SITE INVESTIGATION REPORT

PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

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1.0 INTRODUCTION

Phase I and Phase II Environmental Site Assessments (ESAs) of the property located at 2137 Seneca Street, Buffalo, New York (Site) were completed between June and August 1999. The Site Assessments were undertaken by The Fourth River Company (FRC) on behalf of a prospective purchaser of the property, Walnut Capital Partners. The Site is owned by Franchise Finance Corporation of America (FFCA).

The results of the ESAs indicated that volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals were present in soil and groundwater on the Site at concentrations which exceeded the relevant New York State standards.

On behalf of FFCA, representatives of Hodgson, Russ, Andrews, Woods & Goodyear (HRAWG) and Conestoga-Rovers & Associates (CRA) met with representatives of the New York State Department of Environmental Conservation (NYSDEC) on April 14, 2000. The parties agreed that additional investigative activities were necessary to determine the nature and extent of chemicals and metals in on-Site soil and groundwater. Subsequently, FFCA voluntarily completed a Preliminary Site Investigation to confirm the data reported in the FRC ESAs and to develop a Site characterization. The results of the Preliminary Site Investigation demonstrated that an area of environmental concern existed in the northern quadrant of the property.

FFCA developed a Work Plan for a Site Investigation/Feasibility Study (SI/FS) as part of a Voluntary Cleanup Agreement under the Voluntary Cleanup Program to further define the conditions in the northern quadrant of the property. The activities associated with the SI were completed with the receipt and validation of the final analytical data in January 2002. Following review of the preliminary results of the SI, FFCA proposed and NYSDEC agreed that the SI Report would be prepared and the site characterization reviewed before undertaking the FS.

1.1 OBJECTIVE

The primary purpose of the SI was to gather the data necessary to:

i) complete the Site characterization, particularly in the northern quadrant of the Site; and

ii) gather the data necessary to conduct the FS.

1.2 ORGANIZATION OF THE REPORT

This report presents the results of the Site investigations and is organized as follows:

Section 1 – Introduction: An overview of the history and objective of the Site Investigation is presented in Section 1;

Section 2 - Site Location and Description: The location and physical features of the Site are described in Section 2;

Section 3 - Field Activities and Sample Analyses: A summary of the field activities and procedures associates with the SI is presented in Section 3;

Section 4 - Regional Geology and Hydrogeology: The regional geologic and hydrogeologic characteristics are briefly described in Section 4;

Section 5 - Site Geology and Hydrogeology: The characterization of Site geology and hydrogeology is presented in Section 5;

Section 6 – Nature and Extent of Contamination: The analytical data collected during the SI are presented and discussed in Section 6; and

Section 7 – Summary and Conclusions: A summary of the Site conditions is presented in Section 7. Also presented in Section 7 are the conclusions drawn from the data and the work proposed to be performed to complete the project.

2.0 SITE LOCATION AND DESCRIPTION

The following subsections present descriptions of the Site and its current conditions.

2.1 SITE LOCATION AND DESCRIPTION

The Site is located at 2137 Seneca Street in Buffalo, Erie County, New York, and includes the properties at 2137 through 2153 Seneca Street, excluding 2151 Seneca Street. The location of the Site within the City of Buffalo is shown on Figure 2.1.

2.2 SITE DESCRIPTION

The Site comprises approximately 0.5-acre of relatively flat property located on the southwest corner of Seneca Street and Kingston Place. A site plan is shown on Figure 2.2.

The Site is located in an urban area and is surrounded by commercial and residential properties. Commercial properties are located adjacent to the Site to the north, east, and west and residential/commercial properties are located to the south.

The FRC ESA reports describe the historic uses of the Site as residential dwellings, a pharmacy, a retail tire establishment, automotive service building, offices, and a dry cleaning establishment. Gasoline filling stations were reportedly located in the southeast corner of the Site and on the adjacent property (2157 Seneca Street). Underground storage tanks were believed to have been present at both these locations. The historic locations of on-site buildings are shown on Figure 2.3. A list of the types of businesses which occupied these buildings is presented in Table 2.1.

Sanborn Fire Insurance Maps and City Directory listings for the Site and adjacent properties were received and reviewed during the SI. These records show that two dry cleaning businesses were located within one block of the Site to the northwest; one at the southwest corner of Princeton Place and Seneca Street and one at the southeast corner of Norman Avenue and Seneca Street. A third dry cleaning establishment was located further northwest at the southeast corner of Kamper Avenue and Seneca Street. One or more of these businesses appear in records dated as early as 1940. The locations of these intersections can be seen on Figure 2.1. Other uses of properties in the vicinity of the Site were reported to include a printing facility, a metal fabrication shop, a glass cutting business, a bank and other retail establishments. Anecdotal evidence indicates that solvents were used at the glass cutting business.

An attempt was made to acquire as-built drawings of buildings which currently or historically occupied the Site. However, such drawings were not located.

2.3 SURFACE CHARACTERISTICS

One building, a former restaurant, is currently located on the Site. The majority of the ground surface surrounding the building is an asphalt paved parking lot. The surface characteristics are shown on Figure 2.2.

2.4 PROPERTY OWNERSHIP

A listing of the current ownership of the properties surrounding the Site is presented in Table 2.2. A property boundary survey was performed most recently in 1985. The boundary survey is shown on the survey plan presented in Appendix A.

2.5 UNDERGROUND UTILITIES

Numerous underground utilities are present adjacent to the Site along both Seneca Street and Kingston Place. These utilities include gas lines (one of which enters the Site from Kingston Place) and sanitary and storm sewers. The locations of the underground utilities are shown on Figure 2.2.

Drawings showing the storm and sanitary sewers in the vicinity of the Site were obtained from the Buffalo Sewer Authority (BSA). The layouts of the sewers shown on the BSA drawings have been compiled onto a single plan, Plan 1 located at the back of this report. Copies of the BSA drawings are presented in Appendix B. Profiles of the sewers are also shown on the BSA drawings. Field measurements were obtained which verified the invert depths shown on the BSA drawings.

The information presented on Plan 1 shows that stormwater in the area is conveyed to Cazenovia Creek via two separate storm sewers. One storm sewer runs from the southwest to northeast along Seneca Street to Kingston Place. At Kingston Place this sewer is connected to the sanitary sewers along Seneca Street by overflow chambers.

The storm sewer at Seneca Street and Kingston Place then turns 90 degrees and runs southwest along Kingston Place to the Cazenovia Creek outfall. There is no storm sewer on Seneca Street between Kingston Place and Princeton Place. Storm sewer is again present along Seneca Street from the corner of Princeton Place to Yale Place where it is tied to the sanitary overflow, turns 90 degrees and runs southwest along Yale Place to another outfall at Cazenovia Creek.

2.6 NATURAL RESOURCES

A natural resource field and recovery survey was performed by Mr. Mark Lindberg of Fine Line Technical Services during the Preliminary Site Investigation (November 2000). The survey showed that there are no identified rare, threatened or endangered species, habitats of concern, or freshwater wetlands within a one-half mile radius of the Site. Portions of Cazenovia Creek classified as Classes B and C are located within a one-half mile radius of the Site. The complete natural resource survey report is presented in Appendix C.

2.7 GROUNDWATER USE

The Site is located within the Buffalo Water Authority district and all potable water is supplied through that system. Nonetheless, a survey of groundwater users located within a 0.5-mile radius of the Site was conducted as part of the Site Investigation. The Erie County Department of Health and NYSDEC were contacted during the well survey. According to those Agencies, there are no users of groundwater, either residential or industrial, within a half-mile radius of the Site.

3.0 FIELD ACTIVITIES AND SAMPLE ANALYSES

Field activities, including subsurface soil sampling, groundwater monitoring well installation, groundwater sampling, and hydraulic monitoring and testing have been conducted at the Site. These activities were conducted by FRC in 1999 and CRA in 2000 and 2001. Summaries of the field activities completed are presented in the following subsections. A summary of the samples collected and analyses performed, is presented in Table 3.1.

3.1 SUBSURFACE SOIL SAMPLING

In July 1999, FRC advanced 12 boreholes (SB-1 through SB-10) at the Site using a Geoprobe rig. These boreholes were completed to depths ranging from 1.5 to 20 feet below ground surface (BGS). Soil samples were collected for chemical analysis based on screening of the soil cores with a photoionization detector (PID). Nine soil samples were collected for analysis of Target Compound List (TCL) VOCs and six samples were collected for analysis of Spill Technology and Remediation Series (STARS) SVOCs. All soil samples from these boreholes were collected from below the water table.

In September 2000, CRA advanced 12 additional soil borings (SB-11 through SB-16A and MW-1 through MW-5). Soil samples collected from the unsaturated zone in each borehole were screened with a PID, and portions of each sample were retained for headspace screening. Soil samples for chemical analysis were selected based upon the headspace screening results. Soil samples from 11 of the 12 boreholes advanced were analyzed for TCL VOCs, STARS SVOCs, and/or Target Analyte List (TAL) metals as indicated in Table 3.1.

Following review of the analytical data from the September 2000 sampling, it was determined that additional soil characterization was required. Therefore, samples were collected from twelve additional soil borings (SB-17 through SB-29) in August 2001. Borehole installation and sample collection were conducted in accordance with the procedures contained in the Work Plan with the following exceptions.

i) The soil borings were installed using a Geoprobe system rather than a drill rig and hollow stem augers.

ii) The PID used for screening recovered soil samples malfunctioned on August 22, 2001. Therefore, the analytical samples from SB-18, SB-22, and SB-23 were selected based upon physical characteristics and depth relative to the water table rather than soil vapor readings.

iii) Borings SB-26 and SB-27 were installed and sampled for the purpose of delineating the SVOC presence in soils in the area of SB-8 and SB-9. The analytical samples from SB-8 and SB-9 were collected from the 4 to 8 and 0 to 4 foot BGS intervals, respectively. The samples from borings SB-26 and SB-27 were each collected from the interval directly above the water table surface (10 feet to 12 feet BGS).

The locations of the soil borings are shown on Figure 2.2. Stratigraphic logs of the borings are presented in Appendix D.

3.2 GROUNDWATER

3.2.1 MONITORING WELL/PIEZOMETER INSTALLATION

In 2000/2001, CRA installed 19 overburden monitoring wells and three piezometers on and adjacent to the Site. Monitoring well and piezometer installation details are presented in Table 3.2, and instrumentation logs are included on the stratigraphic logs contained in Appendix D.

The SI/FS Work Plan stipulated that two piezometers were to be installed on Kingston Street along the alignment of the sewers. Due to overhead and underground utility interferences, PZ-1 was relocated. Upon review of the revised location and the intended use of the data from this well (evaluation of the influence of the sewers on groundwater flow), it was decided that an installation nearer the intended location was required. Therefore, an additional piezometer, PZ-3, was installed.

Overhead utility interferences prevented the use of a drill rig for installation of the boreholes for monitoring wells MW-10 and MW-10A. These boreholes were installed using a geoprobe instead of a drill rig. Due to the small diameter boreholes, wells were constructed of 1-inch outside diameter PVC.

3.2.2 WELL AND PIEZOMETER DEVELOPMENT

All of the monitoring wells and piezometers were developed through a combination of pumping with a peristaltic pump and/or surging with a stainless steel or teflon bailer. A minimum of 10 volumes of groundwater were removed from wells and piezometers which exhibited adequate recharge. The well development records are presented in Appendix E.

3.2.3 GROUNDWATER SAMPLING

During the 1999 investigation, groundwater samples were collected from two soil borings, SB-6 and SB-9. Additional groundwater sampling was conducted in October 2000, September 2001, and November 2001. At least one groundwater sample was collected from each of the 19 Site monitoring wells. The samples were analyzed for TCL VOC, STARS SVOC, and/or TAL metals.

With the exceptions noted below, monitoring wells were purged and sampled in accordance with the procedures contained in the SI/FS Work Plan. The exceptions to the Work Plan procedures were:

i) due to slow recharge which would have made full recovery especially long, the minimum of 7 days of recovery between development and sampling specified in the SI/FS Work Plan was not always allowed for wells with poor recovery; and

ii) the inside diameter of wells MW-10 and MW-10A was too small (1-inch) to allow use of a bailer for purging or sampling. These wells were purged using a peristaltic pump and VOC samples were collected by filling the pump tubing, crimping the tubing shut, releasing the pump vacuum, and draining the tubing into the sample containers.

The groundwater analytical parameters for all the sampling events are summarized in Table 3.1. Well purging records are contained in Appendix E.

3.3 HYDRAULIC MONITORING

Complete rounds of water level measurements have been collected on five occasions in accordance with the procedures contained in the SI/FS Work Plan. The water level measurements were converted to elevation for the evaluation of groundwater flow direction. A summary of the groundwater elevation data is presented in Table 3.3.

3.4 HYDRAULIC CONDUCTIVITY TESTING

The hydraulic conductivity of the monitoring wells was tested using two different methods: well recovery tests and slug tests.

3.4.1 RECOVERY TESTS

Recovery tests following well development or sampling were not routinely performed. However, the field records from well development and purging for sampling include information regarding well yield and recovery. This information is presented in Table 3.4.

3.4.2 SLUG TESTS

Slug tests were performed in each monitoring well except MW-10 and MW-10A to collect the data necessary to calculate estimated hydraulic conductivity (K) values.

At least one rising head test was conducted in each well tested.

The small diameter (1-inch) of wells MW-10 and MW-10A prevented the use of a mechanical slug and pressure transducer; therefore, these wells were not tested.

3.5 SITE SURVEY

With the exception of monitoring wells MW-12 and MW-12A, which were surveyed by CRA personnel, the location and elevation of the monitoring wells and soil borings were surveyed by a licensed land surveyor following installation. Elevations were measured relative to the National Geodetic Vertical Datum. The locations of the monitoring wells and soil borings are shown on the site plan on Figure 2.2. Surface features such as catchbasins, building corners, curb lines, etc. were also surveyed. A copy of the survey plan is contained in Appendix A.

3.6 WASTE DISPOSAL

Both solid and liquid wastes were characterized and disposed in accordance with the appropriate regulations.

Borehole cuttings were characterized as a non-hazardous solid waste. The drummed waste was transported to CWM Chemical Services (CWM) for disposal.

Groundwater and decontamination waters generated in 2000 were also disposed at CWM. Copies of the waste manifests for both the solid and liquid wastes are presented in Appendix F.

Following receipt of the analytical data from the September 2001 sampling program, an application was made to the BSA to discharge the wastewaters generated during the SI directly into the municipal sewer for treatment at the Publically Owned Treatment Works (POTW). A permit was granted and the wastewaters from the September and November 2001 monitoring events were discharged December 20, 2001. A copy of the discharge permit is contained in Appendix G.

4.0 REGIONAL GEOLOGY AND HYDROGEOLOGY

4.1 GEOLOGY

4.1.1 OVERBURDEN

Much of Erie County and the Lake Erie Plain exhibit the effects of Wisconsin stage Pleistocene glaciation. The most prominent features are a series of west to east trending end moraines and southwest to northeast trending beach ridges of the late Wisconsin age Lakes Warren and Whittlesey. The Surficial Geologic Map of New York - Niagara Sheet (Cadwell, 1988) and the Quaternary Geology of New York – Niagara Sheet (Muller, 1977) indicate that the unconsolidated materials in the vicinity of the Site consist predominately of generally reddish-brown, generally laminated, lacustrine silt and clay with occasional sand and fine, rounded gravel deposited in these proglacial lakes.

The clays may occasionally be underlain by ablation or lodgement till deposited by the ice sheet. This till may vary from a silty clay to a sandy silt and is moderately to abundantly stony. The lodgement till is comprised of clay, silt, sand, and larger grain sizes transported by and deposited beneath the glacial ice. It is typically poorly sorted, compact and has a low permeability. The till generally overlies bedrock in the region.

Other post-glacial deposition may include minor amounts of alluvium, wetlands deposits (peat), and artificial fill resulting from the areas in proximity to Cazenovia Creek.

4.1.2 BEDROCK

The bedrock geology of the area consists of Upper (Late) Silurian and Lower to Middle Devonian age strata which tend to dip southward at approximately 40 feet per mile and strike approximately east-west.

According to the Geologic Map of Erie County, New York Bedrock Geology (Buehler and Tesmer, 1963), the uppermost bedrock in the area beneath the Site is the Marcellus Formation of the Hamilton Group. The Middle Devonian Marcellus Formation is made up of black calcareous shales and some calcareous concretions. The contact with the underlying Seneca Member of the Onondaga Limestone Formation is gradational.

4.2 HYDROGEOLOGY

4.2.1 OVERBURDEN HYDROGEOLOGY

The overburden materials in the area and under the Site are not important sources of either domestic or industrial water. Groundwater is not extensively utilized in the Buffalo area due to the availability of surface water supplies and the developed municipal water supply system. The overburden of the Lake Erie Basin is primarily glacially derived and consists of till, lake sediments, and sand or gravel deposits. In the area of the Site the overburden consists of varying thicknesses of fill underlain by fine-grained lacustrine and glacial deposits, primarily a silty clay with occasional thin seams of silty or sandy materials. Below this, and directly overlying the bedrock, a compact, poorly sorted, thin glacial till may be present. The lacustrine clay generally exhibits low hydraulic conductivities on the order of 1 x 10-7 cm/sec or less and consequently severely retards groundwater movement. The fill and/or recent alluvium overlying the fine-grained lacustrine deposits sometimes acts as a perched waterbearing zone. The thin silty-sandy seams within the clay are infrequent and usually not laterally extensive but do allow limited horizontal groundwater movement. Horizontal migration of groundwater through the fill/alluvium and through silty/sandy layers and stringers in the lacustrine clay is often disrupted by underground utilities. The utility bedding may act as a preferential pathway for overburden groundwater flow.

4.2.2 BEDROCK HYDROGEOLOGY

The Marcellus Shale is the uppermost bedrock unit in this area. Depth to the bedrock beneath the Site can be over 30 feet. Generally the unit strikes east-west and dips southerly at 40 feet per mile. It is well fractured and jointed. Horizontal pathways, such as fractures and bedding planes control bedrock groundwater flow in this area. Secondary vertical fractures and joints within the formation further connect the horizontal pathways and create flow paths. Generally, the vertical joints in the Marcellus Shale trend north-south, northeast-southwest, and east-west. Conductivity testing in the formation in central western New York yielded a hydraulic conductivity arithmetic average of 5.02 x 10-3 cm/sec.

The general direction of upper bedrock groundwater flow in the area of the Site would most likely be toward the southwest and Cazenovia Creek, located less than 1000 feet away.

5.0 SITE GEOLOGY AND HYDROGEOLOGY

5.1 GEOLOGY

Characterization of the Site geology is limited to the overburden regime. The overburden at the Site generally consists of fill overlying fine-grained native soils.

The information used in this characterization was obtained primarily from the boreholes installed by CRA in 2000 and 2001. Cross-sections illustrating the overburden stratigraphy of the Site are presented on Figures 5.2 through 5.5. Figure 5.1 shows the cross-section alignments.

5.1.1 FILL

Fill was encountered at all boreholes installed at the Site. The fill ranged in thickness from 1.5 to 18 feet with the thickest fill encountered off-site to the northwest at well location MW-12/12A. The fill consists of reworked soil, primarily silt and clay with sand and gravel. Red brick, coal, slag, wood, ceramic tile, concrete, and other assorted small building demolition debris were also encountered in the fill.

The fill is generally thickest northwest of the Site. Fill thickness on-site is greatest north of and adjacent to the existing building. An isopach map of the fill thickness is presented on Figure 5.6.

5.1.2 NATIVE SOIL

The native soils underlying the fill generally consist of sand overlying silt and/or clay; however, the soil stratigraphy is highly variable and silt and clay generally underlies the fill in the southeastern area of the Site. With the exception of MW-4/4A where the lowermost interval is sand, the bedrock is overlain by clay.

The hydraulic conductivity (K) of each of the monitoring wells was determined by performing slug tests and using the resultant data to calculate a K value. K values were calculated for an unconfined aquifer by the Bouwer-Rice method using AQTESOLV software. The calculated K values are presented in Table 5.1 and the calculations are presented in Appendix H. The hydraulic conductivity of the shallow overburden, the fill or underlying sand, ranges from 2.36E x 10^{-3} to 3.28 x 10^{-4} centimeters per second (cm/sec) with a geometric mean of 2.74 x 10^{-3} cm/sec. The hydraulic conductivity of the deep overburden overlying the bedrock ranges from 3.64×10^{-4} to 9.79×10^{-6} cm/sec with a geometric mean of 1.41×10^{-5} cm/sec.

5.1.3 BEDROCK

The bedrock at the Site was encountered at three borings, MW-4A, MW-10A, and MW-11A, at depths ranging from 25 feet at MW-10A to 30.0 feet BGS at MW-4A. Based on the data from these borings, the dip of the bedrock appears to be northwest to southeast.

5.2 HYDROGEOLOGY

Groundwater monitoring wells and piezometers at the Site are installed in the shallow overburden (15) and deep overburden, immediately above the bedrock surface (7). These wells and piezometers were installed between September 2000 and November 2001.

5.2.1 GROUNDWATER LEVEL ELEVATIONS

One complete round of hydraulic monitoring has been conducted since the well installation program was completed. The water level elevations measured in the shallow and deep monitoring wells in this round, November 26, 2001, have been plotted on Site plans and potentiometric surface contours have been drawn. These data and contours are presented on Figures 5.7 and 5.8, respectively.

The water elevation database is not sufficient to evaluate seasonal variations in groundwater depth or flow. In addition, the November 2001 water levels were measured shortly after the development of wells MW-12 and MW-12A and it is not known whether the measurements are representative of static conditions in these wells.

5.2.1.1 SHALLOW OVERBURDEN

The current pattern of groundwater flow in the shallow overburden is consistent with that identified during the Preliminary Site Investigation and described in the SI/FS Work Plan. Generally, shallow groundwater flows from southeast to northwest over the southerly portion of the Site, and bends to the west over the northerly portion of the Site in the vicinity of Kingston Place. This flow direction in the northern portion of the Site is believed to reflect the influence of the storm sewer along Kingston Place. The Kingston Place storm sewer was sounded in August 2001 and was found to be dry. The invert elevations of the sewers and groundwater elevations measured November 26, 2001 are shown on the subsurface profiles (Figures 5.2 through 5.5). These further demonstrate that shallow groundwater flowing to the northwest and west is intercepted by the Kingston Place storm sewer.

The hydraulic gradient in the shallow overburden across the Site during the monitoring events has ranged from 0.0030 feet/foot (November 2001) to 0.00912 feet/foot (September 2001). The average gradient is 0.0047 feet/foot.

5.2.1.2 DEEP OVERBURDEN

The deep overburden monitoring wells are located along the north Site boundary and north and northeast of the Site. Only one deep overburden well, MW-4A, has been installed within the Site boundary. Based on the available data, groundwater flow in the deep overburden is from the northwest to southeast and east. This direction is opposite that in the shallow overburden and seems to follow the dip of the bedrock surface. The difference in flow direction between the shallow and deep overburden further substantiates the influence of the storm sewer on Kingston Place on shallow groundwater flow at the Site.

OR DISTRIBUTION OF [illegible] FILL MATERIAL.

6.0 NATURE AND EXTENT OF CONTAMINATION

Samples of environmental media, including soil vapor, soil, and groundwater were collected and analyzed during the Site investigations. The data resulting from the 2000/2001 field activities have been reviewed for quality assurance as laid forth in the SI/FS Work Plan. The following subsections present the analytical results for each media sampled. Laboratory analytical reports or analytical data assessments are contained in Appendix I.

6.1 SOIL VAPOR

Organic vapor readings were collected from soil cores to aid in the selection of soil analytical samples and evaluate the potential for organic vapors to reach indoor air in existing or potential future structures on the Site.

6.1.1 RESULTS

The organic vapor data have been compiled and are presented on the stratigraphic logs in Appendix D.

The range of organic vapor readings was from 0 to >2,000 parts per million (ppm), with the highest readings taken at SB-18, 0 to 2 feet BGS, and SB-19, 6 to 10 feet BGS. The sample from SB-18 was collected immediately beneath the asphalt surface cover and, in all likelihood, the vapor reading reflects residue of the asphalt. SB-19 is located within the area of soils impacted by PCE (see Section 6.2). Excluding these samples, the maximum organic vapor reading in screened unsaturated soil was 161 ppm in soil boring SB-28 at 2 to 4 feet BGS.

Monitoring well MW-2 is located immediately northwest of the existing building. Concern has been raised as to the impact of the VOCs in Site soils and shallow groundwater on indoor air in this or future buildings. The soil vapor readings of samples collected from the boring for MW-2 ranged from 1.7 to 5.5 parts per million (ppm).

Since the organic vapor measurements were not compound-specific, a comparison to risk-based air standards cannot be made.

