Antimony	113	U	UJ	P
7440-38-2	Arsenic	7.6	J		F
7440-39-3	Barium	202	J		P
7440-41-7	Beryllium	7.4	J		P
7440-43-9	Cadmium	0.96	B	J	P
7440-70-2	Calcium	162000	J		P
7440-47-3	Chromium	1.9	J		P
7440-48-4	Cobalt	5.3	B	J	P
7440-50-8	Copper	31.9	J		P
7439-89-6	Iron	40000	J		P
7439-92-1	Lead	201	J		P
7439-95-4	Magnesium	10700	J		P
7439-96-5	Manganese	1580	J		P
7439-97-6	Mercury	0.11	U	UJ	CV
7440-02-0	Nickel	12.5	J		P
7440-09-7	Potassium	1410	J		P
7782-49-2	Selenium	0.62	B	J W	F
7440-22-4	Silver	1.4	U	UJ	P
7440-23-5	Sodium	416	B	J	P
7440-28-0	Thallium	0.68	B	J W	F
7440-62-2	Vanadium	15.4	J		P
7440-66-6	Zinc	249	J		P
	Cyanide	10.3	J	*N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 213/214

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252_ Case No.: _____ SAS No.: _____ SDG No.: HF____

Matrix (soil/water): SOIL__ Lab Sample ID: L63965-10_

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: 77.8__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23400			P
7440-36-0	Antimony	59.5	U		P
7440-38-2	Arsenic	5.2			F
7440-39-3	Barium	193			P
7440-41-7	Beryllium	4.8			P
7440-43-9	Cadmium	9.5	U		P
7440-70-2	Calcium	144000			P
7440-47-3	Chromium	9.1			P
7440-48-4	Cobalt	4.7	B		P
7440-50-8	Copper	41.1			P
7439-89-6	Iron	48100			P
7439-92-1	Lead	138			P
7439-95-4	Magnesium	21400			P
7439-96-5	Manganese	2370			P
7439-97-6	Mercury	0.049	U		CV
7440-02-0	Nickel	17.0			P
7440-09-7	Potassium	1460			P
7782-49-2	Selenium	0.23	U	W	F
7440-22-4	Silver	0.71	U		P
7440-23-5	Sodium	793			P
7440-28-0	Thallium	0.78	B	W	F
7440-62-2	Vanadium	19.6	B		P
7440-66-6	Zinc	286			P
	Cyanide	6.5	J	N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SB 210A

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252_ Case No.: _____ SAS No.: _____ SDG No.: HF___

Matrix (soil/water): WATER_ Lab Sample ID: L63967-1__

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: _____

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	427000			P
7440-36-0	Antimony	500	U	N	P
7440-38-2	Arsenic	145			F
7440-39-3	Barium	2250			P
7440-41-7	Beryllium	23.4			P
7440-43-9	Cadmium	92.3	B	N	P
7440-70-2	Calcium	2450000			P
7440-47-3	Chromium	779			P
7440-48-4	Cobalt	352	J	N	P
7440-50-8	Copper	1140			P
7439-89-6	Iron	997000			P
7439-92-1	Lead	1300			F
7439-95-4	Magnesium	618000			P
7439-96-5	Manganese	19600			P
7439-97-6	Mercury	0.74			CV
7440-02-0	Nickel	1080	J	N	P
7440-09-7	Potassium	74900			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	120	U	N	P
7440-23-5	Sodium	54300			P
7440-28-0	Thallium	9.7	B		F
7440-62-2	Vanadium	746			P
7440-66-6	Zinc	5400			P
	Cyanide	98.9	J	N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SB 207/208

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252 Case No.: _____ SAS No.: _____ SDG No.: HF___