The groundwater-to-indoor air exposure pathway has been evaluated using the Site data. Several states have developed conservative generic criteria that are protective of the groundwater-to-indoor air exposure pathway for use in screening VOC levels in groundwater. The Michigan Department of Environmental Quality (MDEQ 2000) is one of these states. The MDEQ has developed Generic Groundwater Volatilization to Indoor Air Inhalation Criteria (GVIIC) for residential and industrial/commercial land use. The MDEQ GVIIC are considered to be protective of health effects that may result from chronic inhalation exposure to hazardous substances. The GVIIC are based on the Johnson and Ettinger Model (JEM). The JEM was developed to estimate diffusive and convective transport of chemical vapors from soils/groundwater to indoor air. The JEM is widely used by USEPA, the American Society for Testing and Materials (ASTM), and several other states and international jurisdictions. In general terms, the JEM consists of five fundamental steps:

i) calculation of the ratio of the soil vapor phase concentration (determined from groundwater concentration assuming equilibrium) to the total concentration at the source;

ii) calculation of the effective diffusion coefficient of chemical vapor flow through soil and/or groundwater, which occurs through both pore air and pore water spaces;

iii) calculation of the infiltration rate of chemical vapors into the building;

iv) calculation of the building vapor concentration to the total groundwater vapor source concentration ratio; and

v) back calculation to the GVIIC from an acceptable indoor air concentration.

The GVIIC for PCE, TCE, and 1,2-DCE for industrial and residential land use are presented in Table 6.1. The maximum average concentrations of these compounds in on-Site monitoring wells are also presented on Table 6.1. Comparing the GVIIC to the maximum average concentrations of these compounds detected in Site groundwater shows that the detected concentrations are well below the GVIIC. Therefore, it is expected that these VOC levels will not result in any adverse indoor air impact.

6.1.2 SUMMARY

VOCs are present in soil vapors and in Site groundwater. However, the soil vapor concentrations are low (1.7 to 5.5 ppm) and the VOC concentrations in groundwater are lower than the GVIIC.

6.2 SUBSURFACE SOILS

Subsurface soil samples were collected and analyzed during each of the investigative programs. The sample collection and analyses details are summarized in Table 3.1. Surface soils at the Site are not exposed; therefore, separate characterization of the surface soils is not necessary.

6.2.1 RESULTS

Summaries of the compounds detected in the subsurface soil samples collected at the Site are presented in Tables 6.2 and 6.3. The soils analytical data are presented in Appendix I. The data validation reports for the samples collected and analyzed in 2000/2001 are also contained in Appendix I.

Analyte concentrations detected in site soils have been compared to the New York State soil cleanup objectives presented in TAGM 4046. Analyte concentrations exceeding the cleanup objectives are highlighted in Tables 6.2 and 6.3.

6.2.1.1 ORGANIC CHEMICAL COMPOUNDS

Both VOCs and SVOCs were detected in soil samples at concentrations exceeding the TAGM 4046 cleanup objectives. Detailed descriptions of the locations and extent of the exceedances of the TAGM 4046 cleanup objectives for organic chemical compounds are presented in the following subsections.

6.2.1.1.1 VOLATILE ORGANIC COMPOUNDS

The soil samples analyzed in 1999 (from borings SB-1B and SB-3 through SB-10) were collected from intervals within the saturated zone of the borings. Therefore, the analytical data from these samples is reflective of the contribution from groundwater. The subsequent soil sampling programs were designed to provide the data necessary to characterize the unsaturated soils across the Site. Because they are not representative of the unsaturated soils, the data from the borings installed in 1999 are not discussed further in this report.

The VOCs detected in the soil samples at concentrations exceeding the TAGM 4046 cleanup objectives are limited to acetone and PCE. Acetone was detected in one sample (SB-16A , 7.0 to 9.0 feet BGS) at a concentration, 420 μg/Kg, which exceeds its TAGM standard of 200 μg/Kg. The presence of acetone at this concentration in only one location does not present either an environmental or human health concern. Therefore, acetone in Site soils will not be discussed further in this report.

The detected concentrations of PCE in unsaturated soils on-Site range from 1.5J to 29,000 μg/Kg. The TAGM 4046 cleanup objective for PCE is 1,400 μg/Kg. All borings in which PCE was detected at concentrations exceeding the cleanup objective are located in the northeast quadrant of the Site. The concentrations of PCE detected in the unsaturated soils have been plotted on a Site plan and the plan is presented on Figure 6.1. The plotted data show that the samples exhibiting PCE presence above the cleanup objective were all collected from borings centered around SB-16A northwest of the existing on-site building.

The data presented on Figure 6.1 further demonstrate that the areal extent of soils containing PCE at elevated concentrations is well defined.

Soil boring SB-17 was installed and sampled to gather data for use in preparing a profile of the PCE concentrations in the area of SB-16A. Review of the soils analytical data presented in Table 6.2 shows that PCE is present throughout the interval between ground surface and the top of the water table, approximately 9 feet BGS. PCE was detected in all samples with concentrations increasing with depth. While PCE is present throughout this regime, only the concentration in the lowermost interval (8 to 10 feet BGS) exceeded the TAGM cleanup objective. The sample exhibiting the exceedance was collected across the water table surface. Therefore, it is difficult to determine whether the concentration, 4,100 μg/L, is reflective of chemical presence in soil or groundwater. To present the most conservative scenario for evaluation, it has been assumed that the concentration is reflective of soil. Based on these data, the total thickness of impacted unsaturated soil in the area is assumed to be 9 feet. The thickness of the interval exhibiting the exceedance is assumed to be 2 feet, between 7 and 9 feet BGS.

Based upon the definition of the areal extent of PCE impacted soils and the assumptions regarding depth, the total volume of impacted soil is estimated to be 420 cubic yards and the volume of soil exhibiting exceedances of the PCE standard is estimated to be 90 cubic yards.

Soil samples from borings SB-22 and SB-23 were collected and analyzed to obtain the data necessary to evaluate the presence of VOCs in the bedding of the storm sewer on

Kingston Street. The only VOC detected in the samples from these borings was PCE at low concentrations, 19 and 1.6J μg/Kg respectively.

6.2.1.1.2 SEMI-VOLATILE ORGANIC COMPOUNDS

Six SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenz(a,h)anthracene) were detected in soil samples at concentrations which exceeded their respective cleanup objectives. The exceedances are highlighted in Table 6.2. The locations at which the exceedances were detected have been plotted on a Site plan and the plan is shown in Figure 6.2.

Exceedances of the TAGM 4046 cleanup objective for benzo(a)anthracene were noted in the samples collected from SB-8 and SB-9 during the ESAs and not in any other samples collected in this area of the Site. The rationale for the selection of the depth intervals for the ESA samples is unknown. However, based on a review of the boring logs contained in Appendix D, the following has been assumed:

i) the sample from SB-8 was collected from the 4-foot interval just above the saturated zone (4′ to 8′ BGS); and

ii) the sample from SB-9 was collected from the 0-4 foot BGS interval to evaluate an "oil or tar-like substance" that was observed 2 feet BGS.

Borings SB-26 and SB-27 were drilled and sampled during the SI to verify that the exceedances of the cleanup objective for benzo(a)anthracene in SB-8 and SB-9 were isolated hotspots and not representative of an area of significant environmental impact. No evidence of chemical presence was observed while drilling either SB-26 or SB-27. The PID readings were not elevated and the soils exhibited no evidence of chemical presence (odor, color, etc.). Therefore, the analytical samples from these borings were collected from the interval immediately above the water table. No SVOCs were detected in the samples from SB-26 and SB-27. These data verify that there are only hot spots in the SB-8/SB-9 area and that the data from these borings do not represent an area of sufficient extent to pose a significant environmental impact. Therefore, no further discussion of SVOCs in this portion of the Site is presented in this report.

SVOCs were detected at concentrations exceeding their respective TAGM cleanup objectives in samples from borings SB-15 and MW-4 located in the northeast quadrant of the Site adjacent to the area in which the PCE-impacted soils were identified. To better define the extent of SVOCs in soils in this area, borings SB-18 and SB-24 were drilled and sampled. With the exception of dibenz(a,h)anthracene which was detected in MW-4 and not in SB-18, the SVOCs detected at concentrations exceeding their respective cleanup objectives were the same in the samples from SB-18 and MW-4. No SVOCs were detected in the sample from boring SB-24. Examination of Figure 6.2 shows that the area in which the SVOC exceedances are located is well defined. The area is entirely within the northeast quadrant of the Site and is approximately 1,700 ft^2 in size. The maximum depth of sampling for SVOC analyses in this area was 8 feet BGS in SB-18. The water table surface in this area as indicated by the hydraulic monitoring data from MW-4 is approximately 7.5 feet BGS; therefore, it is assumed that the soils of concern in this area extend from the ground surface to the top of the water table or approximately 8 feet BGS. Based on these assumptions, the volume of SVOC soil exhibiting concentrations of SVOCs in excess of their respective TAGM cleanup objectives is approximately 500 cubic yards.

6.2.1.1.3 METALS

The concentrations of several metals also exceed the TAGM 4046 cleanup objectives; however, the cleanup objectives can be adjusted for Site background. The concentrations of each of the metals in the soil samples are relatively consistent across the Site, indicating that they are representative of background concentrations. The only potentially elevated concentrations which are:

i) copper (96.6 milligrams per kilogram [mg/kg]) and zinc (1310 mg/kg) in the boring for MW-5;

ii) arsenic in soil boring SB-12 (12.9 mg/kg); and

iii) chromium (22.8 mg/kg) in soil boring SB-15.

Similarly to the SVOC exceedances at SB-8 and SB-9, these potentially elevated concentrations of metals in isolated borings represent possible hot spots and not an area or areas of potential significant environmental impact. Therefore, NYSDEC agreed that further investigation of metals in soils at the Site was not required.

6.2.2 SUMMARY

The significant exceedances of TAGM 4046 cleanup objectives were for PCE and several SVOCs in soils in the northern quadrant of the Site. These areas are shown on Figures 6.1 and 6.2, respectively.

The presence of these areas is consistent with previous land use. Laundry and dry cleaners had been located in the area of the PCE exceedances and a tire sales facility in the area of the SVOC exceedances (see Table 6.2).

PCE is not present at significant concentrations in soils along the alignment of the sewers on Kingston Street.

6.3 GROUNDWATER

Groundwater samples have been collected on at least one occasion from each of the Site monitoring wells. The samples have been analyzed for VOCs, SVOCs, and/or metals as indicated in Table 3.1. The following subsections present the analytical data and discuss the nature and extent of chemical presence in Site groundwater.

6.3.1 RESULTS

The groundwater analytical data are presented with the data validation reports for the 2000/2001 sample analyses in Appendix I. Summaries of the compounds detected in the groundwater samples are presented in Tables 6.4 and 6.5.

The concentrations of the analytes detected in the Site groundwater samples have been compared to the New York State (NYS) ambient water quality standards for Class GA (potable) groundwater (Technical and Operation Guidance Standards [TOGS] 1.1.1). The analyte concentrations which exceed the standards are highlighted in Tables 6.4 and 6.5. The groundwater samples collected in July 1999 were collected directly from open boreholes and the sample quality is questionable. The remaining groundwater analytical data are sufficient to characterize the quality of groundwater at the Site; therefore, the groundwater data collected in 1999 are not discussed further in this report.

Sometimes significant variability has been observed in the analytical data from the wells which were sampled more than once. Due to the limited size of the database, it is not possible to determine whether any the data are representative of Site conditions or anomalous. Therefore, the following discussions and characterizations are based upon the average analyte concentrations detected in each of the monitoring wells.

6.3.1.1 ORGANIC CHEMICAL COMPOUNDS

Exceedances of the standards for organic chemical compounds in groundwater were limited to three VOCs; PCE, TCE, and cis-1,2-DCE. No SVOCs were detected in any groundwater sample. The locations at which exceedances were identified are all located in the northeast quadrant of the Site and northwest of the Site, across Kingston Place. No exceedances of standards were detected in the monitoring wells located near the residences southwest of the Site or in the wells northeast of the Site across Seneca Street.

Shallow Overburden Groundwater

The highest average concentration of PCE in the shallow overburden, 7,880 μg/L, was detected in MW-4 located at the northeast corner of the Site. The average concentration of PCE in MW-11, approximately 20 feet northeast of MW-4 on the northeast corner of Seneca Street and Kingston Place, was 970 μg/L. The average concentrations of PCE in wells MW-9 and MW-12 located across Kingston Place to the northeast were 6,850 and 6,200 μg/L, respectively.

The average PCE concentrations in the shallow groundwater decrease from 7,880 μg/L to 970 μg/L between wells MW-4 and MW-11 located along the northwest property boundary (the southeast side of Kingston Place). The concentrations then increase to 6,850 and 6,200 μg/L 30 and 130 feet away at MW-9 and MW-12. Typically, decreases in chemical concentration are observed with increasing distance from the source area. At the Site, the concentrations of PCE at the monitoring points furthest from the Site (MW-9 and MW-12) are substantially higher than those closer and nearly equal to the concentration in the apparent source area (the PCE impacted soils). The average concentrations of TCE and cis-1,2-DCE are highest at MW-12 and lowest at MW-9. MW-9 is in the flow pathway between MW-4 and MW-12 and, therefore, would not be expected to exhibit the lowest concentrations of these compounds. The average concentrations of PCE, TCE, and cis-1,2-DCE have been plotted on a Site plan and isopleths drawn. The plots are presented on Figures 6.3 through 6.5.

The following physical conditions would limit the migration of groundwater from the Site to wells MW-9 and MW-12:

i) the presence of the storm sewer along Kingston Place which may intercept the shallow groundwater migrating toward the northwest;

ii) the direction of shallow groundwater flow, southwest toward Cazenovia Creek; and

iii) and the absence of a preferential flow pathway, i.e. a storm sewer, along Seneca Street between Kingston Place and MW-12.

Deep Overburden Groundwater

Isopleths of the average PCE, TCE, and cis-1,2-DCE concentrations in the deep overburden groundwater are presented on Figures 6.6 through 6.8. The pattern of chemical presence in this interval is similar to that described for the shallow interval: concentrations of each of these VOCs are higher at MW-12A than at monitoring locations between the Site and MW-12A (MW-9A, MW-11A). Further evidence against this migration pathway from the Site are the relatively poor hydraulic conductivity of the soils in the deep overburden and the apparent direction of groundwater flow at this depth which is from MW-12A southeast.

6.3.1.2 METALS

Concentrations of iron, magnesium, manganese, and sodium are present in Site groundwater at concentrations that exceed the groundwater quality standards. Total lead was detected in the samples from SB-1B and SB-6 at concentrations exceeding the standards but was not detected in any of the monitoring well samples at these concentrations. As described previously, the SB-1B and SB-6 groundwater samples were collected directly from an open borehole (no filter pack). The concentrations of lead in these samples were most likely due to the sediment in these unfiltered samples.

The metals present in Site groundwater at elevated concentrations are ubiquitous and do not present environmental or human health risk.

6.3.2 SUMMARY

The compounds present in Site groundwater at concentrations which are of potential environmental and/or human health concern are PCE, TCE, and cis-1,2-DCE. The presence of elevated concentrations of these compounds in off-site groundwater does not appear to be attributable to the on-Site source (the PCE impacted soils).

7.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions have been drawn regarding the nature and extent of chemical presence in soil vapor, soil, and groundwater:

1. VOCs are present in soil vapors and in Site groundwater. However, the soil vapor concentrations are low (1.7 to 5.5 ppm) and the VOC concentrations in groundwater are lower than the GVIIC. Therefore, VOCs in indoor air in on-site or nearby residential or industrial/commercial buildings are not of concern.

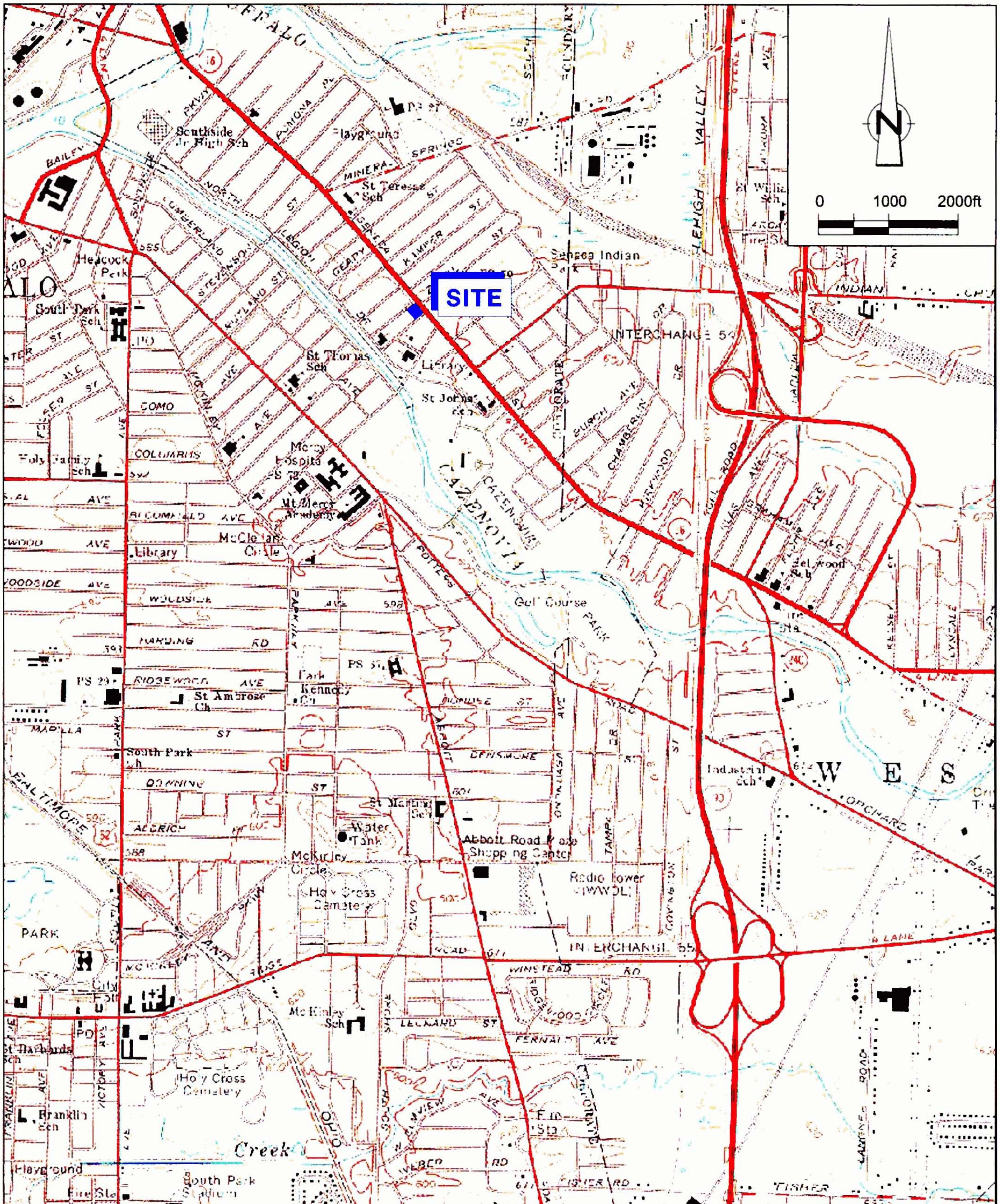
2. The significant exceedances of TAGM 4046 cleanup objectives for soil are limited to PCE and several SVOCs in soils in the northern quadrant of the Site. This area is also the apparent on-site source of VOCs in groundwater.

3. PCE is not present at significant concentrations in soils along the alignment of the sewers on Kingston Street.

4. The compounds present in Site groundwater at concentrations which are of potential environmental and/or human health concern are PCE, TCE, and cis-1,2-DCE. The presence of elevated concentrations of these compounds in off-site groundwater may or may not be attributable to the on-Site source (the PCE impacted soils).

The hydraulic and groundwater water quality databases are limited. It is recommended that the hydraulic and water quality monitoring be continued. Monitoring of water level elevations and water quality will be conducted quarterly for six months (March through August 2002) to collect sufficient data to evaluate seasonal trend in groundwater quality and flow direction. In addition, grab samples of water from the Kingston Street storm sewer will be collected during both wet and dry weather conditions. These data will aid in the evaluation of groundwater presence in flow from this sewer.

Following the collection of these supplemental data, the site characterization will be updated and the scope of the FS will be finalized with the concurrence of NYSDEC. At this time, the site characterization indicates that the off-site presence of VOCs in groundwater at concentrations exceeding the relevant standards may not be attributable to the Site. Therefore, the FS will be limited to control of on-Site source(s) and chemical presence and prevention of off-Site migration.



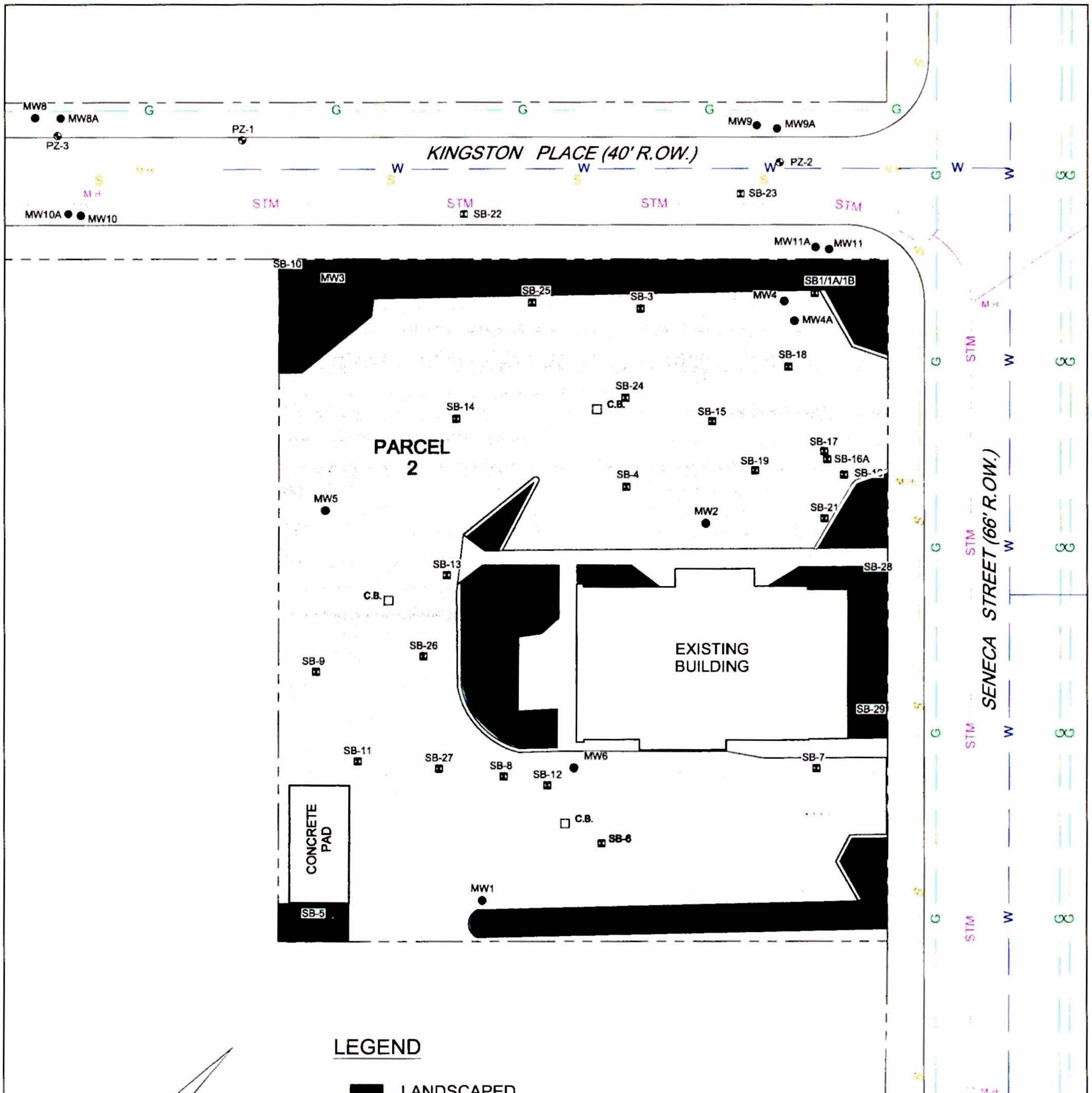
SOURCE:

USGS BUFFALO SE, NY
QUADRANGLE, 1965.