Matrix (soil/water): SOIL__ Lab Sample ID: L64033-2__

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: 74.4__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14000			P
7440-36-0	Antimony	62.8	U		P
7440-38-2	Arsenic	3.3			F
7440-39-3	Barium	134			P
7440-41-7	Beryllium	2.2			P
7440-43-9	Cadmium	0.50	U		P
7440-70-2	Calcium	126000			P
7440-47-3	Chromium	12.2			P
7440-48-4	Cobalt	4.0	B		P
7440-50-8	Copper	37.9			P
7439-89-6	Iron	14700			P
7439-92-1	Lead	58.7			P
7439-95-4	Magnesium	15600			P
7439-96-5	Manganese	1310			P
7439-97-6	Mercury	0.056	U		CV
7440-02-0	Nickel	13.5			P
7440-09-7	Potassium	1080			P
7782-49-2	Selenium	0.25	U	W	F
7440-22-4	Silver	0.75	U		P
7440-23-5	Sodium	489	B		P
7440-28-0	Thallium	0.48	B	W	F
7440-62-2	Vanadium	12.0			P
7440-66-6	Zinc	136			P
	Cyanide	7.9	J	*N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SS 209/210

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252_ Case No.: _____ SAS No.: _____ SDG No.: HF___

Matrix (soil/water): SOIL__ Lab Sample ID: L64033-4__

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: 72.2__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11500			P
7440-36-0	Antimony	67.9	U		P
7440-38-2	Arsenic	7.5			F
7440-39-3	Barium	137			P
7440-41-7	Beryllium	2.0			P
7440-43-9	Cadmium	10.9	U		P
7440-70-2	Calcium	53700			P
7440-47-3	Chromium	59.3			P
7440-48-4	Cobalt	6.9			P
7440-50-8	Copper	76.2			P
7439-89-6	Iron	118000			P
7439-92-1	Lead	248			P
7439-95-4	Magnesium	5830			P
7439-96-5	Manganese	2110			P
7439-97-6	Mercury	0.067	U		CV
7440-02-0	Nickel	114			P
7440-09-7	Potassium	1160			P
7782-49-2	Selenium	0.23	U		F
7440-22-4	Silver	16.3	U		P
7440-23-5	Sodium	243	B		P
7440-28-0	Thallium	0.23	U		F
7440-62-2	Vanadium	39.7	B		P
7440-66-6	Zinc	695			P
	Cyanide	22.8	J	*N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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NYSDEC - ASP
1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SB 209/210

Lab Name: FRIEND_LABORATORY,_INC. Contract: _____

Lab Code: 10252_ Case No.: _____ SAS No.: _____ SDG No.: HF___

Matrix (soil/water): SOIL__ Lab Sample ID: L64033-6__

Level (low/med): LOW___ Date Received: 02/09/01

% Solids: 60.7__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22200			P
7440-36-0	Antimony	72.3	U		P
7440-38-2	Arsenic	5.3			F
7440-39-3	Barium	184			P
7440-41-7	Beryllium	3.5			P
7440-43-9	Cadmium	11.6	U		P
7440-70-2	Calcium	113000			P
7440-47-3	Chromium	42.9			P
7440-48-4	Cobalt	5.7	B		P
7440-50-8	Copper	62.3	B		P
7439-89-6	Iron	65600			P
7439-92-1	Lead	259			P
7439-95-4	Magnesium	11000			P
7439-96-5	Manganese	2350			P
7439-97-6	Mercury	0.087	U		CV
7440-02-0	Nickel	26.5			P
7440-09-7	Potassium	1350			P
7782-49-2	Selenium	0.28	U		F
7440-22-4	Silver	17.3	U		P
7440-23-5	Sodium	379	B		P
7440-28-0	Thallium	1.0	B	W	F
7440-62-2	Vanadium	31.5	B		P
7440-66-6	Zinc	672			P
	Cyanide	16.2	J	*N	AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

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1 E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: 163965-2

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4029.d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 2 R45905 LC 2-14-01

CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.87	8	J
2.	↓	5.22	18	J
3.		~~2043~~		
4.	~~Unknown~~			
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2/13/01

1 E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name:_____ Contract:_____

Lab Code:_____ Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) _____ Lab Sample ID: L63965-4

Sample wt/vol:_____(g/mL)_____ Lab File ID: C4047.D

Level: (low/med) _____ Date Received:_____

% Moisture: not dec. _____ Date Analyzed:_____

GC Column: _____ ID: _____ (mm) Dilution Factor:_____

Soil Extract Volume: _____(µL) Soil Aliquot Volume: _____ (µL)

R45905
LC
2-14-01

Number TICs found: 3 CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.82	11	J
2.	"	5.19	17	"
3.	"	20.7	6	"
4.				
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Malcolm