figure 2.1

SITE LOCATION PLAN
PARCEL 2, SENECA STREET
Buffalo, New York

15867-00(002)GN-NF001 FEB 15/2002



LEGEND

	LANDSCAPED
	CONCRETE
	BLACKTOP
C.B.	CATCH BASIN
M.H.	MANHOLE
SB-5	SOIL BORING
MW-1	MONITORING WELL
PZ-2	PIEZOMETER

figure 2.2

SITE PLAN, SURFACE
CHARACTERISTICS & UNDERGROUND UTILITIES
PARCEL 2 - SENECA STREET
Buffalo, New York

CRA

15867-00(002)GN-NF002 FEB 12/2002

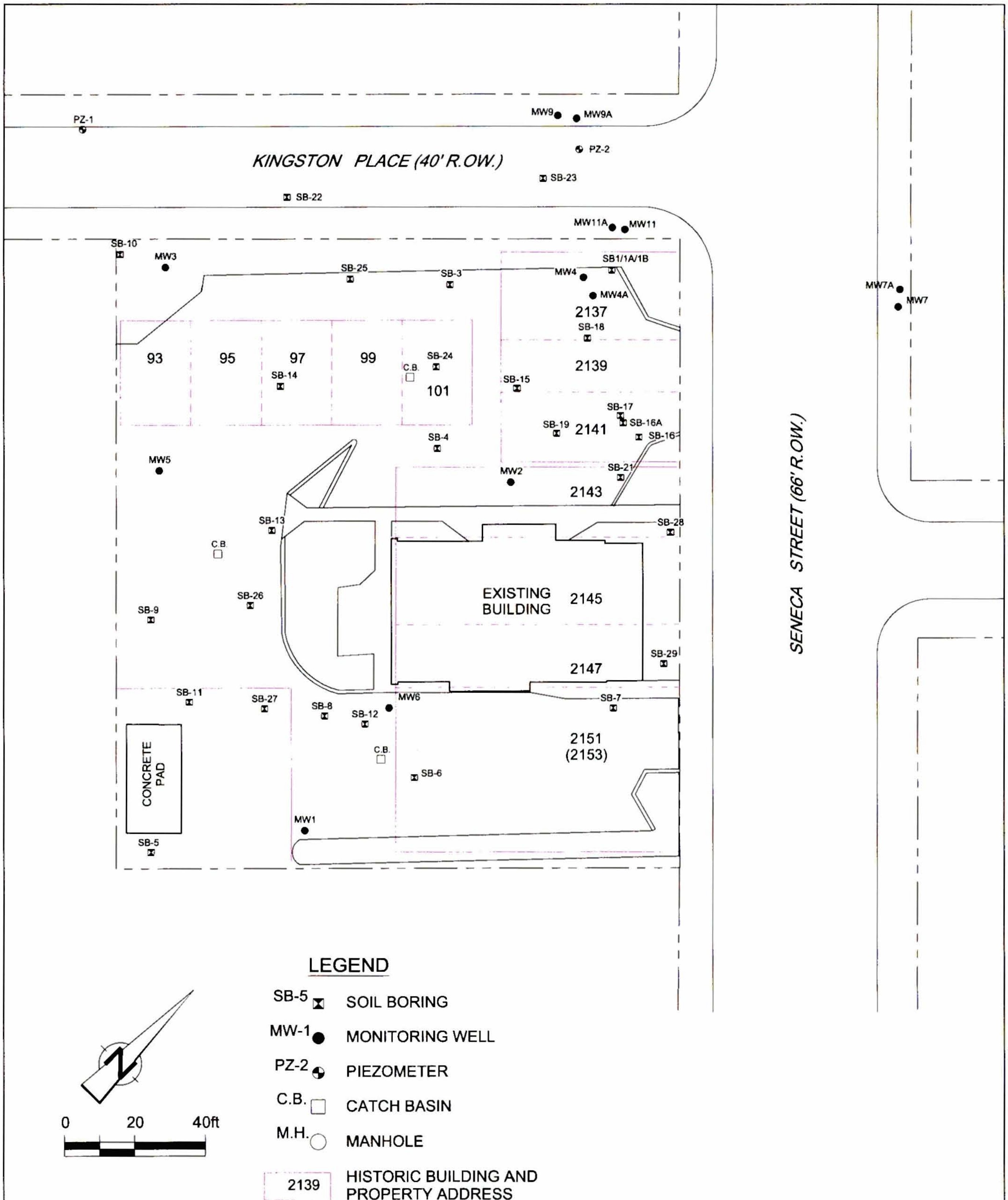


figure 2.3

BUILDING LOCATIONS
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF003 FEB 12/2002

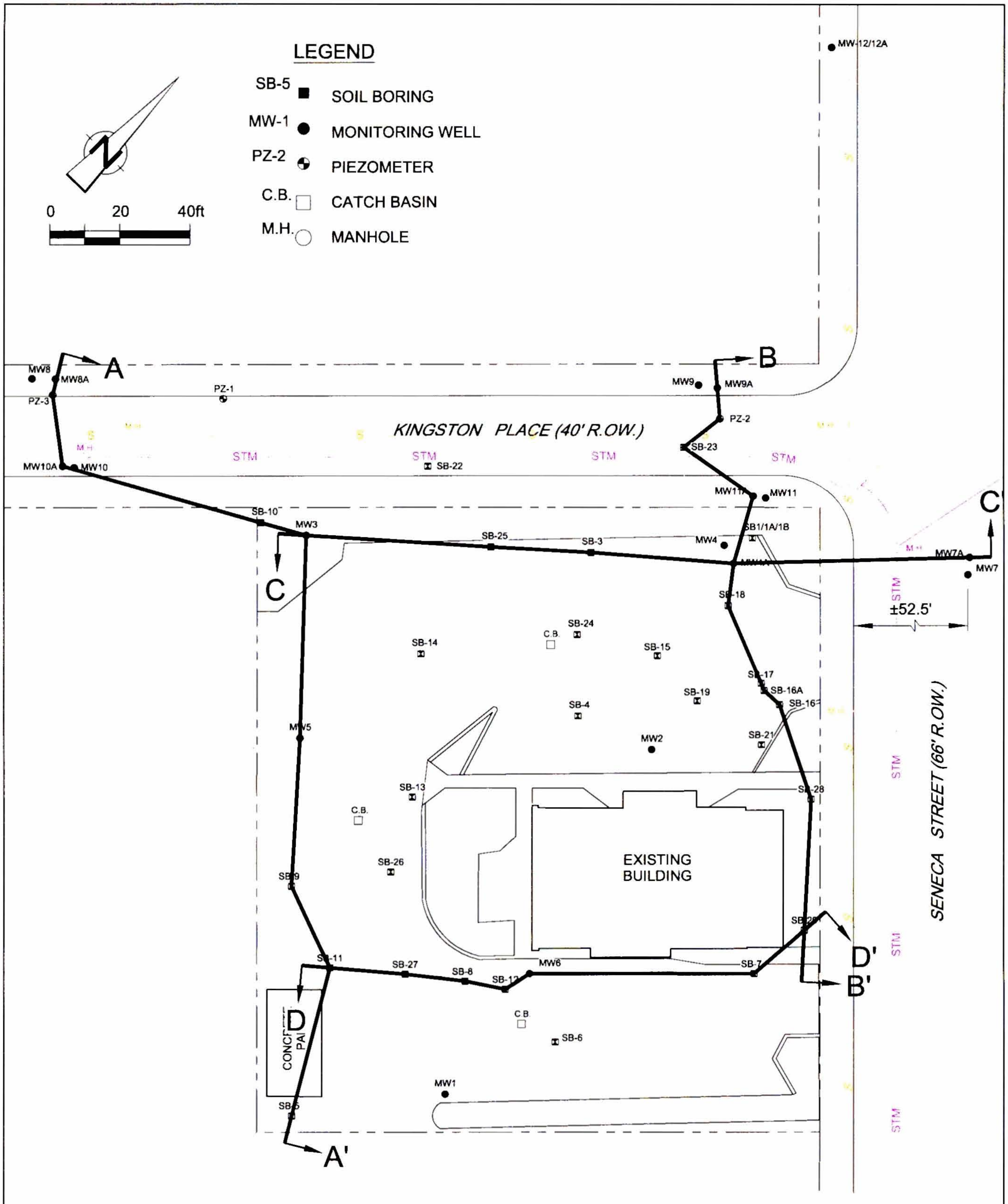
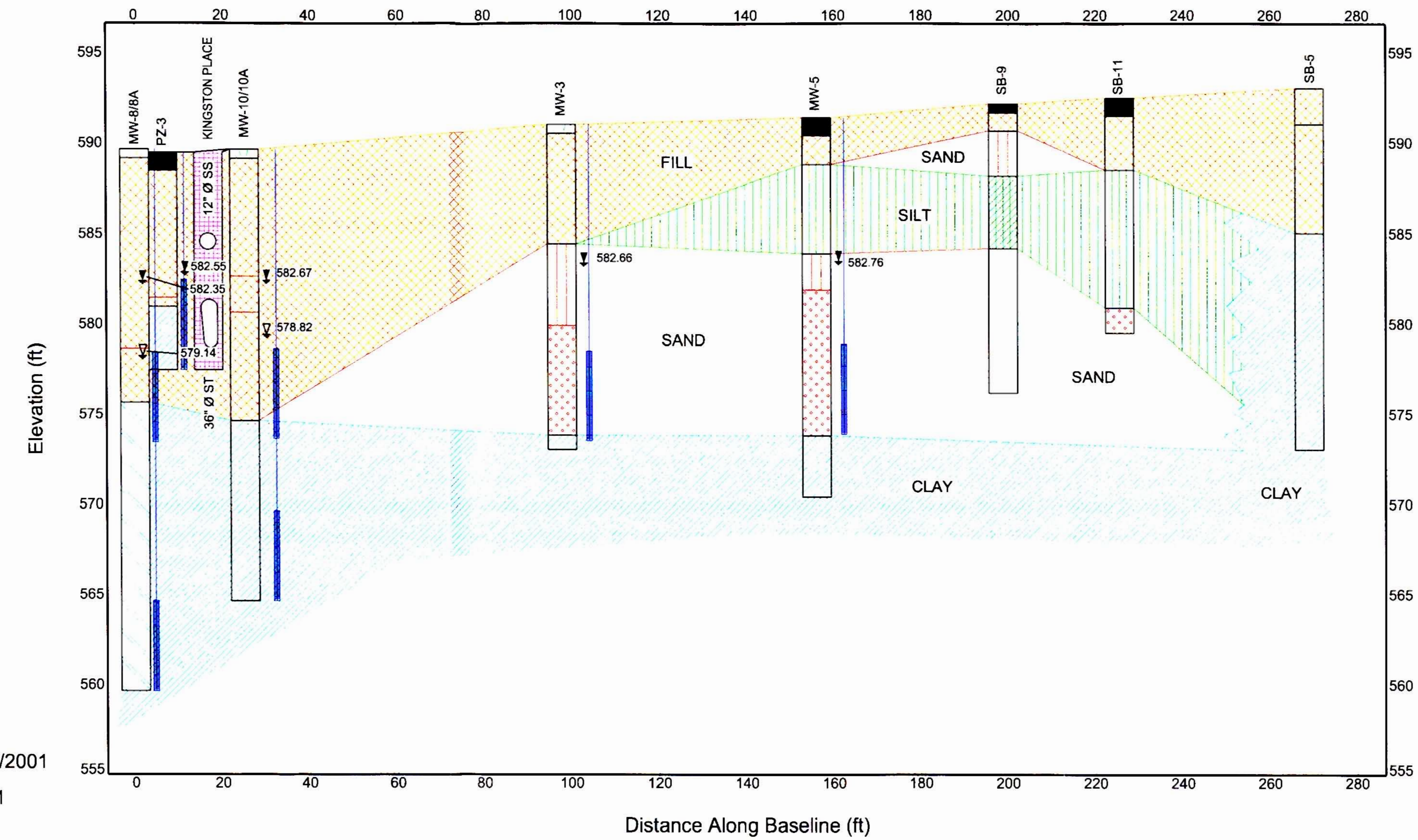


figure 5.1

CROSS-SECTION LOCATION PLAN
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF008 FEB 12/2002



LEGEND

FILL
NATIVE SAND
NATIVE SILT
NATIVE CLAY
WELL SCREEN
BEDDING/BACKFILL
SS SANITARY SEWER
ST STORM SEWER
SHALLOW WATER LEVEL ELEVATION 11/26/2001
DEEP WATER LEVEL ELEVATION 11/26/2001

figure 5.2

SUBSURFACE PROFILE A-A'
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF018 FEB 15/2002

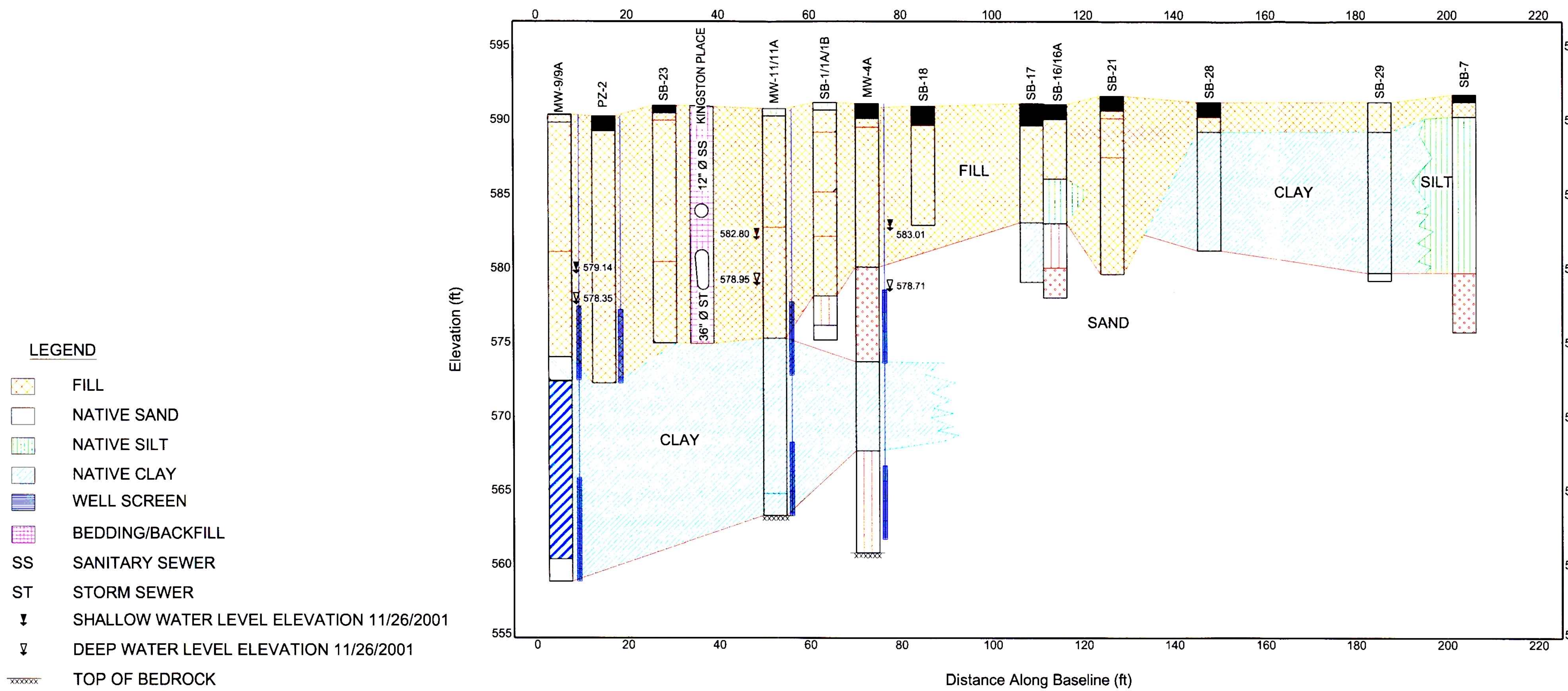


figure 5.3

SUBSURFACE PROFILE B-B'
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF019 FEB 12/2002

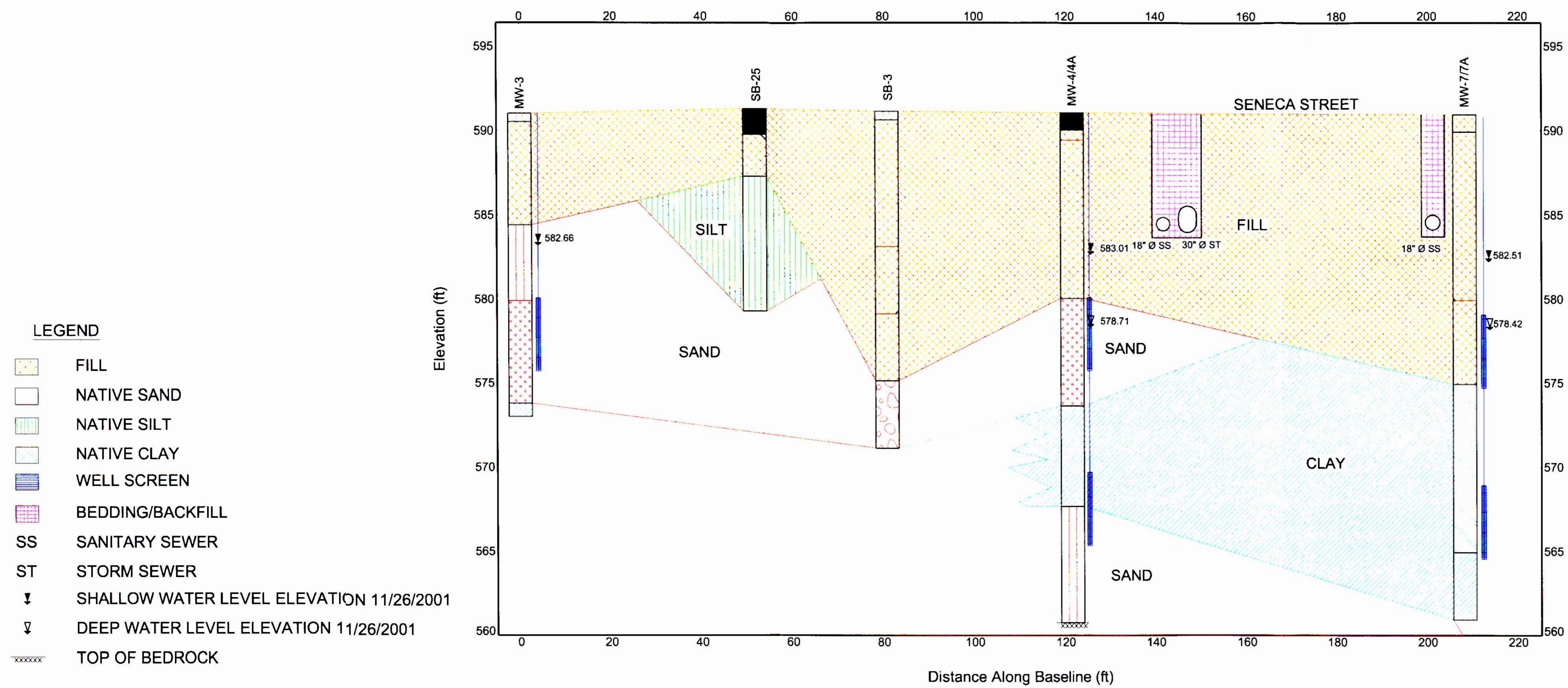


figure 5.4

SUBSURFACE PROFILE C-C'
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF020 FEB 12/2002

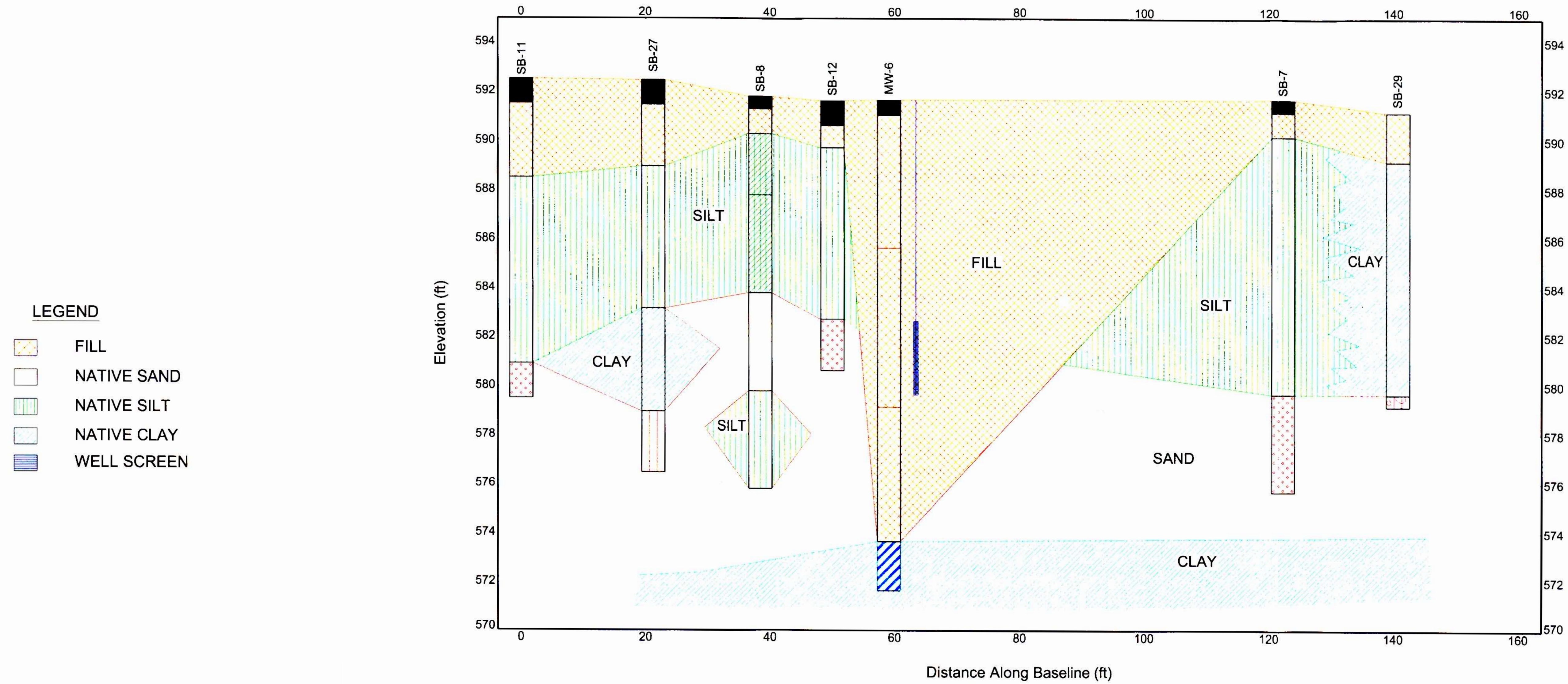


figure 5.5

SUBSURFACE PROFILE D-D'
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF021 FEB 12/2002

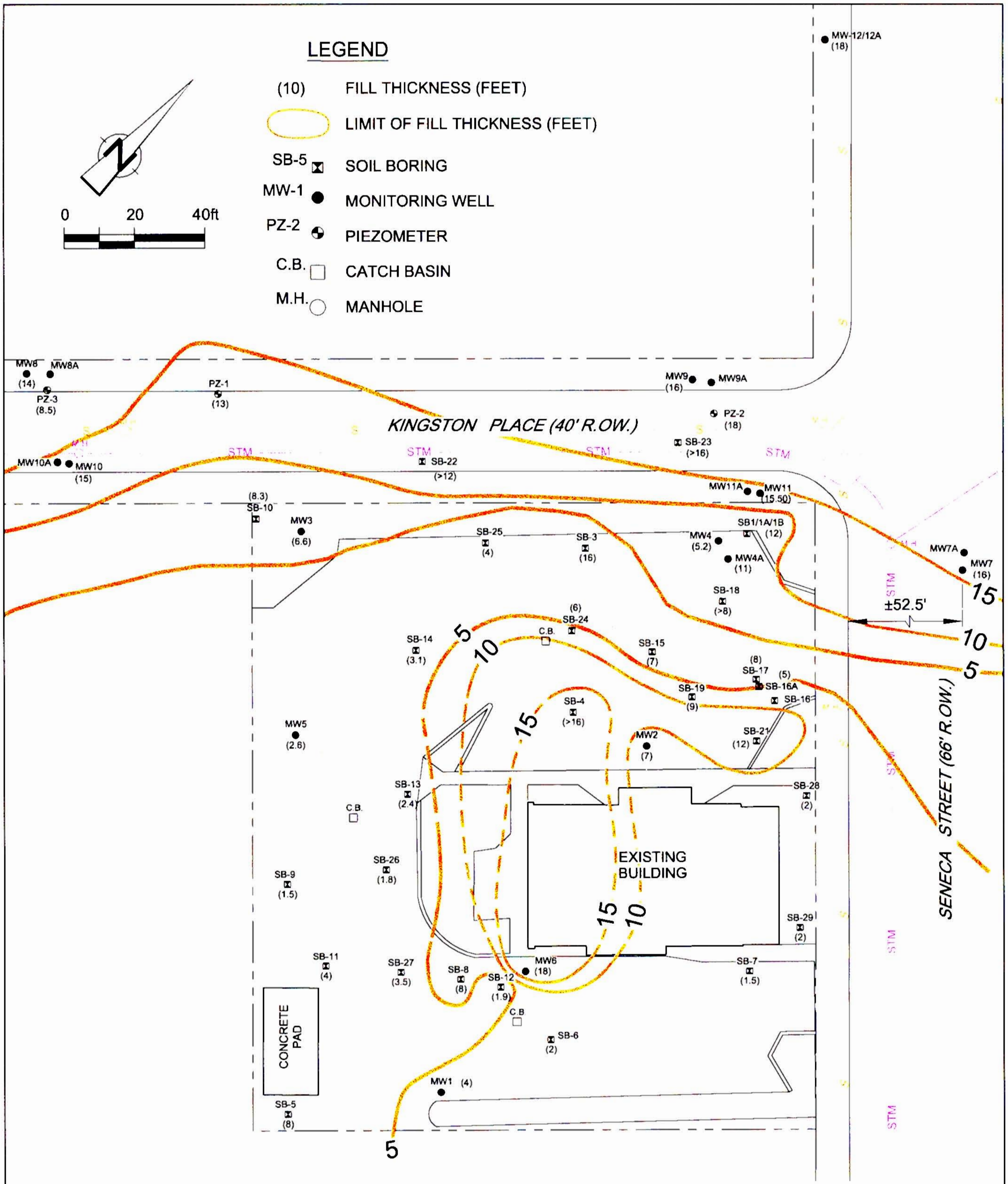


figure 5.6

ISOPACH OF FILL
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF017 FEB 12/2002