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name:_____ Contract:_____

Lab Code:_____ Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) _____ Lab Sample ID: L63965-6

Sample wt/vol:_____(g/mL)_____ Lab File ID: C4061

Level: (low/med) _____ Date Received:_____

% Moisture: not dec. _____ Date Analyzed:_____

GC Column: _____ ID: _____ (mm) Dilution Factor: 1

Soil Extract Volume: _____(µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 4 CONCENTRATION UNITS: (µg/L or µg/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.87	6	J
2.		5.20	13	
3.		19.34	11	
4.		20.73	30	
5.				
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1/12/14/01

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: 463465-7

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4048.D

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 30

CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/kg

R45905
LC
2-14-01

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.83	6	J
2.	Unknown	5.19	1.9	J
3.	Unknown	20.70	6	J
4.				
5.				
6.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L639657

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4031.d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 5

CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.96	6	J
2.		4.85	10	
3.		5.21	27	
4.		14.33	9	
5.		20.71	26	
6.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L639658

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4049d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) R45905 LC 2-14-01 Soil Aliquot Volume: _____ (µL)

Number TICs found: 10 CONCENTRATION UNITS: (µg/L or µg/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	1.76	11	J
2.	"	2.10	13	"
3.	"	2.29	17	"
4.		~~2.92~~	~~11~~ 9	
~~5.~~	Unknown	~~4.84~~	~~15~~	~~J~~
6.	Unknown	5.19	37	
7.		17.40	210	
8.		18.43	23	
9.		19.31	~~17~~ 15	
10.	"	20.41	9	
11.	"	20.70	4	"
12.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L63965-8

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4032d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 10 CONCENTRATION UNITS: (µg/L or µg/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	1.77	20	J
2.		2.10	13	
3.		2.30	16	
4.		2.95	12	
5.		4.85	13	
6.		5.21	43	
7.		17.41	350	
8.		18.44	33	
9.		19.32	21	
10.		20.71	30	
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: 63965-41

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4050.d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 9 DG

CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/Kg

R45905
LC
2-14-01

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	1.76	14	J
2.		2.10	8	
3.		2.29	10	
4.		2.94	9	
5.		4.82	12	
6.	Unknown	5.19	35	
7.		17.39	49	
8.		19.32	8	
9.		20.20	20	
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00154

VMO, 2/15/01

1 E

Malcolm

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name:_____ Contract:_____

Lab Code:_____ Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) _____ Lab Sample ID: LB3915-12

Sample wt/vol:_____(g/mL)_____ Lab File ID: C4065.d

Level: (low/med) _____ Date Received:_____

% Moisture: not dec. _____ Date Analyzed:_____

GC Column: _____ ID: _____ (mm) Dilution Factor:_____

Soil Extract Volume: _____(µL) Soil Aliquot Volume: _____ (µL)

CONCENTRATION UNITS:
(µg/L or µg/Kg)_____

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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2/14/01

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Malcolm

NYSDEC SAMPLE NO.

Lab Name:_____ Contract:_____

Lab Code:_____ Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) _____ Lab Sample ID: L63967-1

Sample wt/vol:_____(g/mL)_____ Lab File ID: C4062.D

Level: (low/med) _____ Date Received:_____

% Moisture: not dec. _____ Date Analyzed:_____

GC Column: _____ ID: _____ (mm) Dilution Factor:_____

Soil Extract Volume: _____(µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 3

CONCENTRATION UNITS:
(µg/L or µg/Kg)_____

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.94	5	J
2.	"	5.19	8	"
3.	"	20.73	14	"
4.				
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1/14/01

FORM I-CLP-VOA-TIC 1/N

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Malcolm

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L63969-4

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4060-d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 4

CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.30	8	J
2.	↓	5.18	14	↓
3.	↓	19.34	12	↓
4.	↓	20.72	34	↓
5.				
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2/14/01

00199

VIO, 2/14/01

Malcolm

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L64033-1

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4062.D

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 3

CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.83	9	J
2.	↓	5.17	19	↓
3.	↓	20.64	9	↓
4.				
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2/14/01

J JM, 2/14/01

1C

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L64033-3

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4122.d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 6

CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.26	8	J
2.		4.81	19	
3.		5.18	19	
4.		20.14	98	
5.		20.41	29	
6.		20.7	15	
7.				
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TAL 6440
1C
2-20-01