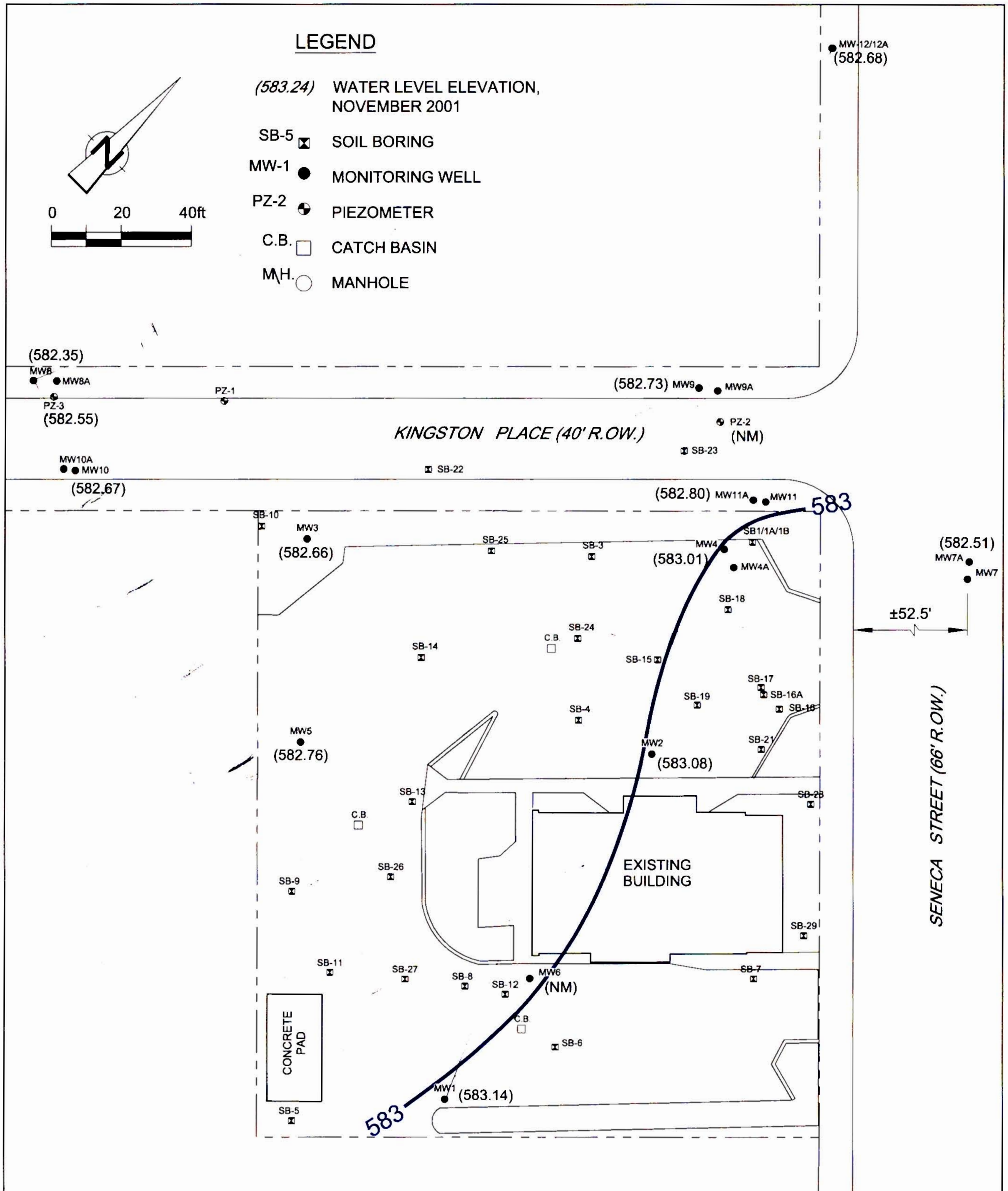


figure 5.7

POTENTIOMETRIC SURFACE CONTOURS
SHALLOW OVERBURDEN
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF009 FEB 12/2002

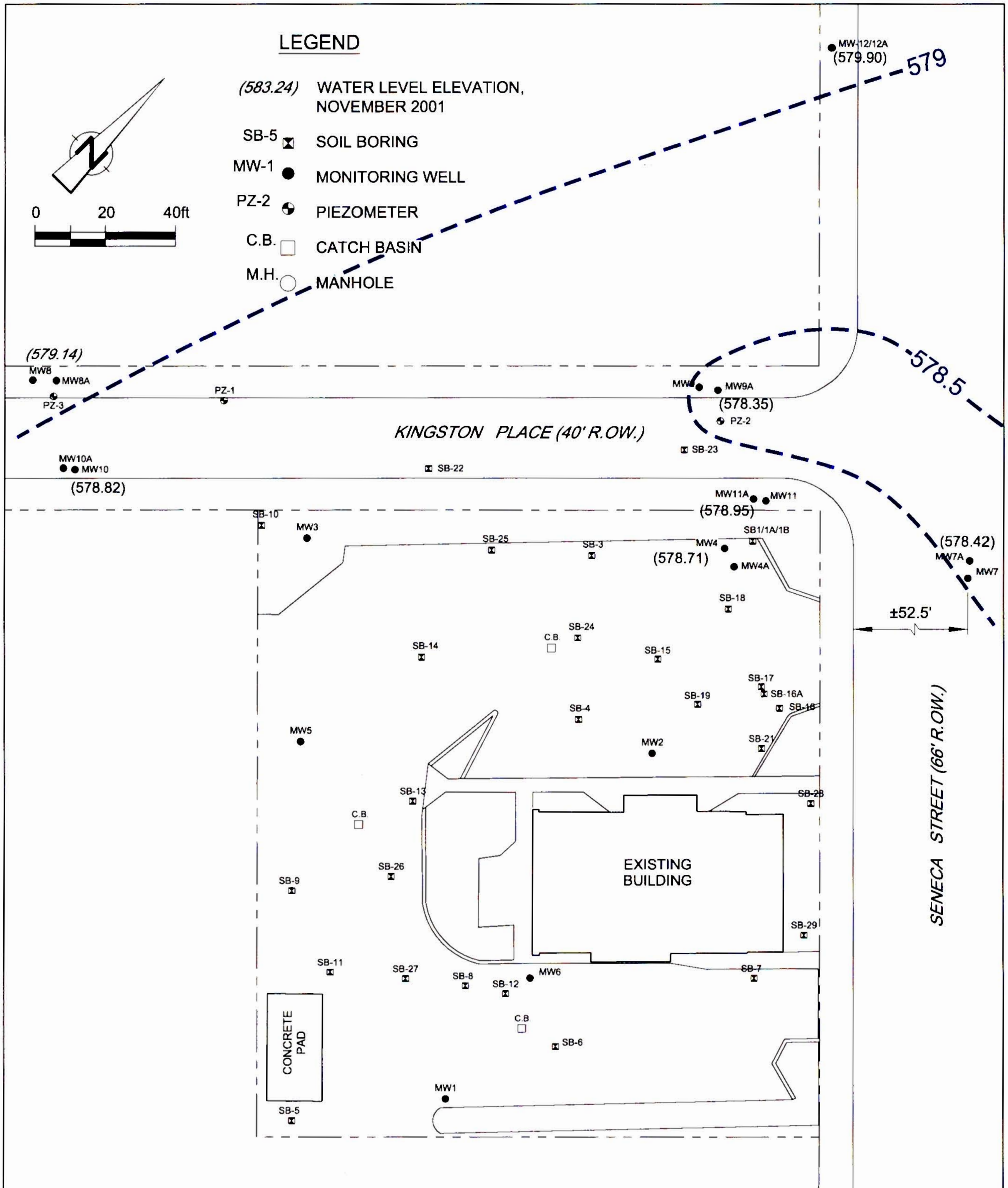


figure 5.8

POTENTIOMETRIC SURFACE CONTOURS
DEEP OVERBURDEN
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF010 FEB 12/2002

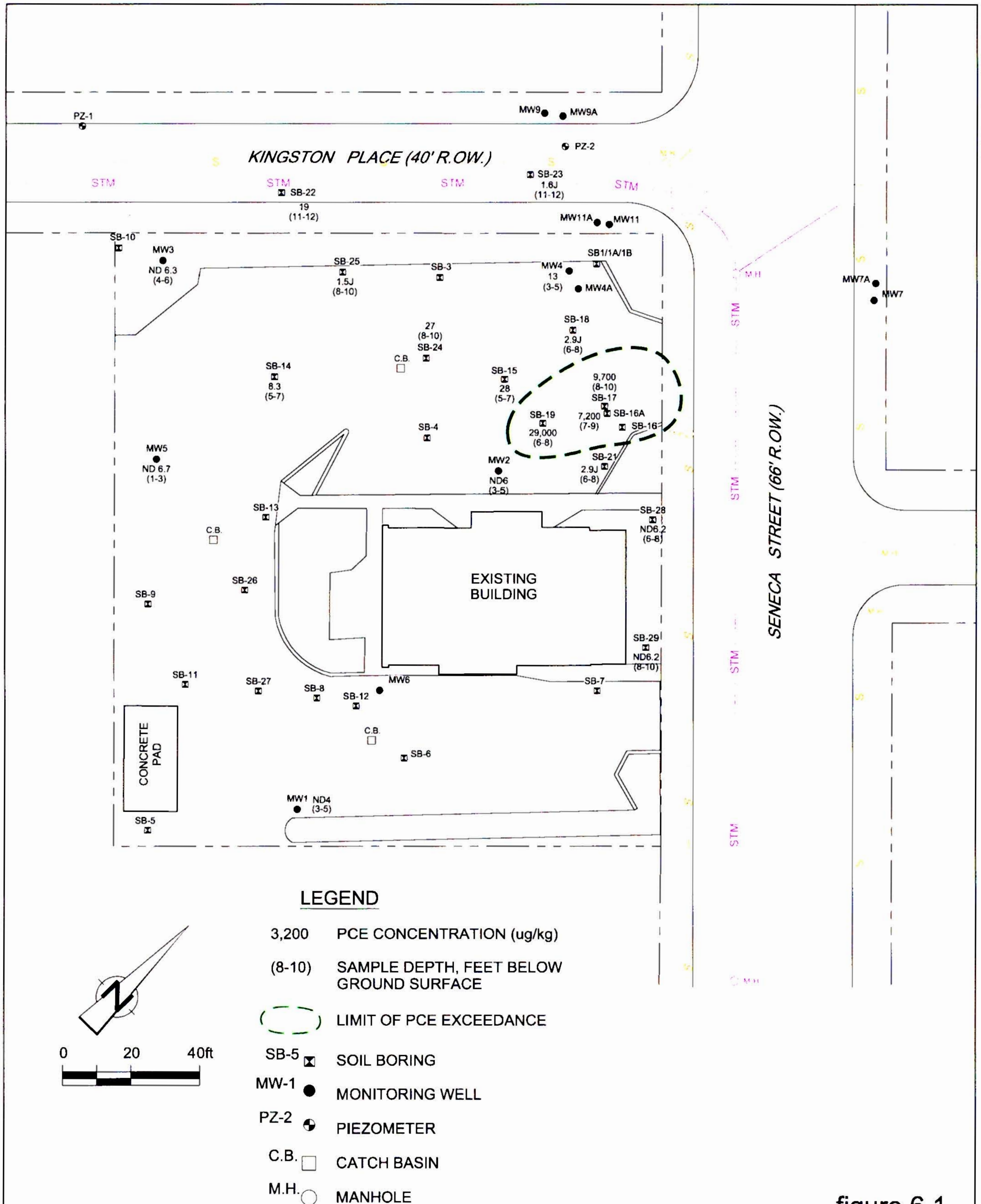


figure 6.1

MAXIMUM PCE CONCENTRATIONS IN SITE SOILS
PARCEL 2 - SENECA STREET
Buffalo, New York

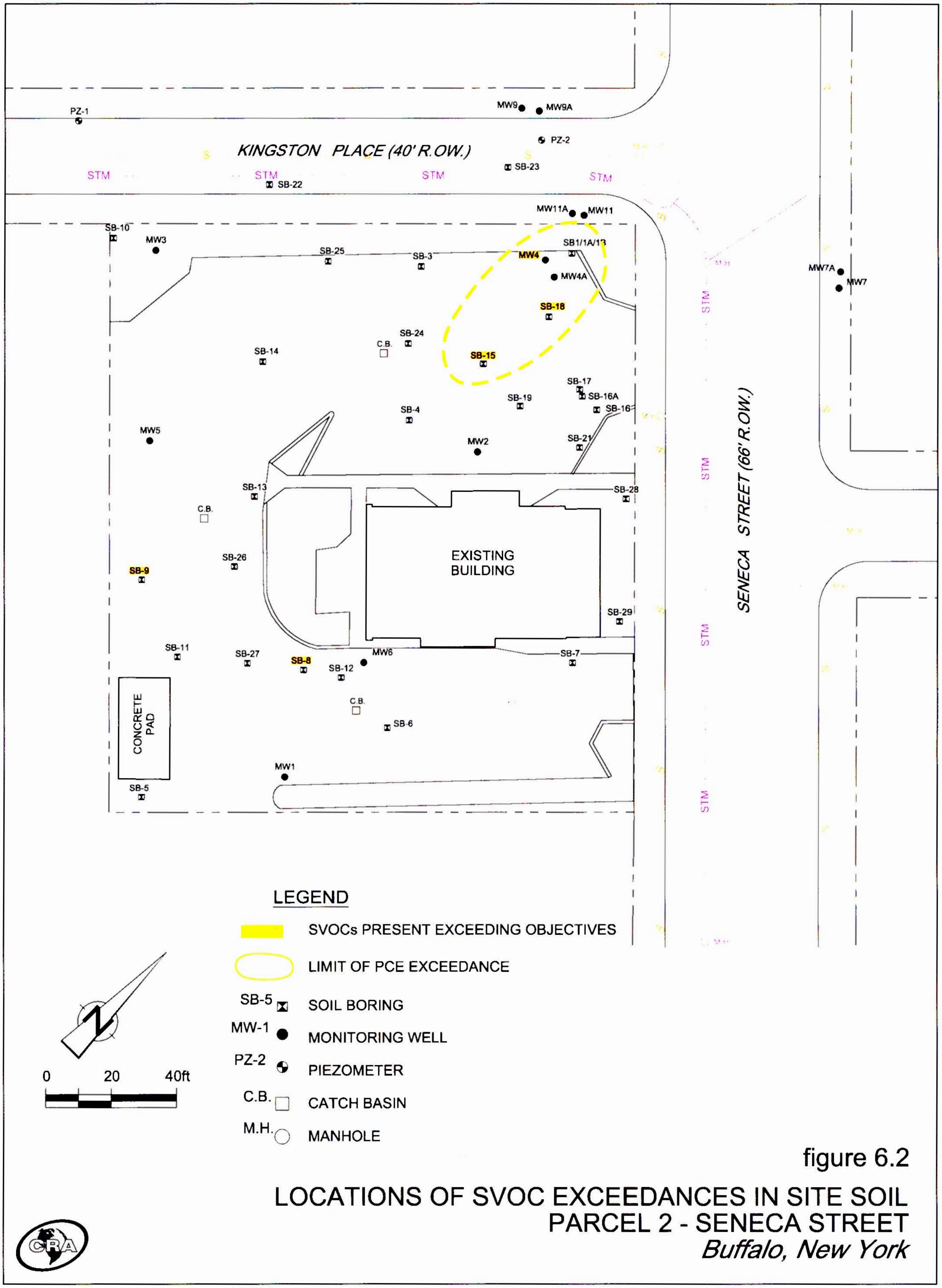


figure 6.2

LOCATIONS OF SVOC EXCEEDANCES IN SITE SOIL
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF005 FEB 12/2002

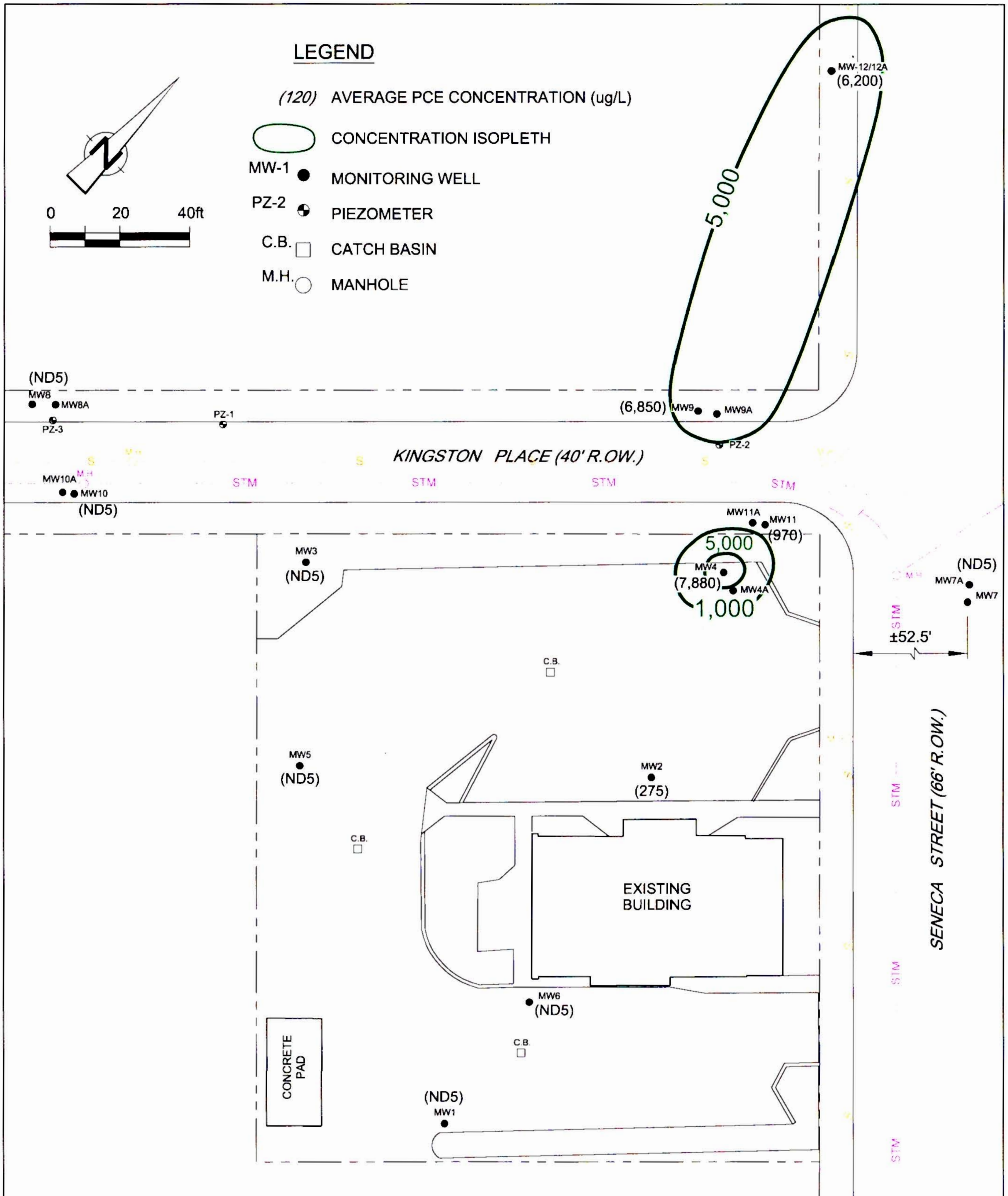


figure 6.3

PCE CONCENTRATION ISOPLETHS
SHALLOW OVERBURDEN GROUNDWATER
PARCEL 2 - SENECA STREET
Buffalo, New York

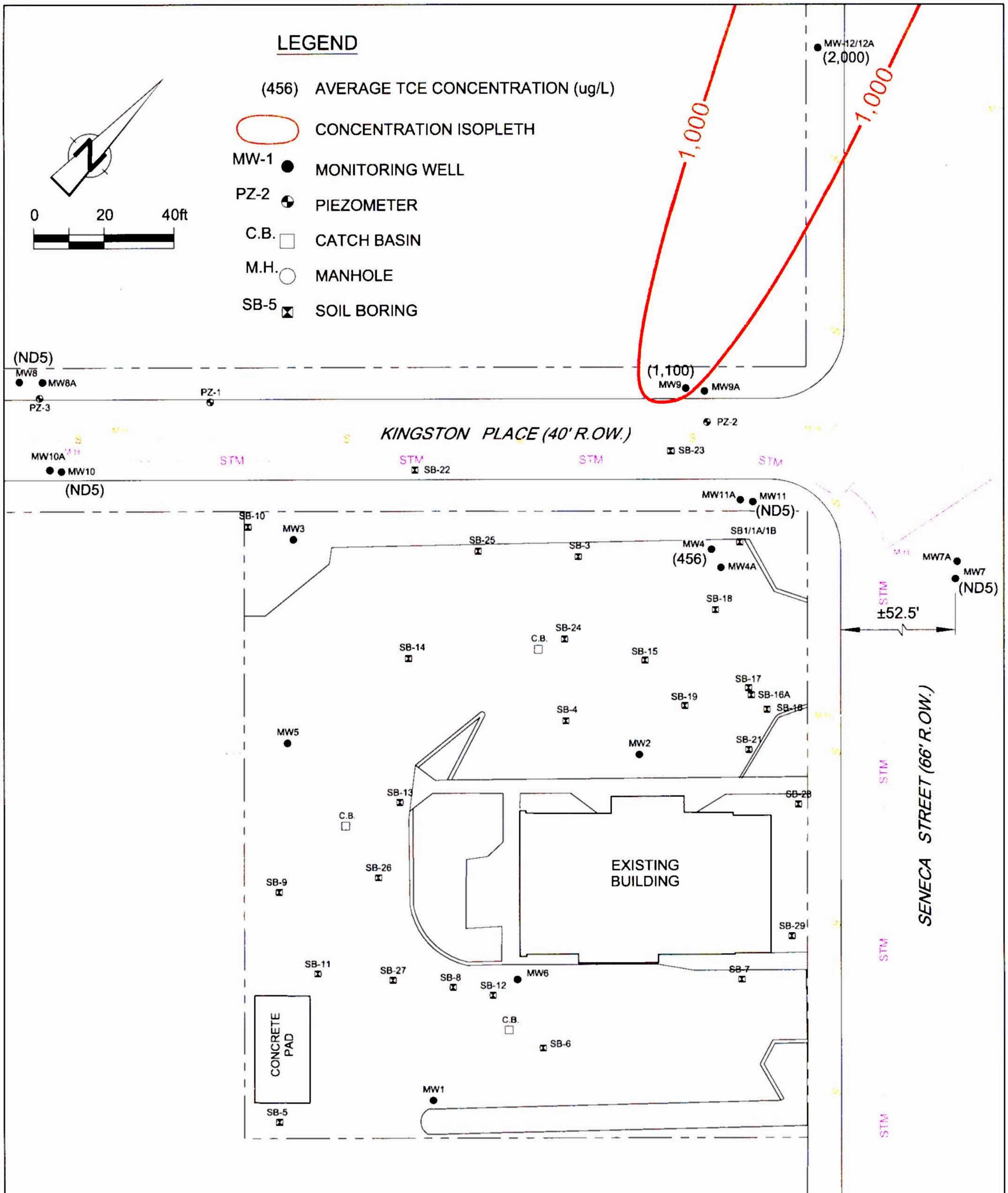


figure 6.4

TCE CONCENTRATION ISOPLETH
SHALLOW OVERBURDEN GROUNDWATER
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF013 FEB 12/2002

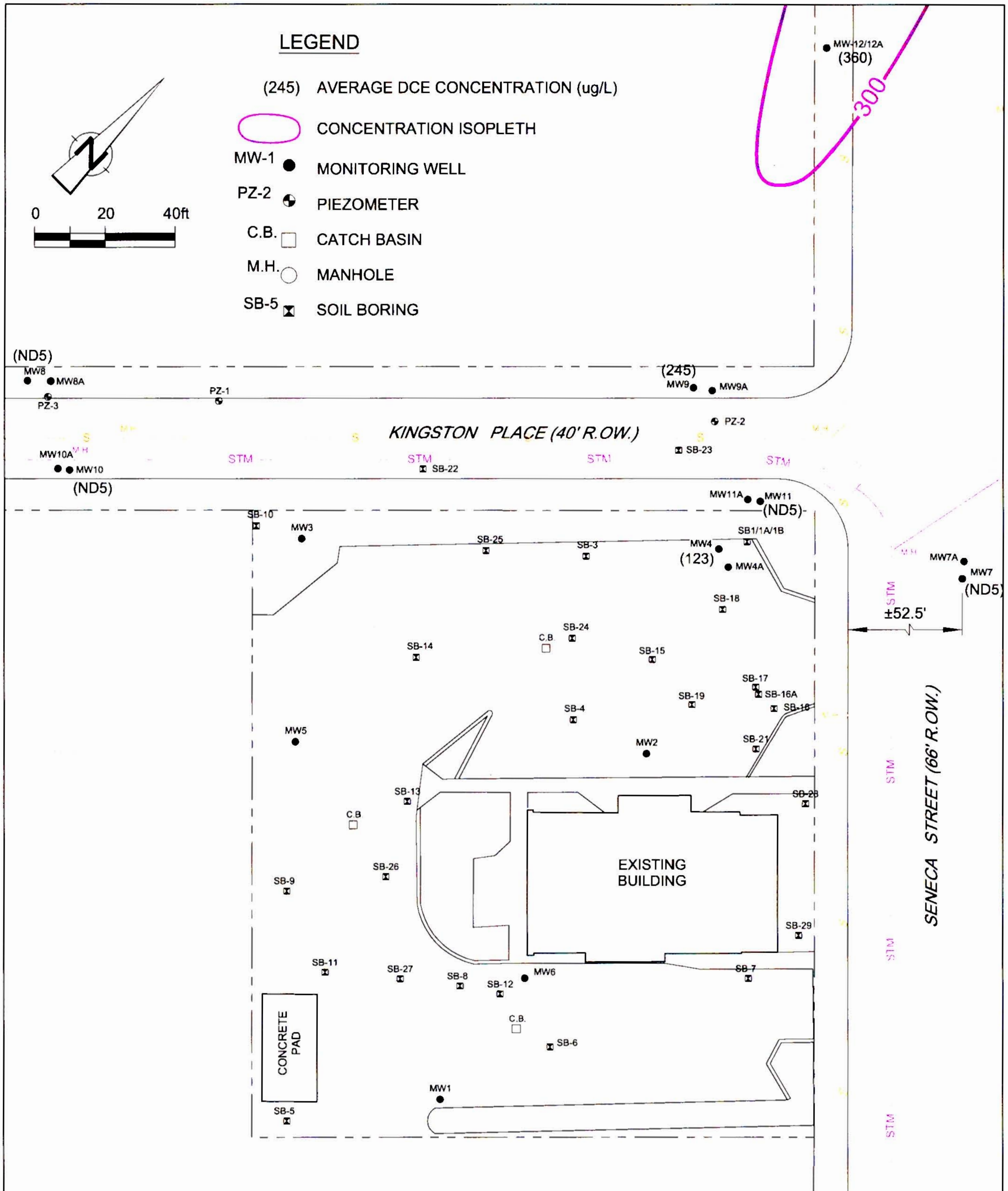


figure 6.5

DCE CONCENTRATION ISOPLETH
SHALLOW OVERBURDEN GROUNDWATER
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF015 FEB 12/2002

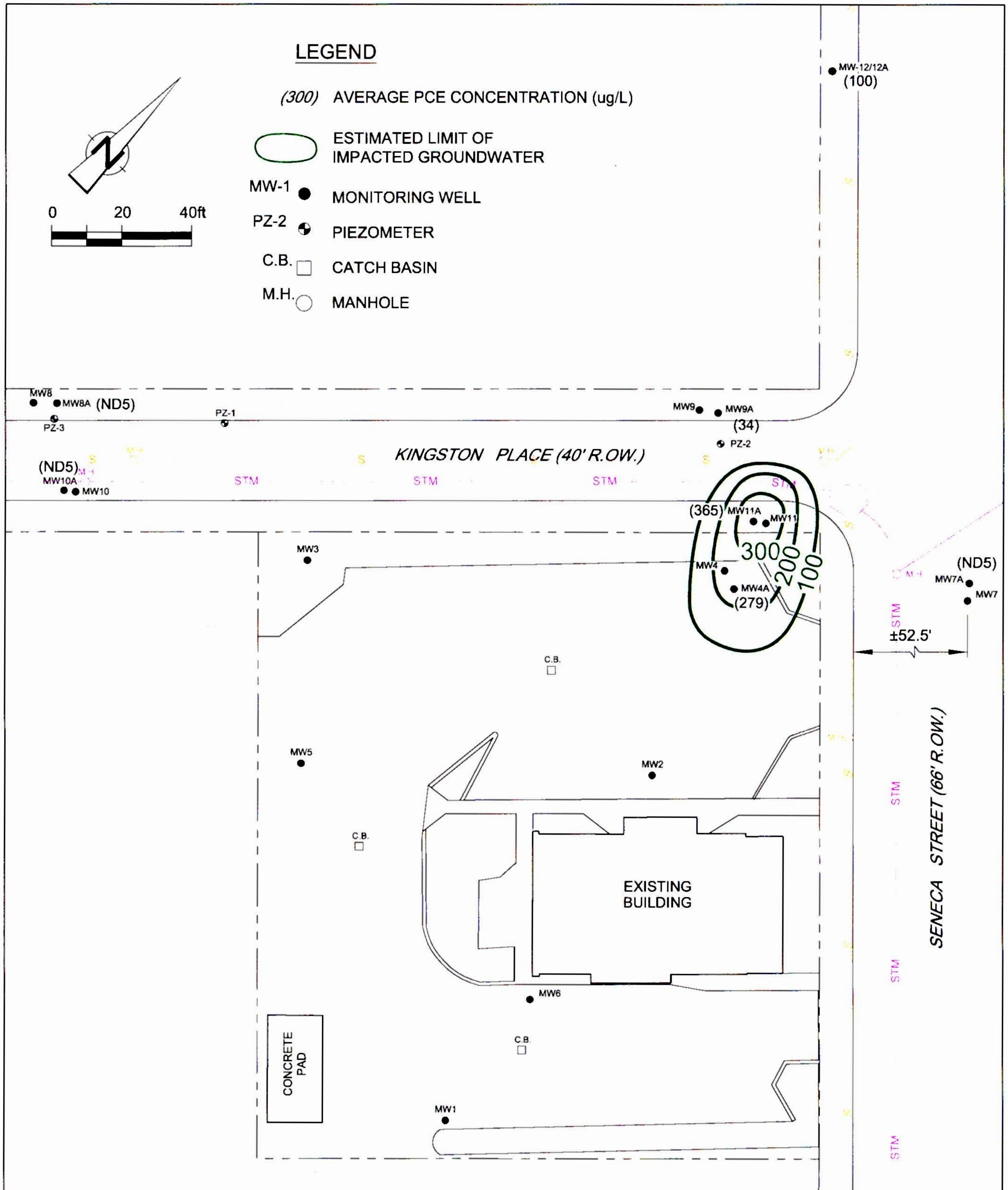


figure 6.6

PCE CONCENTRATION ISOPLETH
DEEP OVERBURDEN GROUNDWATER
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF012 FEB 12/2002

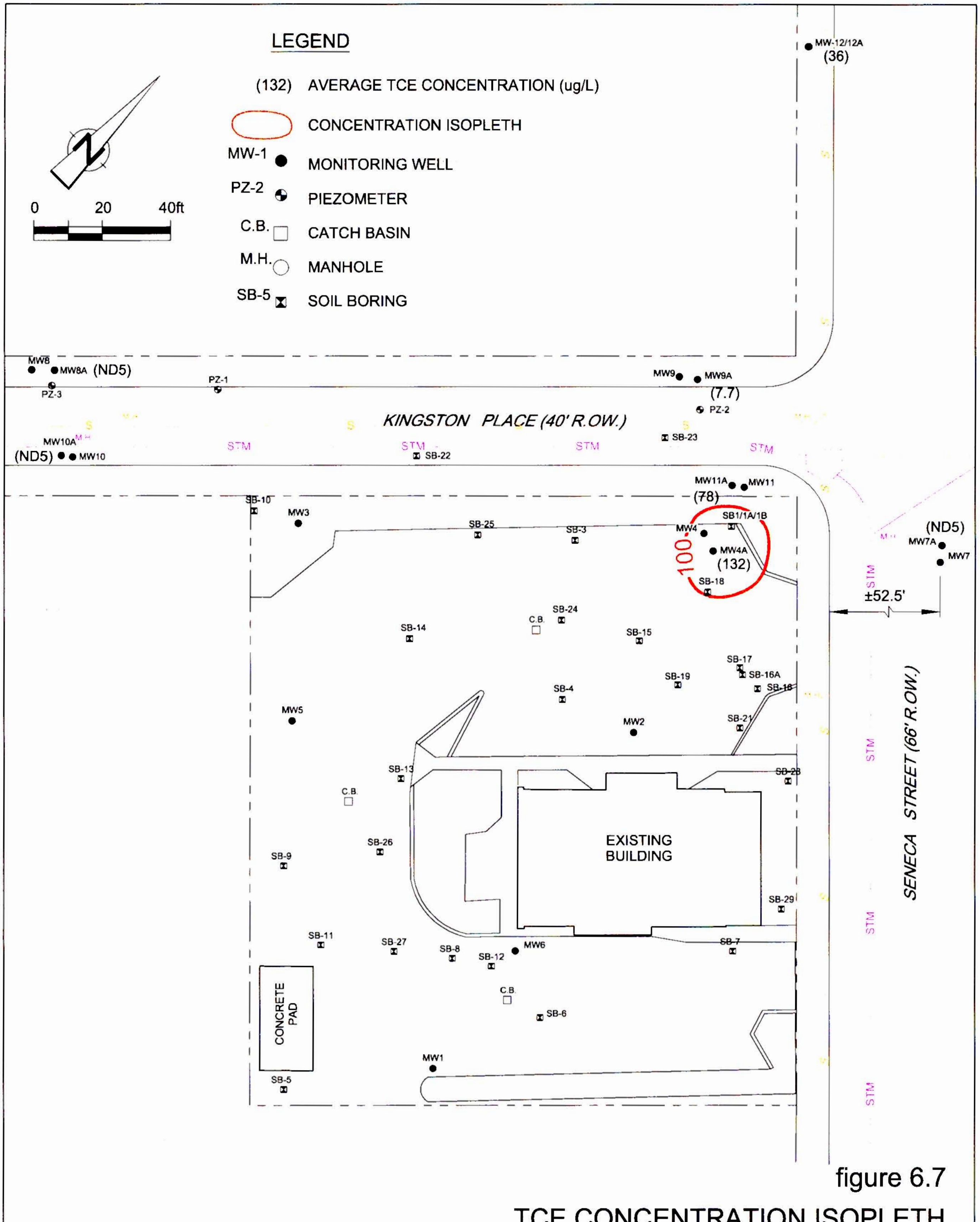


figure 6.7

TCE CONCENTRATION ISOPLETH
DEEP OVERBURDEN GROUNDWATER
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF014 FEB 12/2002

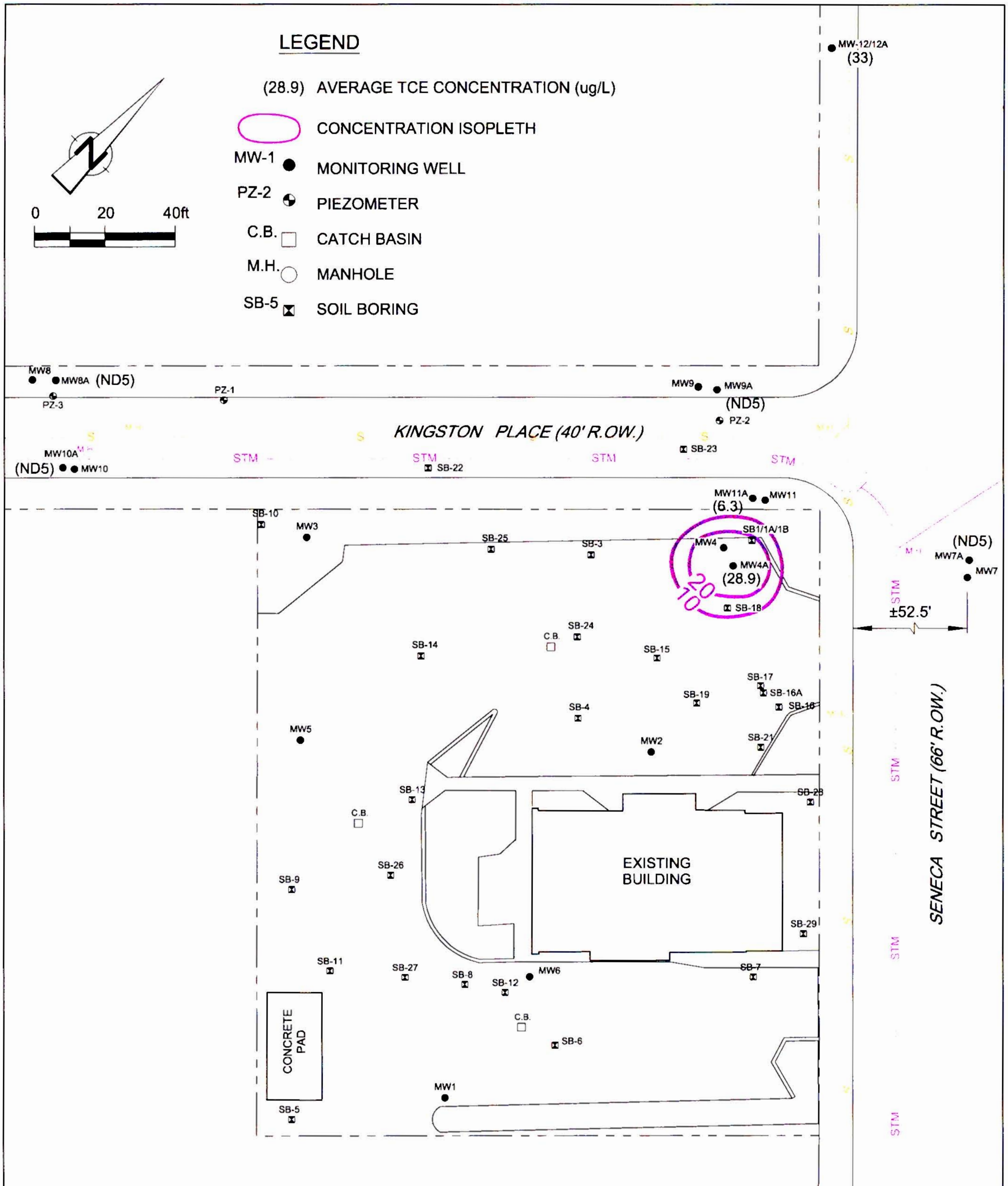


figure 6.8

DCE CONCENTRATION ISOPLETH
DEEP OVERBURDEN GROUNDWATER
PARCEL 2 - SENECA STREET
Buffalo, New York

15867-00(002)GN-NF016 FEB 12/2002

TABLE 2.1

HISTORIC BUSINESS LISTINGS/PROPERTY USE
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

		1900	*1917*	*1940*	*1950*	*1959*	*1965*
Seneca Street	2137	Undeveloped	Drugstore	Tire sales	Restaurant	Restaurant	Restaurant
	2139	Undeveloped	Drugstore	Tire sales	Restaurant	Laundry	Laundry
	2141	Undeveloped	Drugstore	Tire sales	Restaurant	Drycleaner	Drycleaner
	2143	Undeveloped	Undeveloped	Undeveloped	Restaurant	Restaurant	Restaurant
	2145	Undeveloped	Undeveloped	Undeveloped	Undeveloped	Thrift store	Food store
	2147	Undeveloped	Undeveloped	Undeveloped	Restaurant	Restaurant	Restaurant
	2151	Undeveloped	Undeveloped	Undeveloped	Undeveloped	Auto supply	Auto supply
	2153	Undeveloped	Undeveloped	Tire warehouse	Auto service	Restaurant(?)	Restaurant(?)
Kingston Place	93	Undeveloped	Residential	Residential	Residential	Unknown	Unknown
	95	Undeveloped	Residential	Residential	Residential	Unknown	Unknown
	97	Undeveloped	Residential	Residential	Residential	Unknown	Unknown
	99	Undeveloped	Residential	Residential	Residential	Unknown	Unknown
	101	Undeveloped	Residential	Residential	Residential	Unknown	Unknown

		1971	*1977*	*1985*	*1992*	*1998*	*2001*
Seneca Street	2137	Restaurant	Book store	Demolished	No buildings	No buildings	No buildings
	2139	Unknown	Unknown	Demolished	No buildings	No buildings	No buildings
	2141	Drycleaner	Drycleaner	Demolished	No buildings	No buildings	No buildings
	2143	Restaurant	Restaurant	Demolished	No buildings	No buildings	No buildings
	2145	Vacant	Vacant	Restaurant	Vacant	Restaurant	Vacant
	2147	Restaurant	Restaurant	Demolished	No buildings	No buildings	No buildings
	2151	Vacant	Aquarium	Demolished	No buildings	No buildings	No buildings
	2153	Vacant	Unknown	Auto service	No buildings	Machine shop	No buildings
Kingston Place	93	Unknown	Unknown	Demolished	No buildings	No buildings	No buildings
	95	Unknown	Unknown	Demolished	No buildings	No buildings	No buildings
	97	Unknown	Unknown	Demolished	No buildings	No buildings	No buildings
	99	Unknown	Unknown	Demolished	No buildings	No buildings	No buildings
	101	Unknown	Unknown	Demolished	No buildings	No buildings	No buildings

TABLE 2.2

PROPERTY OWNERSHIP INFORMATION
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Parcel Address	*Owner Name*
2131 Seneca Street	Property Developers Inc.
2140 Seneca Street	Gorenflo, Richard
2134 Seneca Street	Nostrant, Daniel and Gould, Kevin
2132 Seneca Street	Do, Bihn
2137 Seneca Street	Insured Income Properties Inc.
2157 Seneca Street	Key Bank of NY
2161 Seneca Street	Johnson, Michael T.
2158 Seneca Street	2158-2160 Seneca Street, Inc.
2156 Seneca Street	Wagner, Norman and Sue
2152 Seneca Street	Giglia, Joseph and Marie
85 Kingston Place	Armstrong, John and Lanor
87 Kingston Place	Eckam, Douglas
91 Kingston Place	Nowak, John
92 Kingston Place	Cunningham, Francis
88 Kingston Place	City of Buffalo Real Estate Division
90 Kingston Place	Beutler, Richard Sr.

Note:
Information obtained from Erie County Real Property Information, March 2001.

TABLE 3.1

SAMPLE COLLECTION AND ANALYSES SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

			Analysis/Parameters								
	Location	*Sample Date*	*TCL VOCs*	*TCL SVOCs*	*STARS VOCs*	*STARS SVOCs*	*Metals (Filtered)*	*Metals (Unfiltered)*	*CN*	*Lead Only*	*Comment*
Soils	SB-1	07/21/99	X								8.0-12.0'
	SB-3	07/21/99	X								12.0'-16.0'
	SB-4	07/21/99	X								12.0'-16.0'
	SB-5	07/21/99			X	X				X	12.0'-16.0'
	SB-6	07/21/99			X	X				X	8.0'-12.0'
	SB-7	07/21/99			X	X				X	8.0'-12.0'
	SB-8	07/21/99			X	X				X	4.0'-8.0'
	SB-9	07/21/99			X	X				X	0-4.0'
	SB-10	07/21/99			X	X				X	8.0'-12.0'
	SB-11	09/13/00				X		X	X		7.0-9.0'
	SB-12	09/13/00				X		X	X		7.0-9.0'
	SB-13	09/13/00				X		X	X		7.0-9.0'
	SB-14	09/13/00	X			X		X	X		5.0-7.0'
	SB-15	09/13/00	X			X		X	X		5.0-7.0'
	MW-1	09/14/00	X			X		X	X		3.0-5.0'
	MW-5	09/14/00	X			X		X	X		1.0-3.0'
	MW-3	09/14/00	X			X		X	X		0.0-2.0'
	MW-3	09/14/00	X			X		X	X		4.0-6.0'
	MW-2	09/15/00	X			X		X	X		3.0-5.0'
	MW-2	09/15/00	X			X		X	X		7.0-9.0', Duplicate collected
	MW-4	09/16/00	X			X		X	X		3.0-5.0'
	SB-16A	09/18/00	X			X		X	X		7.0-9.0'
	SB-17	08/20/01	X								2.0-4.0'
	SB-17	08/20/01	X								6.0-8.0'
	SB-17	08/22/01	X								0-2.0'
	SB-17	08/22/01	X								4.0-6.0'
	SB-17	08/22/01	X								8.0-10.0'
	SB-18	08/22/01	X	X							6.0-8.0'
	SB-19	08/20/01	X	X							6.0-8.0'
	SB-21	08/20/01	X								6.0-8.0'
	SB-22	08/22/01	X								11.0-12.0'
	SB-23	08/22/01	X								11.0-12.0'
	SB-24	08/20/01	X	X							8.0-10.0', Duplicate collected
	SB-25	08/20/01	X								8.0-10.0'
	SB-26	08/20/01		X							10.0-12.0'
	SB-27	08/20/01		X							10.0-12.0'
	SB-28	08/20/01	X								6.0-8.0'
	SB-29	08/20/01	X								8.0-10.0'

TABLE 3.1

SAMPLE COLLECTION AND ANALYSES SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

	Location	*Sample Date*	*Analysis/Parameters*								*Comment*
			TCL VOCs	*TCL SVOCs*	*STARS VOCs*	*STARS SVOCs*	*Metals (Filtered)*	*Metals (Unfiltered)*	*CN*	*Lead Only*	
Groundwater	SB-1B	07/21/99	X		X	X				X	
	SB-6	07/21/99	X		X	X				X	
	MW-1	10/04/00	X			X		X	X		
	MW-1	09/19/01	X								
	MW-2	10/05/00	X			X		X	X		
	MW-2	09/20/01	X								
	MW-2	11/29/01	X								
	MW-3	10/04/00	X			X		X	X		
	MW-3	09/20/01	X								
	MW-4	10/05/00	X			X		X	X		Duplicate collected
	MW-4	09/24/01	X								
	MW-4	11/28/01	X								Duplicate collected
	MW-4A	10/04/00	X			X	X	X	X		
	MW-4A	09/24/01	X								
	MW-4A	11/29/01	X								
	MW-5	10/04/00	X			X		X	X		
	MW-5	09/19/01	X								
	MW-6	09/24/01	X	X							Duplicate collected
	MW-7	09/24/01	X	X							
	MW-7A	09/20/01	X								
	MW-8	09/24/01	X								
	MW-8A	09/20/01	X								
	MW-9	09/21/01	X								
	MW-9	11/27/01	X								
	MW-9A	09/21/01	X								
	MW-9A	11/28/01	X								
	MW-10	09/20/01	X	X							
	MW-10A	09/20/01	X								
	MW-11	09/20/01	X	X							
	MW-11	11/28/01	X								
	MW-11A	09/20/01	X								
	MW-11A	11/29/01	X								
	MW-12	11/27/01	X								
	MW-12A	11/30/01	X								

Notes:

' Feet.
CN Chloroacetophenone.
STARS Spill Technology and Remediation.
SVOCs Semi-Volatile Organic Compounds.
TCL Target Compound List.
VOCs Volatile Organic Compounds.

TABLE 3.2

MONITORING WELL INSTALLATION DETAILS
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Well No.	*Borehole Depth (Ft. BGS)*	*Ground Elevation (Ft. NGVD)*	*Sandpack Interval (Ft. BGS)*			*Sandpack Interval (Ft. NGVD)*			*Screened Interval (Ft. BGS)*			*Screened Interval (Ft. NGVD)*		
MW-1	21.0	592.6	13.5	to	21.0	579.1	to	571.6	16.0	to	21.0	576.6	to	571.6
MW-2	18.0	591.7	9.0	to	18.0	582.7	to	573.7	12.5	to	17.5	579.2	to	574.2
MW-3	18.0	591.0	9.0	to	18.0	582.0	to	573.0	12.5	to	17.5	578.5	to	573.5
MW-4	18.0	591.2	9.0	to	18.0	582.2	to	573.2	12.5	to	17.5	578.7	to	573.7
MW-4A	30.0	591.0	21.5	to	29.6	569.5	to	561.4	24.4	to	29.4	566.6	to	561.6
MW-5	21.0	591.4	9.5	to	21.0	581.9	to	570.4	12.5	to	17.5	578.9	to	573.9
MW-6	20.0	591.6	23.0	to	20.0	568.6	to	571.6	15.0	to	20.0	576.6	to	571.6
MW-7	18.4	590.9	11.4	to	18.4	579.5	to	572.5	13.4	to	18.4	577.5	to	572.5
MW-7A	30.0	590.9	23.0	to	30.0	567.9	to	560.9	25.0	to	30.0	565.9	to	560.9
MW-8	16.2	589.7	8.0	to	16.2	581.7	to	573.5	11.2	to	16.2	578.5	to	573.5
MW-8A	30.0	589.6	22.0	to	30.0	567.6	to	559.6	25.0	to	30.0	564.6	to	559.6
MW-9	17.9	590.3	11.0	to	17.9	579.3	to	572.4	12.9	to	17.9	577.4	to	572.4
MW-9A	31.5	590.3	24.5	to	31.5	565.8	to	558.8	26.5	to	31.5	563.8	to	558.8
MW-10	16.0	589.4	7.0	to	16.0	582.4	to	573.4	11.0	to	16.0	578.4	to	573.4
MW-10A	25.0	589.6	12.0	to	25.0	577.6	to	564.6	20.0	to	25.0	569.6	to	564.6
MW-11	18.0	590.8	11.0	to	18.0	579.8	to	572.8	13.0	to	18.0	577.8	to	572.8
MW-11A	27.5	590.7	20.5	to	27.5	570.2	to	563.2	22.5	to	27.5	568.2	to	563.2
MW-12	18.0		11.0	to	18.0		to		13.0	to	18.0		to	
MW-12A	30.0		23.0	to	30.0		to		25.0	to	30.0		to	
PZ-1	18.0	589.6	11.0	to	18.0	578.6	to	571.6	13.0	to	18.0	576.6	to	571.6
PZ-2	18.0	590.2	11.0	to	18.0	579.2	to	572.2	13.0	to	18.0	577.2	to	572.2
PZ-3	12.0	589.4	4.0	to	12.0	585.4	to	577.4	7.0	to	12.0	582.4	to	577.4

Notes:
Ft. BGS Feet Below Ground Surface.
NGVD National Geodetic Vertical Datum

TABLE 3.3

WATER LEVEL ELEVATIONS
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Well No.	*Top of Casing*	*27-Sep-00*	*05-Oct-00*	*07-Feb-01*	*28-Sep-01*	*26-Nov-01*
MW-1	592.24	583.13	583.19	583.42	582.16	583.14
MW-2	591.23	583.18	583.13	583.35	582.01	583.08
MW-3	590.33	582.67	582.75	583.00	581.54	582.66
MW-4	590.51	583.09	583.11	583.29	582.02	583.01
MW-4A	590.61	579.36	579.72	579.81	578.09	578.71
MW-5	590.76	582.78	582.81	583.03	580.62	582.76
MW-6	591.47	--	--	--	581.96	NM
MW-7	590.41	--	--	--	581.72	582.51
MW-7A	590.42	--	--	--	577.87	578.42
MW-8	588.88	--	--	--	581.33	582.35
MW-8A	589.04	--	--	--	578.26	579.14
MW-9	589.71	--	--	--	581.92	582.73
MW-9A	589.55	--	--	--	577.99	578.35
MW-10	589.02	--	--	--	581.29	582.67
MW-10A	589.07	--	--	--	578.10	578.82
MW-11	590.40	--	--	--	581.87	582.80
MW-11A	590.20	--	--	--	578.68	578.95
MW-12	590.68	--	--	--	--	582.68
MW-12A	590.55	--	--	--	--	579.90
PZ-1	589.36	--	--	--	581.60	NM
PZ-2	590.04	--	--	--	581.86	NM
PZ-3	589.15	--	--	--	581.40	582.55

Notes:
All elevations are relative to National Geodetic Vertical Datum
-- Not installed.
NM Not measured.