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L64033-3

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4068.d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 3

CONCENTRATION UNITS:
(µg/L or µg/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.81	8	J
2.	↓	5.17	26	↓
3.		20.01	18	
4.				
5.				
6.				
7.				
8.				
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Malcolm

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L64033-5

Sample wt/vol: _____ (g/mL) _____ Lab File ID: C4069-d

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. _____ Date Analyzed: _____

GC Column: _____ ID: _____ (mm) Dilution Factor: _____

Soil Extract Volume: _____ (µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 2 CONCENTRATION UNITS: (µg/L or µg/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.82	11	J
2.	↓	5.17	22	J
3.				
4.				
5.				
6.				
7.				
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2/19/10

4/6/10

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Malcolm

NYSDEC SAMPLE NO.

Lab Name:_____ Contract:_____

Lab Code:_____ Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) _____ Lab Sample ID: L64033-7

Sample wt/vol:_____(g/mL)_____ Lab File ID: C4068.D

Level: (low/med) _____ Date Received:_____

% Moisture: not dec. _____ Date Analyzed:_____

GC Column: _____ ID: _____ (mm) Dilution Factor:_____

Soil Extract Volume: _____(µL) Soil Aliquot Volume: _____ (µL)

CONCENTRATION UNITS:
(µg/L or µg/Kg)_____

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name:_____ Contract:_____

Lab Code:_____ Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) _____ Lab Sample ID: L69033-8

Sample wt/vol:_____(g/mL)_____ Lab File ID:_____

Level: (low/med) _____ Date Received:_____

% Moisture: not dec. _____ Date Analyzed:_____

GC Column: _____ ID: _____ (mm) Dilution Factor:_____

Soil Extract Volume: _____(µL) Soil Aliquot Volume: _____ (µL)

Number TICs found: 0 CONCENTRATION UNITS: (µg/L or µg/Kg)_____

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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LC
7-20-01

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L63965-1

Sample wt/vol: _____ (g/mL) _____ Lab File ID: B1762.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) _____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: _____

GPC Cleanup: (Y/N) _____ pH: _____

R48234
LC
3-15-01

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

Number TICs found: 7

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	C
1.	Unknown	19.83	220	JB
2.		23.21	200	J
3.		28.44	90	
4.		34.97	970	
5.		36.80	150	
6.		38.58	210	
7.		42.48	280	
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FORM I-CLP-SV-TIC

VB, 3/15/01

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L03965-3

Sample wt/vol: _____ (g/mL) _____ Lab File ID: A1408.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) ____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.86	200	J
2.		24.28	270	
3.		36.82	310	
4.		37.43	1400	
5.		37.95	140	
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FORM I-GLP-SV-TIC

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L63965-5

Sample wt/vol: _____ (g/mL) _____ Lab File ID: A1409.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) _____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: _____

GPC Cleanup: (Y/N) ____ pH: ____

Number TICs found: 7

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.86	190	J
2.		24.29	210	
3.		30.73	200	
4.		32.97	130	
5.		34.13	120	
6.		37.41	1900	
7.		37.96	210	
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2/23/01

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: ~~L63965-10~~ L63965-9

Sample wt/vol: _____ (g/mL) _____ Lab File ID: ~~B1758.d~~ B1761.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) ____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: _____

GPC Cleanup: (Y/N) ____ pH: ____

RH8234
LC
3-15-01

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	19.83	240	JB
2.		23.21	250	J
3.		25.13	100	
4.		34.96	560	
5.		35.83	290	
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RH 3/15/01

Confirmation

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name:_____ Contract:_____

Lab Code:_____ Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) _____ Lab Sample ID: L63965-9

Sample wt/vol: _____(g/mL)_____ Lab File ID: A1576.d

Level: (low/med) _____ Date Received:_____

% Moisture: decanted: (Y/N) _____ Date Extracted:_____

Concentrated Extract Volume: _____(uL) Date Analyzed:_____

Injection Volume: _____(uL) Dilution Factor:_____

GPC Cleanup: (Y/N) ____ pH: _____

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	11.31	180	J
2.			20.77	460	
3.			24.18	680	
4.			26.19	160	
5.			30.63	170	
6.			32.95	220	
7.			34.04	170	
8.			36.91	660	
9.			37.18	350	
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: ~~LB2~~ LB3965-10