TABLE 3.4
WELL RECOVERY INFORMATION
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Well Number	*Description*
MW-1	Yield sufficient for purging and sampling
MW-2	Yield sufficient for purging and sampling
MW-3	Yield sufficient for purging and sampling
MW-4	Yield sufficient for purging and sampling
MW-4A	Dry after 1.5 volumes (5 gallons) removed. Same day recovery sufficient for sampling.
MW-5	Yield sufficient for purging and sampling.
MW-6	Yield sufficient for purging and sampling
MW-7	Yield sufficient for purging and sampling
MW-7A	Dry after 3 volumes (8 gallons) removed. Same day recovery sufficient for sampling.
MW-8	Yield sufficient for purging and sampling.
MW-8A	Dry after 2.5 volumes (5 gallons). 24-hour recovery 2.5 gallons.
MW-9	Dry after 4 volumes (5 gallons) removed, full recovery in 15 minutes.
MW-9A	Yield sufficient for purging and sampling.
MW-10	Dry after 4 volumes (1.0 gallon), same day recovery sufficient for sampling.
MW-10A	Yield sufficient for purging and sampling.
MW-11	Yield sufficient for purging and sampling.
MW-11A	Dry after 3 volumes (7.5 gallons) removed, recovery 1.8 gallons in 4 hours.
MW-12	Yield sufficient for purging and sampling.
MW-12A	Dry after 1.5 volumes (4.5 gallons) removed, recovery 3.3 gallons in approximately 48 hours.

TABLE 5.1
ESTIMATED HYDRAULIC CONDUCTIVITY VALUES
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

	Well ID	*Falling Head (cm/sec)*	*Rising Head (cm/sec)*	*Geometric Mean (cm/sec)*
Shallow Overburden	MW-1	2.460E-03	2.113E-03	
		2.375E-03	2.495E-03	2.356E-03
	MW-2	8.259E-03	7.132E-03	
		1.034E-02	1.025E-02	8.889E-03
	MW-3	4.548E-03	5.283E-03	
		6.219E-03	5.406E-03	5.331E-03
	MW-4	5.541E-03	4.981E-03	
		4.998E-03	5.723E-03	5.301E-03
	MW-5	4.594E-03	1.608E-03	
		4.484E-03	1.963E-03	2.840E-03
	MW-6	2.586E-03		2.586E-03
	MW-7	4.646E-03		4.646E-03
	MW-8	1.394E-04		1.394E-04
	MW-9	3.284E-04		3.284E-04
	MW-10		*- Not Tested -*	
	MW-11	1.145E-02	8.647E-03	9.950E-03
	MW-12	1.189E-02	7.039E-03	
		1.117E-02	4.638E-03	7.198E-03
Deep Overburden	MW-4A	1.693E-05	1.554E-05	1.622E-05
	MW-7A	1.452E-05	6.603E-06	9.792E-06
	MW-8A	1.932E-05	1.274E-05	1.569E-05
	MW-9A	3.769E-04	3.523E-04	3.644E-04
	MW-10A ???			
	MW-11A ??	2.500E-06		2.500E-06
	MW-12A	3.509E-06		3.509E-06

TABLE 6.1

GENERIC GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Compound	*Units*	*Maximum Average Concentration* [(1)]	*Residential Criteria* [(2)]	*Industrial Criteria* [(2)]
Tetrachloroethene	µg/L	7,880 (MW-4)	25,000	170,000
Trichloroethene	µg/L	456 (MW-4)	15,000	97,000
cis-1,2-Dichloroethene	µg/L	240 (MW-2)	96,000	200,000

Notes:

(1) Maximum of the average groundwater concentration detected in on-Site monitoring wells.

(2) Source: Michigan Department of Environmental Quality, Part 201,
Operational Memo 18, Attachment A, June 2000.

TABLE 6.2

ORGANIC CHEMICAL COMPOUNDS DETECTED IN SOILS
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

		Sample Location:	SB-1B	SB-3	SB-4	SB-6	SB-7	SB-8	SB-9	SB-10	SB-14	SB-15
		Sample Depth (ft BGS):	8.0-12.0	12.0-16.0	12.0-16.0	8.0-12.0	8.0-12.0	4.0-8.0	0-4.0	8.0-12.0	5.0-7.0	5.0-7.0
		Sample Date:	07/21/99	07/21/99	07/21/99	07/21/99	07/21/99	07/21/99	07/21/99	07/21/99	9/13/2000	9/13/2000
Parameter	TAGM 4046 Standard	Unit										
Volatiles												
Acetone	200	ug/Kg	100 U	100 U	25	NA	NA	NA	NA	NA	24 U	21 U
2-Butanone	300	ug/Kg	100 U	100 U	100 U	NA	NA	NA	NA	NA	24 U	21UJ
cis-1,2-Dichloroethene	NS	ug/Kg	NA	NA	NA	NA	NA	NA	NA	NA	6.0 U	5.3 U
Tetrachloroethene	1400	ug/Kg	15	$\boxed{12000}$	421	NA	NA	NA	NA	NA	8.3	28
Methylene chloride	100	ug/Kg	20	7	3	NA	NA	NA	NA	NA	6.0 U	5.3 U
Trichloroethene	700	ug/Kg	2	54	12	NA	NA	NA	NA	NA	6.0 U	5.3 U
Toluene	1500	ug/Kg	3	5 U	5 U	1.5	2.7	7.0	1.9	5.9	6.0 U	5.3 U
Xylenes, total	1200	ug/Kg	2	5 U	5 U	2.8 U	2.8 U	7.5	2.8 U	7.6	6.0 U	5.3 U
Benzene	60	ug/Kg	5 U	5 U	5 U	1 U	1 U	5.1	1 U	1 U	6.0 U	5.3 U
Ethylbenzene	5500	ug/Kg	5 U	5 U	5 U	1 U	1 U	1.8	1 U	1 U	6.0 U	5.3 U
Semi-Volatiles												
Acenaphthene	50000	ug/Kg	NA	NA	NA	330 U	330 U	330 U	330 U	330 U	400 U	1800 UJ
Anthracene	50000	ug/Kg	NA	NA	NA	330 U	330 U	164	330 U	330 U	400 U	170 J
Benzo(a)anthracene	224	ug/Kg	NA	NA	NA	89	330 U	$\boxed{450}$	$\boxed{6340}$	330 U	400 U	$\boxed{710 J}$
Benzo(a)pyrene	61	ug/Kg	NA	NA	NA	87	330 U	$\boxed{520}$	$\boxed{6080}$	330 U	400 U	$\boxed{720 J}$
Benzo(b)fluoranthene	1100	ug/Kg	NA	NA	NA	157	330 U	513	$\boxed{6280}$	330 U	400 U	750 J
Benzo(g,h,i)perylene	50000	ug/Kg	NA	NA	NA	330 U	330 U	328	3420	330 U	400 U	280 J
Benzo(k)fluoranthene	1100	ug/Kg	NA	NA	NA	87	330 U	475	$\boxed{4080}$	330 U	400 U	730 J
bis(2-Ethylhexyl) phthalat	50000	ug/Kg	NA	NA	NA	330 U	330 U	330 U	330 U	330 U	400 U	1800 UJ
Carbazole	NS	ug/Kg	NA	NA	NA	330 U	330 U	330 U	330 U	330 U	400 U	1800 UJ
Chrysene	400	ug/Kg	NA	NA	NA	129	330 U	$\boxed{514}$	$\boxed{6670}$	330 U	400 U	$\boxed{830 J}$
Dibenzofuran	6200	ug/Kg	NA	NA	NA	330 U	330 U	330 U	330 U	330 U	400 U	1800 UJ
Dibenz(a,h)anthracene	14	ug/Kg	NA	NA	NA	330 U	330 U	330 U	$\boxed{1690}$	330 U	400 U	1800 UJ
Fluoranthene	50000	ug/Kg	NA	NA	NA	258	330 U	1280	8330	330 U	400 U	1800 J
Fluorene	50000	ug/Kg	NA	NA	NA	330 U	330 U	89	330 U	330 U	400 U	1800 UJ
Indeno(1,2,3-cd)pyrene	3200	ug/Kg	NA	NA	NA	330 U	330 U	275	3180	330 U	400 U	290 J
Naphthalene	13000	ug/Kg	NA	NA	NA	330 U	330 U	330 U	330 U	330 U	400 U	1800 UJ
Phenanthrene	50000	ug/Kg	NA	NA	NA	160	330 U	979	330 U	330 U	400 U	950 J
Pyrene	50000	ug/Kg	NA	NA	NA	242	330 U	1340	12600	330 U	400 U	860 J
2-Methyl naphthalene	35400	ug/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 6.2

ORGANIC CHEMICAL COMPOUNDS DETECTED IN SOILS
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

		Sample Location:	SB-16A	SB-17	SB-17	SB-17	SB-17	SB-17	SB-18	SB-19	SB-21	SB-22
		Sample Depth (ft BGS):	7.0-9.0	0-2.0	2.0-4.0	4.0-6.0	6.0-8.0	8.0-10.0	6.0-8.0	6.0-8.0	6.0-8.0	11.0-22.0
		Sample Date:	9/18/2000	08/22/01	08/22/01	08/22/01	08/22/01	08/22/01	08/22/01	08/20/01	08/20/01	08/22/01
Parameter	*TAGM 4046 Standard*	*Unit*										
Volatiles												
Acetone	200	ug/Kg	420 J	21 U	21 U	25 U	25 U	24 U	46 U	25 U	24 U	24 U
2-Butanone	300	ug/Kg	1300U	21 U	21 U	25 U	25 U	24 U	8.3 J	25 U	24 U	24 U
cis-1,2-Dichloroethene	NS	ug/Kg	310 U	5.2 U	5.2 U	6.2 U	6.2 U	1.5J	6.1	70	6.0 U	5.9 U
Tetrachloroethene	1400	ug/Kg	7200	13	33	16	140	9700	2.9J	29000	2.9 J	19
Methylene chloride	100	ug/Kg	310 U	5.2 U	5.2 U	6.2 U	6.2 U	6.1 U	5.7 U	6.3 U	6.0 U	5.9 U
Trichloroethene	700	ug/Kg	310 U	5.2 U	5.2 U	6.2 U	6.2 U	13	6.1	25	6.0 U	5.9 U
Toluene	1500	ug/Kg	310 U	5.2 U	5.2 U	6.2 U	6.2 U	6.1 U	5.7 U	6.3 U	6.0 U	5.9 U
Xylenes, total	1200	ug/Kg	310 U	16 U	16 U	19 U	19 U	18 U	17 U	19 U	18 U	18 U
Benzene	60	ug/Kg	310 U	5.2 U	5.2 U	6.2 U	6.2 U	6.1 U	5.7 U	6.3 U	6.0 U	5.9 U
Ethylbenzene	5500	ug/Kg	310 U	5.2 U	5.2 U	6.2 U	6.2 U	6.1 U	5.7 U	6.3 U	6.0 U	5.9 U
Semi-Volatiles												
Acenaphthene	50000	ug/Kg	410 U	NA	NA	NA	NA	NA	1200 J	410 U	NA	NA
Anthracene	50000	ug/Kg	410 U	NA	NA	NA	NA	NA	1800 J	410 U	NA	NA
Benzo(a)anthracene	224	ug/Kg	410 U	NA	NA	NA	NA	NA	3200 J	410 U	NA	NA
Benzo(a)pyrene	61	ug/Kg	410 U	NA	NA	NA	NA	NA	2200 J	410 U	NA	NA
Benzo(b)fluoranthene	1100	ug/Kg	410 U	NA	NA	NA	NA	NA	2000 J	410 U	NA	NA
Benzo(g,h,i)perylene	50000	ug/Kg	410 U	NA	NA	NA	NA	NA	1100 J	410 U	NA	NA
Benzo(k)fluoranthene	1100	ug/Kg	410 U	NA	NA	NA	NA	NA	1400 J	410 U	NA	NA
bis(2-Ethylhexyl) phthalat	50000	ug/Kg	410 U	NA	NA	NA	NA	NA	3800 U	120 J	NA	NA
Carbazole	NS	ug/Kg	410 U	NA	NA	NA	NA	NA	880 J	410 U	NA	NA
Chrysene	400	ug/Kg	22 J	NA	NA	NA	NA	NA	2900 J	410 U	NA	NA
Dibenzofuran	6200	ug/Kg	410 U	NA	NA	NA	NA	NA	730 J	410 U	NA	NA
Dibenz(a,h)anthracene	14	ug/Kg	410 U	NA	NA	NA	NA	NA	3800 U	410 U	NA	NA
Fluoranthene	50000	ug/Kg	46 J	NA	NA	NA	NA	NA	5900	43 J	NA	NA
Fluorene	50000	ug/Kg	410 U	NA	NA	NA	NA	NA	1100 J	410 U	NA	NA
Indeno(1,2,3-cd)pyrene	3200	ug/Kg	410 U	NA	NA	NA	NA	NA	1100 J	410 U	NA	NA
Naphthalene	13000	ug/Kg	410 U	NA	NA	NA	NA	NA	1700 J	410 U	NA	NA
Phenanthrene	50000	ug/Kg	46 J	NA	NA	NA	NA	NA	6900	410 U	NA	NA
Pyrene	50000	ug/Kg	44 J	NA	NA	NA	NA	NA	5800	51 J	NA	NA
2-Methyl naphthalene	35400	ug/Kg	NA	NA	NA	NA	NA	NA	460 J	410 U	NA	NA

TABLE 6.2

ORGANIC CHEMICAL COMPOUNDS DETECTED IN SOILS
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Parameter	TAGM 4046 Standard	Unit	SB-23	SB-24	SB-25	MW-1	MW-2	MW-3	MW-3	MW-4	MW-5
		Sample Depth (ft BGS):	*11.0-12.0*	*8.0-10.0*	*8.0-10.0*	*3.0-5.0*	*3.0-5.0*	*0-2.0*	*4.0-6.0*	*3.0-5.0*	*1.0-3.0*
		Sample Date:	*08/22/01*	*08/20/01*	*08/20/01*	*9/14/2000*	*9/15/2000*	*9/14/2000*	*9/14/2000*	*9/15/2000*	*9/14/2000*
Volatiles											
Acetone	200	ug/Kg	24 U	24 U/24 U	24 U	27 J	29 J	25 UJ	28 J	21 U	27 U
2-Butanone	300	ug/Kg	24 U	24 U/24 U	24 U	24 UJ	24 UJ	25 UJ	25 UJ	21 UJ	27 UJ
cis-1,2-Dichloroethene	NS	ug/Kg	5.9 U	6.0 U/6.0 U	6.0 U	6.0 U	6.0 U	6.2 U	6.3 U	5.3 U	6.7 U
Tetrachloroethene	1400	ug/Kg	1.6 J	53/9.8	1.5 J	6.0 U	6.0 U	6.2 U	6.3 U	13	6.7 U
Methylene chloride	100	ug/Kg	5.9 U	6.0 U/6.0 U	6.0 U	6.0 U	6.0 U	6.2 U	6.3 U	5.3 U	6.7 U
Trichloroethene	700	ug/Kg	5.9 U	6.0 U/6.0 U	6.0 U	6.0 U	6.0 U	6.2 U	6.3 U	5.3 U	6.7 U
Toluene	1500	ug/Kg	5.9 U	6.0 U/6.0 U	6.0 U	6.0 U	6.0 U	6.2 U	6.3 U	5.3 U	6.7 U
Xylenes, total	1200	ug/Kg	18 U	18 U/18 U	18 U	6.0 U	6.0 U	6.2 U	6.3 U	5.3 U	6.7 U
Benzene	60	ug/Kg	5.9 U	6.0 U/6.0 U	6.0 U	6.0 U	6.0 U	6.2 U	6.3 U	5.3 U	6.7 U
Ethylbenzene	5500	ug/Kg	5.9 U	6.0 U/6.0 U	6.0 U	6.0 U	6.0 U	6.2 U	6.3 U	5.3 U	6.7 U
Semi-Volatiles											
Acenaphthene	50000	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	410 U	410 U	970 J	440 U
Anthracene	50000	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	31 J	410 U	2100 J	30 J
Benzo(a)anthracene	224	ug/Kg	NA	400 U/400 U	NA	400 U	150 J	160 J	410 U	5700 J	88 J
Benzo(a)pyrene	61	ug/Kg	NA	400 U/400 U	NA	22 J	2000 U	160 J	410 U	5600	90 J
Benzo(b)fluoranthene	1100	ug/Kg	NA	400 U/400 U	NA	30 J	190 J	210 J	410 U	6400	78 J
Benzo(g,h,i)perylene	50000	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	53 J	410 U	1500 J	50 J
Benzo(k)fluoranthene	1100	ug/Kg	NA	400 U/400 U	NA	400 U	170 J	160 J	410 U	5400	70 J
bis(2-Ethylhexyl) phthalat	50000	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	410 U	410 U	3500 U	440 U
Carbazole	NS	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	410 U	410 U	3500 U	440 U
Chrysene	400	ug/Kg	NA	400 U/400 U	NA	28 J	190 J	180 J	410 U	6200 J	110 J
Dibenzofuran	6200	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	410 U	410 U	3500 U	440 U
Dibenz(a,h)anthracene	14	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	410 U	410 U	500 J	440 U
Fluoranthene	50000	ug/Kg	NA	400 U/400 U	NA	55 J	540 J	490	410 U	22000	220 J
Fluorene	50000	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	410 U	410 U	1100 J	440 U
Indeno(1,2,3-cd)pyrene	3200	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	53 J	410 U	1700 J	45 J
Naphthalene	13000	ug/Kg	NA	400 U/400 U	NA	400 U	2000 U	410 U	410 U	3500 U	440 U
Phenanthrene	50000	ug/Kg	NA	400 U/400 U	NA	29 J	260 J	160 J	410 U	11000	140 J
Pyrene	50000	ug/Kg	NA	400 U/400 U	NA	22 J	220 J	180 J	410 U	8200 J	120 J
2-Methyl naphthalene	35400	ug/Kg	NA	400 U/400 U	NA	NA	NA	NA	NA	NA	NA

Notes:
J Estimated.
NA Not analyzed.
TAGM Technical and Administrative Guidance Memoranda.
U Non-detect at associated value.
Exceeds standard.

TABLE 6.3

METALS DETECTED IN SOIL
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

		Sample Location:	MW-1	MW-2	MW-2	MW-2	MW-3	MW-3	MW-4
		Sample ID:	S-091400-KL-007	S-091500-KL-012	S-091500-KL-013	S-091500-KL-014	S-091400-KL-009	S-091400-KL-010	S-091500-KL-015
		Sample Depth (ft. BGS):	3.0-5.0	3.0-50	7.0-9.0	7.0-9.0	0-2.0	4.0-6.0	3.0-5.0
		Sample Date:	9/14/2000	9/15/2000	9/15/2000	9/15/2000	9/14/2000	09/14/00	9/15/2000
						Duplicate			
	TAGM 4046 Std								
Metals									
Aluminum	Background	mg/Kg	11700	15300	9050	8990	9460	12900	9060
Antimony	Background	mg/Kg	0.80 UJ	0.64 UJ	0.40 UJ	0.88 J	0.81 J	0.54 UJ	0.46 UJ
Arsenic	7.5	mg/Kg	8.5	4.8	7.5	7.0	8.1	10.7	4.6
Barium	300	mg/Kg	68.7	457	55.1	60.1	76.2	107	129
Cadmium	1	mg/Kg	0.60 UJ	0.60 UJ	0.61 UJ	0.62 UJ	0.12 J	0.63 UJ	0.88 J
Calcium	Background	mg/Kg	20000	171000	2760	2890	27400	1770	201000
Chromium	10	mg/Kg	16.0	12.6	11.9	12.0	14.9	16.9	6.1
Cobalt	30	mg/Kg	11.1	8.5	11.2	10.9	10.7	15.9	2.6
Copper	25	mg/Kg	16.8	20.6	27.4	26.1	30.2	31.0	11.2
Iron	2000	mg/Kg	28500	11700	23600	23200	23100	32400	9310
Lead	Background	mg/Kg	33.9	25.6	11.3	11.1	87.6	15.8	34.9
Magnesium	Background	mg/Kg	4740 J	31200 J	3400 J	3470 J	9790 J	4830 J	9420 J
Manganese	Background	mg/Kg	453	1700	384	365	627	603	413
Nickel	13	mg/Kg	23.6	11.3	25.4	26.0	22.2	35.4	7.6
Potassium	Background	mg/Kg	915	1360	771	691	924	943	931
Selenium	2	mg/Kg	0.34	1.2 U	0.61 U	0.62 U	0.62 U	0.63 U	0.53 U
Silver	Background	mg/Kg	1.2 U	0.19	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U
Sodium	Background	mg/Kg	343 U	507	142 U	161 U	138 U	79.0 U	358 U
Thallium	Background	mg/Kg	1.2	3.4	1.4	0.87	1.5	1.1	1.6
Vanadium	150	mg/Kg	17.8	13.2	15.7	14.8	18.8	19.6	9.3
Zinc	20	mg/Kg	84.3	141	83.2	82.0	121	108	311
Mercury	0.1	mg/Kg	0.043	0.068	0.031	0.023	0.11	0.035	0.042
Cyanide (total)		mg/Kg	0.60 U	3.8	0.61 U	0.62 U	17.1	0.63 U	0.53 U

TABLE 6.3

METALS DETECTED IN SOIL
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

	TAGM 4046 Std	*Sample Location:*	*MW-5*	*SB-11*	*SB-12*	*SB-13*	*SB-14*	*SB-15*	*SB-16A*
		Sample ID:	*S-091400-KL-008*	*S-091300-KL-001*	*S-091300-KL-005*	*S-091300-KL-002*	*S-091300-KL-003*	*S-091300-KL-004*	*S-091800-KL-016*
		Sample Depth (ft. BGS):	*1.0-3.0*	*7.0-9.0*	*7.0-9.0*	*7.0-9.0*	*5.0-7.0*	*5.0-7.0*	*7.0-9.0*
		Sample Date:	*9/14/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/18/2000*
Metals									
Aluminum	Background	mg/Kg	14100	14500	14100	10200	10500	4230	11100
Antimony	Background	mg/Kg	0.58 UJ	0.70 UJ	0.93 J	0.62 UJ	0.32 UJ	0.46 UJ	0.78 UJ
Arsenic	7.5	mg/Kg	$\boxed{9.7}$	$\boxed{9.7}$	$\boxed{12.9}$	$\boxed{8.6}$	$\boxed{9.3}$	4.8	$\boxed{9.9}$
Barium	300	mg/Kg	85.9	80.2	103	50.8	56.4	71.4	67.9
Cadmium	1	mg/Kg	$\boxed{1.5 J}$	0.61 UJ	0.62 UJ	0.60 UJ	0.60 UJ	0.48 J	0.63 UJ
Calcium	Background	mg/Kg	42600	2020	1450	1840	2190	178000	2100
Chromium	10	mg/Kg	$\boxed{18.4}$	$\boxed{18.9}$	$\boxed{18.6}$	$\boxed{13.2}$	$\boxed{12.9}$	$\boxed{22.8}$	$\boxed{13.7}$
Cobalt	30	mg/Kg	15.7	13.2	16.6	11.9	14.8	3.0	16.8
Copper	25	mg/Kg	$\boxed{96.6}$	$\boxed{30.0}$	$\boxed{33.7}$	$\boxed{27.1}$	$\boxed{31.5}$	21.0	$\boxed{32.0}$
Iron	2000	mg/Kg	$\boxed{30800}$	$\boxed{34000}$	$\boxed{36100}$	$\boxed{26300}$	$\boxed{26900}$	$\boxed{9270}$	$\boxed{28000}$
Lead	Background	mg/Kg	44.8	12.6	17.3	11.7	13.7	354	13.9
Magnesium	Background	mg/Kg	11100 J	5360 J	5230 J	3790 J	3730 J	26400 J	3940 J
Manganese	Background	mg/Kg	515	459	673	422	668	315	708
Nickel	13	mg/Kg	$\boxed{31.8}$	$\boxed{37.8}$	$\boxed{37.5}$	$\boxed{28.4}$	$\boxed{31.2}$	8.7	$\boxed{31.3}$
Potassium	Background	mg/Kg	1620	1090	1030	737	902	585	795
Selenium	2	mg/Kg	0.67 U	1.2 U	0.62 U	0.60 U	0.60 U	0.54 U	0.63 U
Silver	Background	mg/Kg	1.4 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.3 U
Sodium	Background	mg/Kg	151 U	112 U	255 U	156 U	114 U	421	220 U
Thallium	Background	mg/Kg	1.5	1.8	1.2	1.4	2.2	0.86	1.4
Vanadium	150	mg/Kg	21.4	21.0	21.4	17.3	18.2	9.6	17.9
Zinc	20	mg/Kg	$\boxed{1310}$	$\boxed{102}$	$\boxed{103}$	$\boxed{81.0}$	$\boxed{84.6}$	$\boxed{186}$	$\boxed{87.5}$
Mercury	0.1	mg/Kg	0.091	0.032 U	0.026 U	0.017 U	0.033 U	$\boxed{0.13}$	0.034
Cyanide (total)		mg/Kg	0.67 U	0.61 U	0.62 U	0.60 U	0.60 U	0.53 U	0.63 U

Notes:
- \- Not applicable.
- J Estimated.
- TAGM Technical Administrative Guidance Memoranda.
- U Non-detect at associated value.
- $\boxed{}$ Exceeds standard.

CRA 15867 (2)

TABLE 6.4

ORGANIC CHEMICAL COMPOUNDS DETECTED IN GROUNDWATER
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

		Sample Location:	*SB-1B*	*SB-6*	*MW-1*		*MW-2*			*MW-4*		
		Sample Date:	*7/21/99*	*7/21/99*	*10/4/2000*	*9/19/01*	*10/5/2000*	*9/20/01*	*11/29/01*	*10/5/2000*	*9/24/01*	*11/25/01*
Parameter	***Groundwater Std.*** [(1)]	***Units***										
Volitile Organic Compounds												
1,1,1-Trichloroethane	5	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	25 U	5.0 U	5.0 U	500 U/500 U	5.0 U	150 U/250 U
1,1-Dichloroethane	5	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	25 U	5.0 U	5.0 U	500 U/500 U	5.0 U	150 U/250 U
1,1-Dichloroethene	5	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	25 U	5.0 U	5.0 U	500 U/500 U	5.0 U	150 U/250 U
Acetone	50	ug/L	100 U	100 U	3.7 J	20 U	100 U	20 U	20 U	R	20 U	600 U/1000 U
Carbon disulfide	5	ug/L	5.0 U	5.0 U	5.0 UJ	5.0 U	25 UJ	5.0 U	5.0 U	500 UJ/500 UJ	5.0 U	150 U/250 U
cis-1,2-Dichloroethene	5	ug/L	NA	NA	5.0 U	5.0 U	400	180	140	250 J/220 J	3.8 J	100 J/160 J
Tetrachloroethene	5	ug/L	12600	5.0 U	5.0 U	5.0 U	690 J	50	85	17000 J/15000 J	41	5800/9400
trans-1,2-Dichloroethene	5	ug/L	2.0	5.0 U	5.0 U	5.0 U	25 U	5.0 U	5.0 U	500 U/500 U	5.0 U	150 U/250 U
Trichloroethene	5	ug/L	537	5.0 U	5.0 U	5.0 U	350	210	140	940 /840	6.5	360/580
Vinyl chloride	5	ug/L	10 U	10 U	10 U	10 U	50 U	4.5J	5.0 J	500 U/500 U	10 U	300 U/500 U
Ethylbenzene	5	ug/L	7.1	2.8 U	5.0 U	5.0 U	25 U	5.0 U	5.0 U	500 U/500 U	5.0 U	150 U/250 U
Methyl Tert Butyl Ether		ug/L	NA	NA	NA	5.0 U	NA	5.0 U	5.0 U	NA/NA	5.0 U	150 U/250 U
Xylenes, Total	5	ug/L	4.6	2.8U	5.0 U	15.0 U	25 U	15.0 U	15.0 U	500 U/500 U	15.0 U	450 U/750 U
Semi-Volatile Organic Compounds												
Caprolactum		ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 6.4

ORGANIC CHEMICAL COMPOUNDS DETECTED IN GROUNDWATER
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

		Sample Location:	*MW-4A*			*MW-5*		*MW-6*	*MW-7*	*MW-8A*	*MW-9*		*MW-9A*	
		Sample Date:	*10/4/2000*	*9/24/01*	*11/29/01*	*10/4/2000*	*9/19/01*	*9/24/01*	*9/24/01*	*9/20/01*	*9/21/01*	*11/27/01*	*9/21/01*	*11/28/01*
Parameter	***Groundwater Std.*** [(1)]	***Units***												
Volitile Organic Compounds														
1,1,1-Trichloroethane	5	ug/L	5.0 U	5.0 U	5.0 U	2.8 J	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	5.0 U	250 U	5.0 U	5.0 U
1,1-Dichloroethane	5	ug/L	5.0 U	5.0 U	5.0 U	1.5 J	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	5.0 U	250 U	5.0 U	5.0 U
1,1-Dichloroethene	5	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	2.0 J	250 U	5.0 U	5.0 U
Acetone	50	ug/L	17 J	20 U	20 U	4.3 J	20 U	20 U/20 U	20 U	13 J	20 U	1000 U	20 U	20 U
Carbon disulfide	5	ug/L	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U/5.0 U	1.1J	5.0 U	5.0 U	250 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	5	ug/L	7.6	33	46	5.0 U	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	230 J	260	5.0 U	2.0 J
Tetrachloroethene	5	ug/L	730	65	32	5.0 U	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	12000	9500	27	41
trans-1,2-Dichloroethene	5	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	2.2 J	250 U	3.7J	5.0 U
Trichloroethene	5	ug/L	30	270	95	5.0 U	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	1200	1000	5.0 U	7.7
Vinyl chloride	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U/10 U	10 U	10 U	2.7 J	250 U	10 U	10 U
Ethylbenzene	5	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	5.0 U	250 U	5.0 U	5.0 U
Methyl Tert Butyl Ether		ug/L	NA	5.0 U	5.0 U	NA	5.0 U	5.0 U/5.0 U	5.0 U	5.0 U	5.0 U	250 U	5.0 U	5.0 U
Xylenes, Total	5	ug/L	5.0 U	15.0 U	15.0 U	5.0 U	15.0 U	15U/15U	15.0 U	15.0 U	15.0 U	750 U	15.0 U	15.0 U
Semi-Volatile Organic Compounds														
Caprolactum		ug/L	NA	NA	NA	NA	NA	5100/4000	1600	NA	NA	NA	NA	NA

TABLE 6.4

ORGANIC CHEMICAL COMPOUNDS DETECTED IN GROUNDWATER
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

		Sample Location:	*MW-10*	*MW-10A*	*MW-11*		*MW-11A*		*MW-12*	*MW-12A*
		Sample Date:	*9/20/01*	*9/20/01*	*9/21/01*	*11/28/01*	*9/20/01*	*11/29/01*	*11/27/01*	*11/30/01*
Parameter	***Groundwater Std.*** [(1)]	***Units***								
Volitile Organic Compounds										
1,1,1-Trichloroethane	5	ug/L	5.0 U	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U
1,1-Dichloroethane	5	ug/L	5.0 U	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U
1,1-Dichloroethene	5	ug/L	5.0 U	5.0 U	10 U	5.0 U	5.0 U	10 U	3.2 J	5.0 U
Acetone	50	ug/L	20 U	5.7 J	40 U	20 U	20 U	40 U	20 U	5.6 J
Carbon disulfide	5	ug/L	5.0 U	5.0 U	10 U	5.0 U	1.5 J	10 U	5.0 U	2.7 J
cis-1,2-Dichloroethene	5	ug/L	5.0 U	5.0 U	4.3 J	29	5.5	7.1J	360	33
Tetrachloroethene	5	ug/L	5.0 U	5.0 U	240	1700	480	240	6200	100
trans-1,2-Dichloroethene	5	ug/L	5.0 U	5.0 U	10 U	5.0 U	5.0 U	10 U	3.0 J	5.0 U
Trichloroethene	5	ug/L	5.0 U	5.0 U	12	84	75	80	2000	36
Vinyl chloride	5	ug/L	10 U	10 U	20 U	10 U	10 U	20 U	3.3 J	10 U
Ethylbenzene	5	ug/L	5.0 U	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U
Methyl Tert Butyl Ether		ug/L	2.9 J	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U
Xylenes, Total	5	ug/L	15.0 U	15.0 U	30 U	15.0 U	15.0 U	30 U	15.0 U	15.0 U
Semi-Volatile Organic Compounds										
Caprolactum		ug/L	10 U	NA	10 U	NA	NA	NA	NA	NA

Notes:

(1) New York State Ambient Water Quality Standards, Class GA Groundwater, Technical and Operation Guidance Standards (TOGS) 1.1.1.

NA Not analyzed.

J Estimated.

R Rejected.

U Non-detect at associated value.

$\boxed{}$ Exceeds standard.

100/10 Results of duplicate analyses

TABLE 6.5

METALS DETECTED IN GROUNDWATER
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Parameter	Groundwater Std. [1]	Units	SB-1B 7/21/99	SB-6 7/21/99	MW-1 10/4/2000	MW-2 10/5/2000	MW-3 10/5/2000	MW-4 10/5/2000	MW-4 10/5/2000 Duplicate	MW-4A 10/4/2000	MW-5 10/4/2000
Aluminum	-	ug/L	NA	NA	153	86.0	105	394	440	1290/200U	53.1
Arsenic	25	ug/L	NA	NA	10.0 U	4.1	10.0 U	10.0 U	10.0 U	10.0 U/10.0U	10.0U
Barium	1,000	ug/L	NA	NA	181	137	61.4	111	112	164/154	88.1
Calcium	-	ug/L	NA	NA	153000	143000	112000	129000	130000	74700/62700	104000
Chromium	50	ug/L	NA	NA	2.2 U	1.6	1.9 U	1.7	1.2	3.8 U/10.0U	1.8U
Copper	200	ug/L	NA	NA	25.0 U	6.9 U	25.0 U	5.3 U	5.8 U	8.2 U	25.0U
Iron	300	ug/L	NA	NA	6820	1010	587	1060	1110	8130/164	1750
Lead	25	ug/L	2280	1820	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.5/3.0U	3.0U
Magnesium	35,000	ug/L	NA	NA	42500	24100	21000	25900	26100	21600/18800	12300
Manganese	300	ug/L	NA	NA	2270	1940	289	823	822	135/62.0	1380
Nickel	100	ug/L	NA	NA	7.5	6.4	11.9	9.3	14.8	18.7/9.9	11.6
Potassium	-	ug/L	NA	NA	1760	7640	8720	5010	5270	2150/1310	3670
Selenium	10	ug/L	NA	NA	2.4	5.0 U	2.3	5.0 U	5.0 U	5.0 U/5.0U	2.2
Sodium	20,000	ug/L	NA	NA	168000	204000	82500	161000	162000	33400/30400	55200
Zinc	2,000	ug/L	NA	NA	20.0 U	11.0	20.0 U	9.4	9.5	17.6/20.0U	5.3

Notes:

(1) New York State Ambient Water Quality Standards, Class GA Groundwater, Technical and Operation Guidance Standards (TOGS) 1.1.1.

NA Not analyzed.

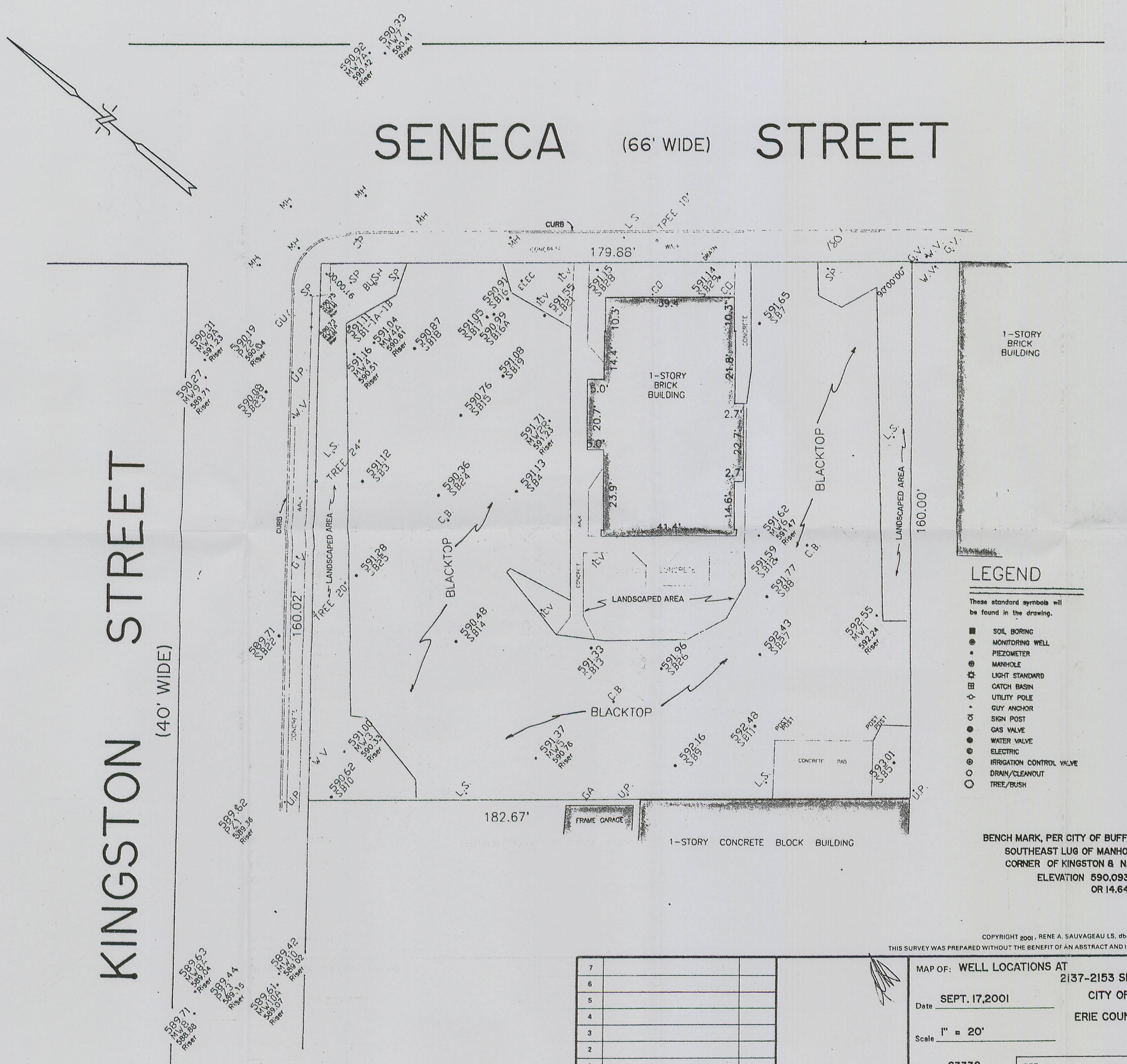
U Non-detect at associated value.

[box] Exceeds standard.

100/10 Total concentration/dissolved concentration

APPENDIX A

SITE SURVEY MAPS



POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
267	4790.565	5035.125	592.55	MW1
268	4790.465	5034.709	592.24	MW1-Riser
248	4903.907	5011.255	591.71	MW2
249	4904.159	5010.910	591.23	MW2-Riser
255	4883.081	4896.933	591.00	MW3
256	4883.353	4897.139	590.33	MW3-Riser
218	4961.371	4985.597	591.16	MW4
219	4961.635	4985.807	590.51	MW4-Riser
220	4959.351	4992.257	591.04	MW4A
221	4959.012	4992.329	590.61	MW4A-Riser
260	4838.680	4934.621	591.37	MW5
261	4838.449	4934.206	590.76	MW5-Riser
269	4833.436	5029.107	591.82	MW6
270	4833.309	5029.348	591.47	MW6-Riser
246	5015.300	5058.140	590.93	MW7
247	5015.115	5058.465	590.41	MW7-Riser
244	5018.812	5055.089	590.92	MW7A
245	5018.498	5055.310	590.42	MW7A-Riser
238	4863.389	4808.783	589.71	MW8
239	4863.014	4809.012	588.88	MW8-Riser
234	4867.722	4813.733	589.63	MW8A
235	4867.368	4814.037	589.04	MW8A-Riser
226	4989.666	4950.282	590.27	MW9
227	4989.501	4950.546	589.71	MW9-Riser
228	4993.410	4953.856	590.31	MW9A
229	4993.280	4954.016	589.55	MW9A-Riser
257	4852.600	4834.860	589.42	MW10
258	4852.273	4834.971	589.02	MW10-Riser
240	4850.679	4832.135	589.61	MW10A
241	4850.371	4832.412	589.07	MW10A-Riser
224	4979.331	4985.888	590.75	MW11
225	4979.142	4986.134	590.40	MW11-Riser
222	4976.609	4982.898	590.73	MW11A
223	4976.340	4983.219	590.20	MW11A-Riser
232	4895.801	4852.668	589.62	PZ1
233	4895.677	4852.833	589.36	PZ1-Riser
230	4987.061	4961.026	590.19	PZ2
231	4986.935	4961.249	590.04	PZ2-Riser
236	4863.868	4816.196	589.44	PZ3
237	4863.623	4816.470	589.15	PZ3-Riser
208	4968.116	4990.716	591.11	SB1-1A-1B
215	4934.004	4960.092	591.12	SB3
243	4897.410	4989.391	591.13	SB4
274	4757.340	5006.671	593.01	SB5
279	4876.308	5075.641	591.65	SB7
273	4819.019	5017.006	591.77	SB8
275	4805.635	4961.630	592.16	SB9
217	4876.810	4884.507	590.62	SB10
264	4795.840	4986.386	592.48	SB11
272	4824.504	5027.214	591.59	SB12
263	4848.262	4969.842	591.33	SB13
266	4879.952	4943.637	590.48	SB14
262	4925.012	4994.236	590.76	SB15
250	4938.243	5029.315	590.91	SB16
251	4938.148	5023.032	590.99	SB16A
210	4939.135	5021.033	591.05	SB17
211	4948.904	4999.351	590.87	SB18
212	4923.349	5011.080	591.07	SB19
209	4926.273	5032.947	591.55	SB21
214	4920.925	4908.584	589.71	SB22
213	4973.679	4959.316	590.08	SB23
259	4914.121	4972.702	590.36	SB24
216	4915.577	4937.839	591.28	SB25
242	4828.417	4979.679	591.96	SB26
265	4809.097	5003.001	592.43	SB27
271	4923.856	5054.099	591.15	SB28
280	4894.680	5077.719	591.14	SB29

LEGEND

These standard symbols will be found in the drawing.

- SOIL BORING
- MONITORING WELL
- PIEZOMETER
- MANHOLE
- LIGHT STANDARD
- CATCH BASIN
- UTILITY POLE
- GUY ANCHOR
- SIGN POST
- GAS VALVE
- WATER VALVE
- ELECTRIC
- IRRIGATION CONTROL VALVE
- DRAIN/CLEANOUT
- TREE/BUSH

BENCH MARK, PER CITY OF BUFFALO ENGINEERING OFFICE:
SOUTHEAST LUG OF MANHOLE, NORTHEAST
CORNER OF KINGSTON & N. LEGION STS.
ELEVATION 590.093 N.G.V.D.
OR 14.64 CITY DATUM

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.

REV.		DATE
7		
6		
5		
4		
3		
2		
1		

MAP OF: WELL LOCATIONS AT
2137-2153 SENECA STREET
CITY OF BUFFALO
ERIE COUNTY, NEW YORK

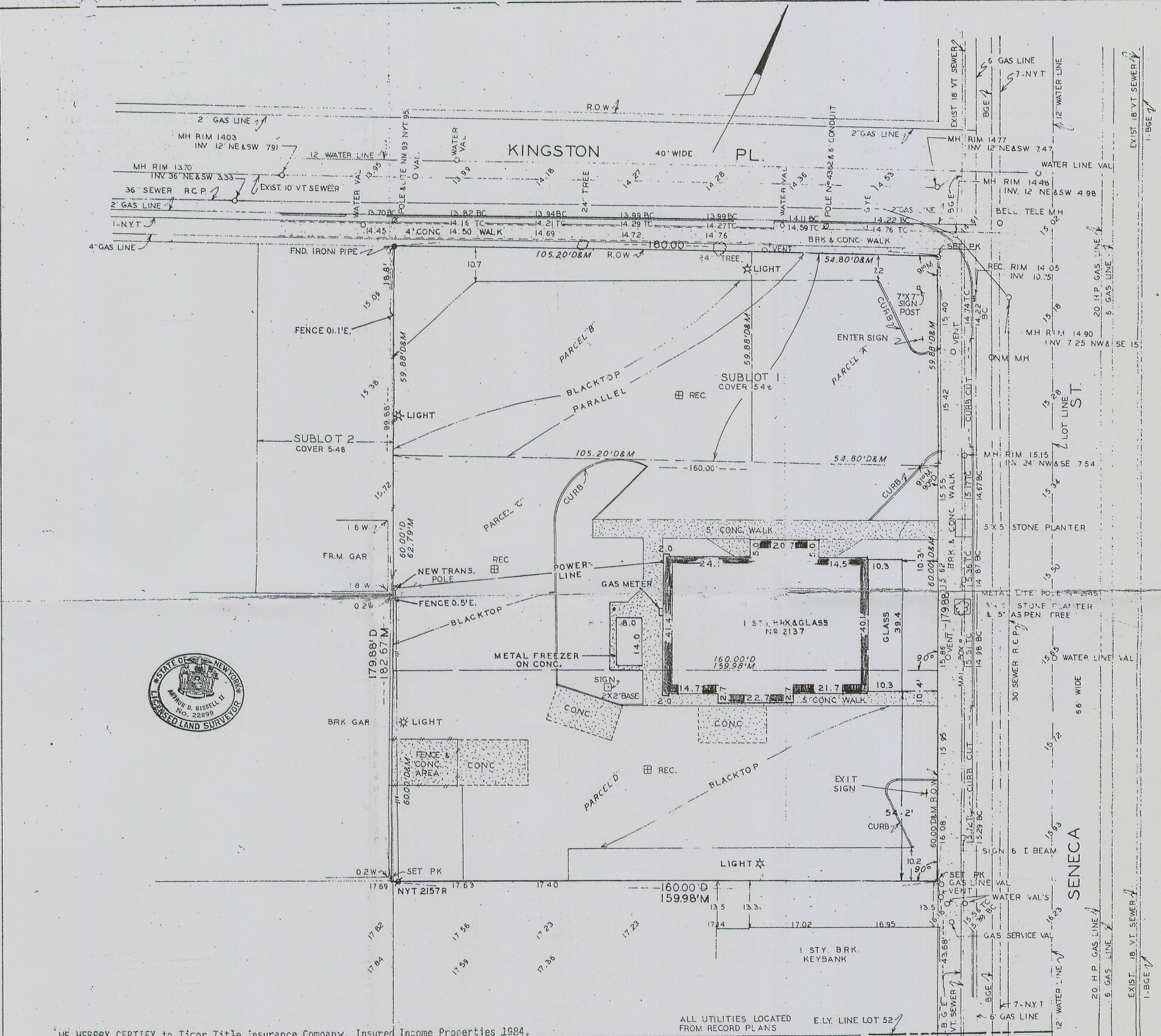
Date SEPT. 17, 2001

Scale 1" = 20'

Job No. 63338 REF.

ADVANCE SURVEY GROUP LLC
RENE & JAY SAUVAGEAU
LICENSED LAND SURVEYOR
Niagara Falls, NY 14302 • Buffalo, NY 14202
Lic. No. 41019 & 50328
Exemption Certificate - Sec. 7208N

4936-611



PARCEL A

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 52, Township 10 Range 7 of the Buffalo Creek Reservation and according to a Map filed in the Erie County Clerk's Office under Cover No. 548, is known as part of Subdivision Lot No. 1, described as follows:

BEGINNING at the point of intersection of the southwesterly line of Seneca Street with the southeasterly line of Kingston Street; thence southwesterly along said line of Kingston Street, 54.80 feet; thence southeasterly and parallel to said line of Seneca Street, 59.88 feet to the southeasterly line of said Subdivision Lot No. 1; thence northeasterly along said line and parallel to said line of Kingston Street, 54.80 feet to the southwesterly line of Seneca Street; thence northwesterly along said line of Seneca Street, 59.88 feet to the place of beginning.