Sample wt/vol: _____ (g/mL) _____ Lab File ID: B1758.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) ____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ Date: ____

BN48234 LC 3-15-01

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

Number TICs found: 11

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	19.82	240	JB
2.		20.18	98	J
3.		23.20	210	
4.		23.26	180	
5.		26.04	180	
6.		26.88	95	
7.		27.33	170	
8.		28.56	120	
9.		29.75	110	
10.		35.84	130	
11.		39.44	220	
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FORM I-CLP-SV-TIC

JB, 3/15/01

00565

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L63967-1

Sample wt/vol: _____ (g/mL) _____ Lab File ID: A1382.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) ____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) ____ pH: ____

CONCENTRATION UNITS: L
(ug/L or ug/Kg) ug/kg ~~ug/kg~~

Number TICs found: 6

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	16.03	2	J
2.		22.09	4	
3.		29.66	4	
4.		32.97	14	
5.		35.90	14	
6.		38.57	4	
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VAJ 2/19/01 L4638

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10/88

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: L64033-2

Sample wt/vol: _____ (g/mL) _____ Lab File ID: A1417.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) _____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: _____

GPC Cleanup: (Y/N) ____ pH: ____

IS Out

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 20

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.83	230	JB
2.		24.25	490	J
3.		25.48	100	
4.		25.74	110	
5.		27.11	93	
6.	(PAH)	27.44	150	
7.	(")	27.53	150	
8.	(")	27.77	210	
9.	(")	27.86	100	
10.	(")	28.41	210	
11.	(")	28.49	110	
12.		29.31	100	
13.	(PAH)	31.68	94	
14.		31.97	100	
15.		33.07	99	
16.		33.43	110	
17.		33.53	120	
18.		34.11	120	
19.		35.46	120	
20.		38.13	520	
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FORM I-CLP-SV-TIC

R48241 3/15

3/23/01

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Confirmation

NYSDEC SAMPLE NO. | | |

Lab Name: _____ Contract: _____ | | |

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: 164033-2

Sample wt/vol: _____ (g/mL) _____ Lab File ID: A1579.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) _____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: _____

GPC Cleanup: (Y/N) ___ pH: _____

Number TICs found: 19 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	17.66	120	J
2.		20.77	300	
3.		24.19	1200	
4.		25.20	130	
5.		25.42	160	
6.		25.68	140	
7.		27.04	130	
8.		27.39	210	
9.		27.47	200	
10.		27.71	310	
11.		27.80	130	
12.		28.35	320	
13.		28.47	190	
14.		29.26	140	
15.		31.92	170	
16.		32.97	150	
17.		33.38	220	
18.		34.05	120	
19.		38.10	850	
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: LL4033-4

Sample wt/vol: _____ (g/mL) _____ Lab File ID: A1416.D

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) _____ Date Extracted: _____ 12/18/2011

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____ 12/11

Injection Volume: _____ (uL) Dilution Factor: _____ 3/15

GPC Cleanup: (Y/N) _____ pH: _____

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	12.45	200	J
2.		20.84	280	JB
3.		24.25	430	J
4.		26.41	110	
5.		30.43	110	
6.		31.97	130	
7.	Cyclotetrasiloxane, octamethyl-	33.03	310	
8.		34.11	160	
9.		37.93	150	
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VD, 2/23/01

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) _____ Lab Sample ID: 4-4033-6

Sample wt/vol: _____ (g/mL) _____ Lab File ID: A1410.d

Level: (low/med) _____ Date Received: _____

% Moisture: decanted: (Y/N) _____ Date Extracted: _____

Concentrated Extract Volume: _____ (uL) Date Analyzed: _____

Injection Volume: _____ (uL) Dilution Factor: _____

GPC Cleanup: (Y/N) ___ pH: ___

Bad DFL

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

Number TICs found: 13

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.86	270	J
2.		23.54	130	
3.		24.28	240	
4.		24.36	350	
5.		24.40	240	
6.		25.79	430	
7.		27.00	120	
8.		27.16	300	
9.		28.47	540	
10.		30.90	1300	
11.		32.04	1400	
12.		35.12	1100	
13.		36.14	530	
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2/23/01

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