PARCEL B

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 52, Township 10 Range 7 of the Buffalo Creek Reservation and according to a Map filed in the Erie County Clerk's Office under Cover No. 548, is known as part of Subdivision Lot No. 1, described as follows:

BEGINNING at a point on the southeasterly line of Kingston Place distant 54.80 feet southwesterly from the intersection of the southwesterly line of Seneca Street with the southeasterly line of Kingston Place; thence southwesterly along said line of Kingston Place, 105.20 feet to the southwesterly corner of said Subdivision Lot No. 1; thence southeasterly along the southwesterly line of said Subdivision Lot No. 1 and parallel to said line of Seneca Street, 59.88 feet to the southeasterly corner of said Subdivision Lot No. 1; thence northeasterly along the southeasterly line of said Subdivision Lot No. 1 and parallel to said line of Kingston Place, 105.20 feet; thence northwesterly and parallel with the said line of Seneca Street, 59.88 feet to the place of beginning.

PARCEL C

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 52, Township 10 Range 7 of the Buffalo Creek Reservation and bounded and described as follows:

BEGINNING at a point in the southerly line of Seneca Street 109.68 feet westerly from the easterly line of said Lot; and running thence southerly at right angles 160 feet; thence westerly parallel with Seneca Street 60 feet; thence northerly at right angles with Seneca Street 160 feet to Seneca Street; thence easterly on the southerly line of Seneca Street 60 feet to the place of beginning.

PARCEL D

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 52, Township 10 Range 7 of the Buffalo Creek Reservation and bounded and described as follows:

BEGINNING at a point in the southerly line of Seneca Street 43.68 feet westerly from the east line of said Lot; thence southerly at right angles 160 feet; thence westerly parallel with Seneca Street 60 feet; thence northerly at right angles with Seneca Street 160 feet; thence easterly on the southerly line of Seneca Street 60 feet to the point of beginning.

TOGETHER with, but subject to the terms of an easement in common with others as set out in Deed recorded in Liber 7783 of Deeds at page 545 on April 7, 1971.

WARNING: IT IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER, IN ANY WAY, ANY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER OR LAND SURVEYOR HAS BEEN APPLIED.

WE HEREBY CERTIFY to Ticor Title Insurance Company, Insured Income Properties 1984, and Wendy's Food Systems, Inc. that this survey was actually made on the ground and is in conformance with the information and instructions provided. The field notes and pertinent data, which remain part of our official records, can be found at 5757 Main Street, Williamsville, New York 14221.

DESIGN SYSTEMS COLLABORATIVE

Date: 4/17/85 By: Arthur D. Bissell II
Arthur D. Bissell, II - Lic. #22899

STATE OF NEW YORK · ARTHUR D. BISSELL II · No. 22899 · LICENSED LAND SURVEYOR

NIAGARA FRONTIER LAND SURVEYORS Association Inc. 1960

AS BUILT SURVEY 2-19-85 DSC. JOB Nº DS-41-00774 FB 381-27	AS BUILT SURVEY 4-17-85 DSC. JOB Nº DS-46-00925 FB 381-28

PK = MASONRY NAIL

DSC

DESIGN SYSTEMS COLLABORATIVE, A BISSELL-LESLIE P.C.
ARCHITECTURE·ENGINEERING·SURVEYING·DESIGNING·CONSULTING
BUFFALO — WESTERN NEW YORK

DATE 2-19-85	JOB NO. DS-46-00774	FIELD BOOK: 381-1-6	SCALE 1" = 20'
RE-SURVEYED			

SURVEY OF PART OF LOT 52 SECT. — TWP. 10 RANGE 7
CITY OF BUFFALO — ERIE CO., N.Y. BUFFALO CREEK RESERVATION

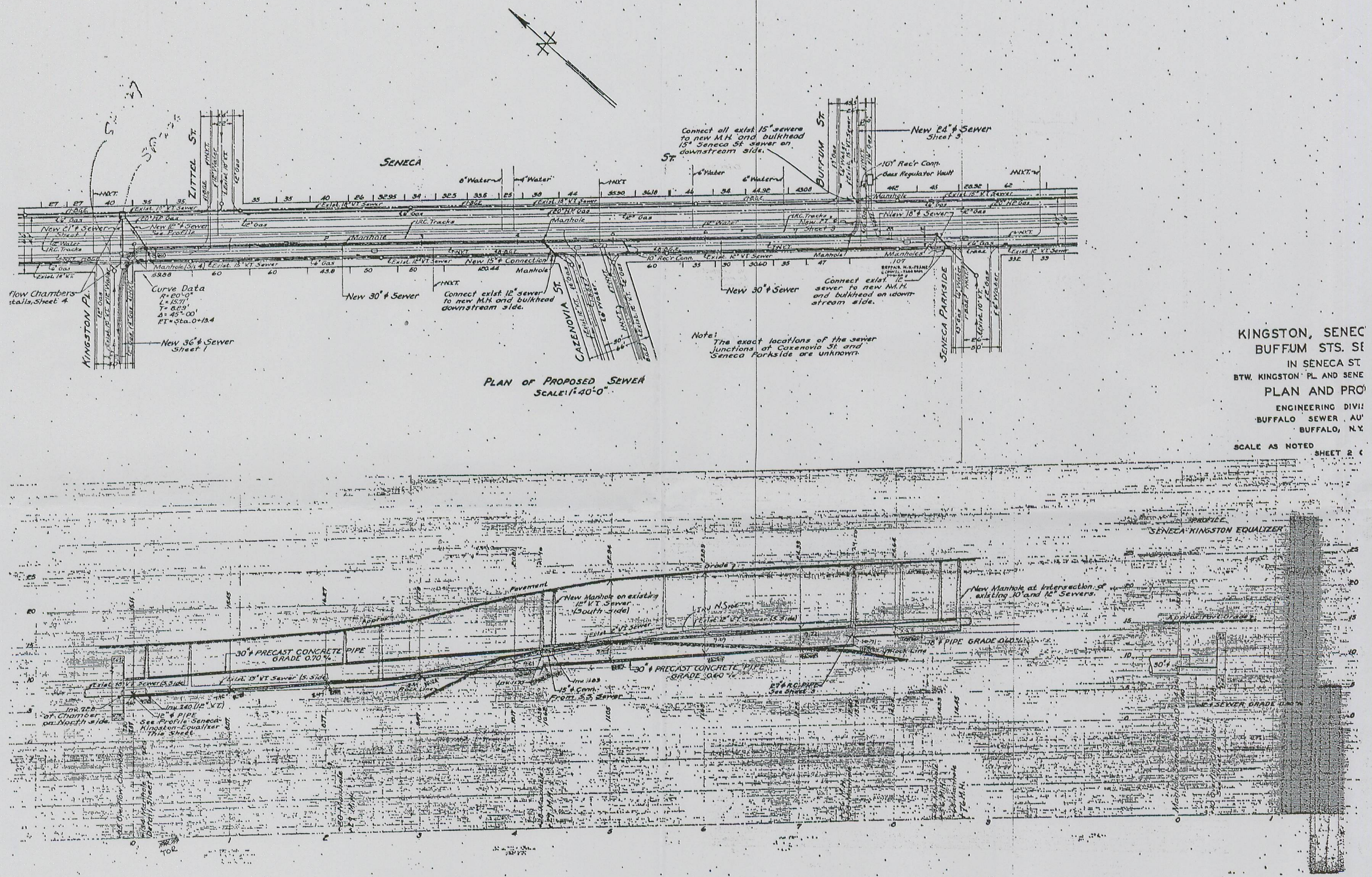
C.M.

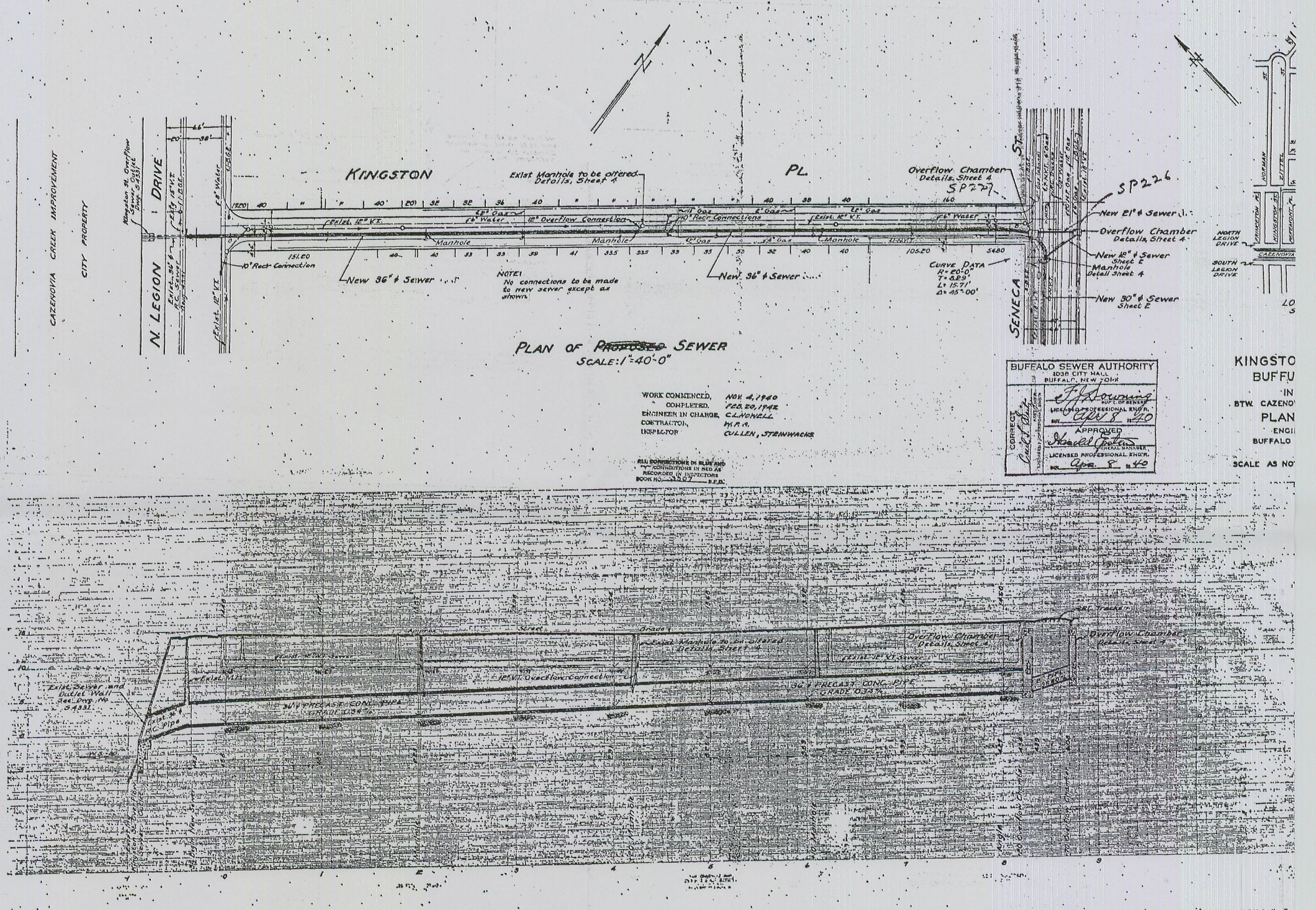
F-1751A

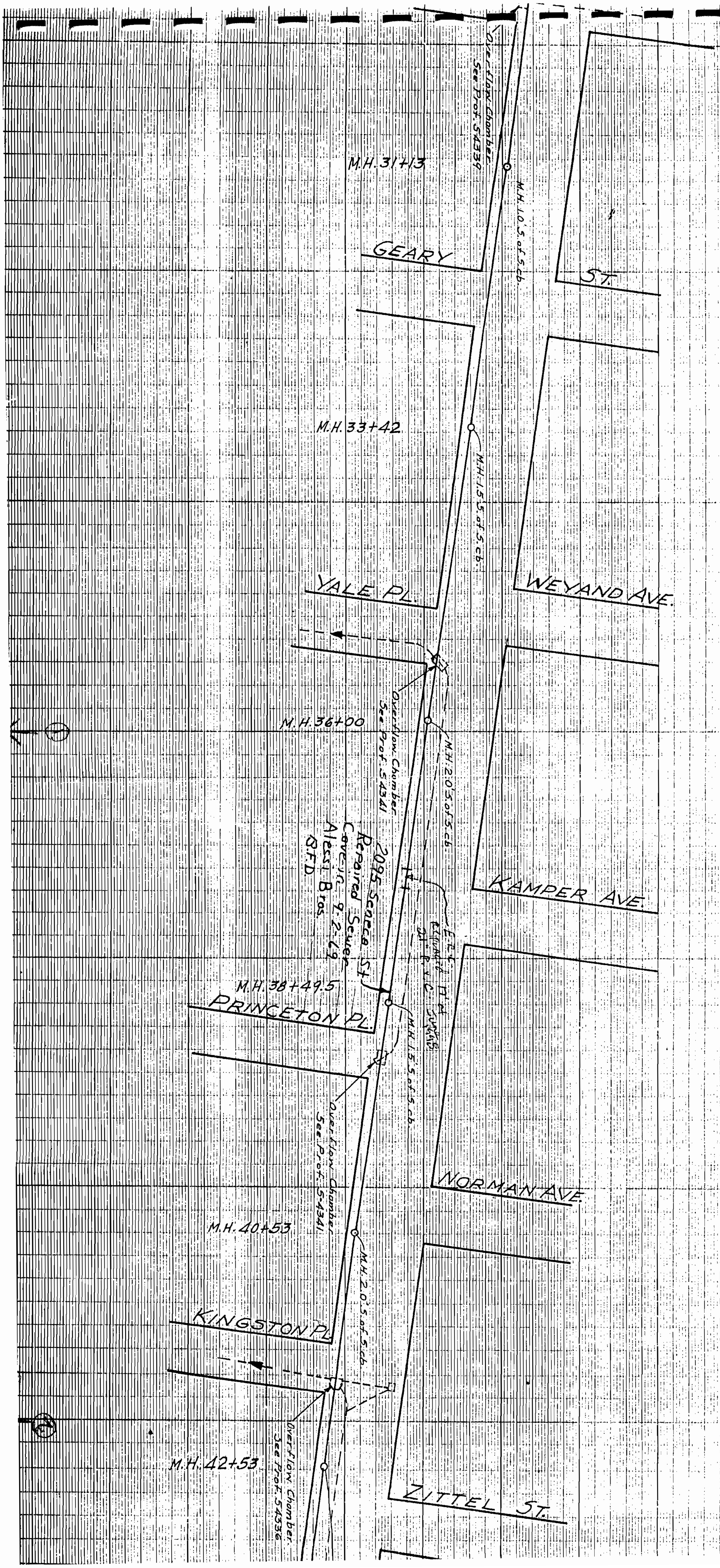
F-1751A

APPENDIX B

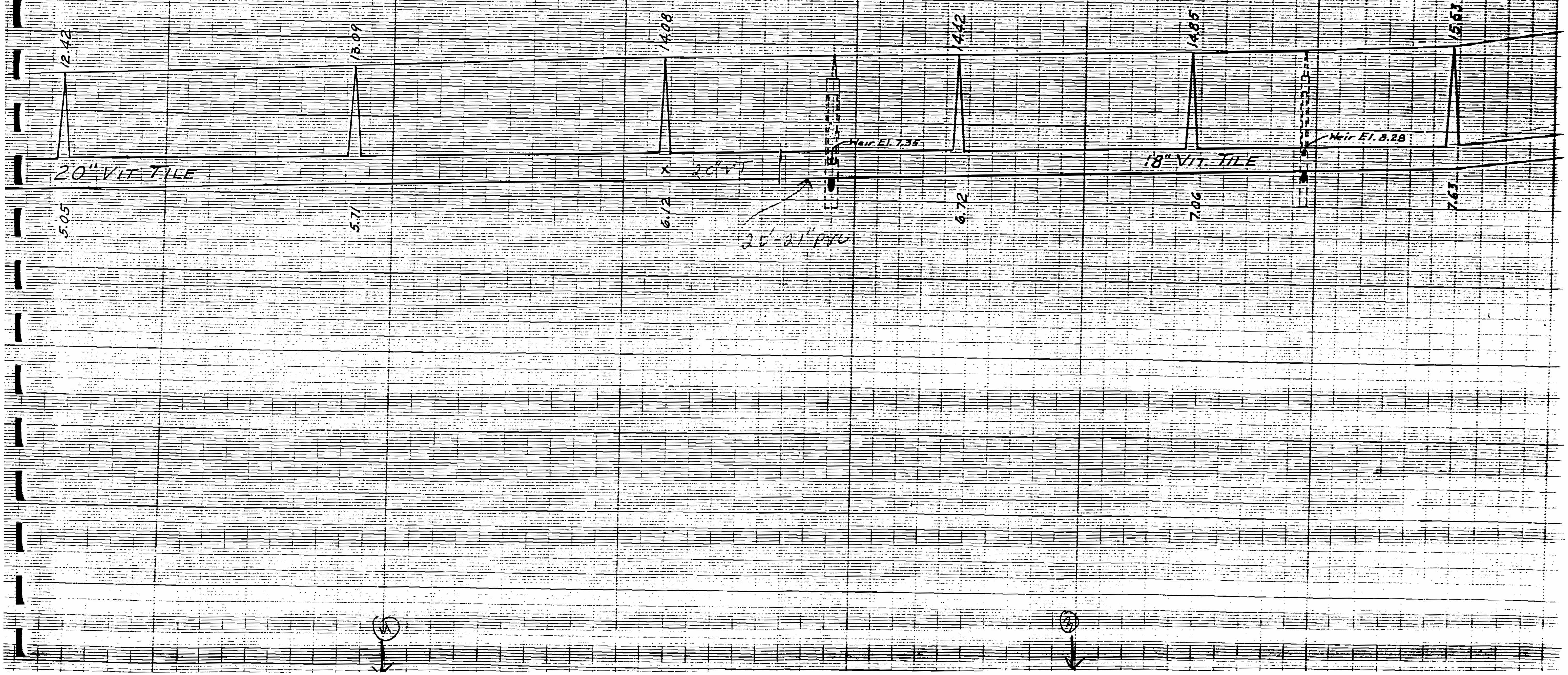
BUFFALO SEWER AUTHORITY SEWER DRAWINGS


SENECA
ZITTEL ST.
BUFFUM ST.
KINGSTON PL.
CAZENOVIA ST.
SENECA PARKSIDE
Connect all exist. 15" sewers to new M.H. and bulkhead 15" Seneca St. sewer on downstream side.
New 24" φ Sewer Sheet 3
New 30" φ Sewer
New 36" φ Sewer Sheet 1
Connect exist. 12" sewer to new M.H. and bulkhead downstream side.
Connect exist. sewer to new M.H. and bulkhead on downstream side.
Curve Data
Note! The exact locations of the sewer junctions at Cazenovia St. and Seneca Parkside are unknown.
PLAN OF PROPOSED SEWER
SCALE: 1"=40'-0"
KINGSTON, SENEC
BUFFUM STS. SE
IN SENECA ST.
BTW. KINGSTON PL. AND SENE
PLAN AND PRO
ENGINEERING DIVI
BUFFALO SEWER AU
BUFFALO, N.Y.
SCALE AS NOTED
SHEET 2
SENECA-KINGSTON EQUALIZER
30" φ PRECAST CONCRETE PIPE GRADE 0.70%
30" φ PRECAST CONCRETE PIPE GRADE 0.60%
New Manhole at intersection of existing 30" and 12" Sewers.


KINGSTON
PL
N. LEGION DRIVE
CAZENOVIA CREEK IMPROVEMENT
CITY PROPERTY
SENECA
Exist. Manhole to be altered. Details, Sheet 4
Overflow Chamber Details, Sheet 4
SP226
SP227
New 21" φ Sewer
New 12" φ Sewer Sheet 2
New 30" φ Sewer Sheet 2
New 36" φ Sewer
Note! No connections to be made to new sewer except as shown.
Curve Data
PLAN OF ~~PROPOSED~~ SEWER
SCALE: 1"=40'-0"
WORK COMMENCED, NOV. 4, 1940
" COMPLETED. FEB. 20, 1942
ENGINEER IN CHARGE, C.L. HOWELL
CONTRACTOR, W.P.A.
INSPECTOR CULLEN, STEINWACHS
ALL CONNECTIONS IN BLUE AND "Y" CONNECTIONS IN RED AS RECORDED IN INSPECTORS BOOK NO. 3307 B.E.D.
BUFFALO SEWER AUTHORITY
1038 CITY HALL
BUFFALO, NEW YORK
F.J. Downing
SUPT. OF SEWERS
LICENSED PROFESSIONAL ENG'R.
Apr 8 1940
APPROVED
Harold Epstein
GENERAL MANAGER
LICENSED PROFESSIONAL ENG'R.
Apr. 8 1940
CORRECT
36" φ PRECAST CONC. PIPE GRADE 0.33%
Overflow Chamber Details, Sheet 4


Overflow Chamber
See Prof. 54339
M.H. 31+13
M.H. 1.0 S. of S.cb.
GEARY
ST.
M.H. 33+42
M.H. 1.5 S. of S.cb.
YALE PL.
WEYAND AVE.
Overflow Chamber
See Prof. 54341
M.H. 36+00
M.H. 2.0 S. of S.cb.
2095 Seneca St.
Repaired Sewer
Cave-in 9-2-69
Alessi Bros.
B.F.D.
KAMPER AVE.
M.H. 38+49.5
PRINCETON PL.
M.H. 1.5 S. of S.cb.
Overflow Chamber
See Prof. 54341
NORMAN AVE.
M.H. 40+53
M.H. 2.0 S. of S.cb.
KINGSTON PL.
M.H. 42+53
Overflow Chamber
See Prof. 54536
ZITTEL ST.

BK, #19 PG, 2-14


12.42
13.09
14.08
14.42
14.86
15.63
Weir El. 7.35
Weir El. 8.28
20" VIT. TILE
20"VT
18" VIT. TILE
20'-21" PVC
5.05
5.71
6.12
6.72
7.06
7.63

APPENDIX C

NATURAL RESOURCE SURVEY REPORT

Site Description

The Parcel 2, Seneca Street Site (Site) consists of approximately 0.6 acres of developed urban land located at the corner of Seneca and Kingston Streets in the Village of West Seneca, City of Buffalo, Erie County, New York. The Site locale is within an urbanized area dominated by retail businesses, and single and multi-family residences. Development of the Site includes one vacant building, paved driveways and parking areas. Observations of Site conditions conducted by Fine Line Technical Services during November 2000 indicated that the Site and immediate vicinity are "culturally developed". No undisturbed natural resource elements occur on the Site. The location of the Site is shown on Figure 1. Site Location Plan.

Natural Resources within a One-half Mile Radius of the Site

The presence and identification of natural resources with a one-half mile radius of the Site was determined by direct observation and by review of existing agency resource information for the Site area. Agency information reviewed included maps and data provided by the New York State Department of Environmental Conservation (NYSDEC) Divisions of Water Resources, Regulatory Affairs, and Fish, Wildlife, and Marine Resources, and the U.S. Fish and Wildlife Service. Natural resource elements investigated in the area within a one-half mile radius of the Site are identified below.

"Rare Threatened and Endangered Species"

Review of NYSDEC New York State Natural Heritage Program files indicate that there are no known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of the Site. Correspondence from NYSDEC Division of Fish, Wildlife and Marine Resources, Wildlife Resources Center and the NYSDEC Regional Wildlife Manager (Region 9) are contained in Attachment A.

Freshwater Wetlands

Review of the NYSDEC Freshwater Wetlands Map titled "Buffalo, New York" indicate that no State regulated wetlands occur on the site or within one- half mile of the Site. The closest New York State wetlands in the vicinity of the Site are identified as BU-1 and BU-16. BU-1 is located approximately two miles west of the Site. BU-16 is located approximately two miles to the southeast. The portion of the New York State Wetland map showing the Site and its vicinity is presented in Figure 2. New York State Freshwater Wetlands Map.

The U.S. Fish and Wildlife Service, National Wetland Inventory Map titled "Buffalo, New York" indicates that no federally regulated wetlands occur on the Site. A portion of Cazenovia Creek located within one-half mile of the Site includes a federally regulated wetland classified as "R3OWH". This wetland is a riverine habitat that consists of continuously flowing water contained in natural and artificial channels. The system is characterized by high gradient and fast water velocity. The substrate consists of rock, cobbles and gravel with patches of sand. There is very little or no floodplain development. The portion of the National Wetland Inventory Map showing this area is presented as Figure 3. National Wetland Inventory Map.

Regulated Open Waters

No regulated open water areas occur on the Site. Portions of Cazenovia Creek occur in the area within one-half mile of the Site. The segments of the Creek in this area are included as items 139 and 140 of Chapter 10 of the New York State Waters Index and are identified as Waters Index Number W-1-4 (portion as described) "Enters Buffalo River from southeast approximately 6.14 miles above mouth. From mouth to Cazenovia street Bridge, City of Buffalo", and as Waters Index Number E-1-4 (portion as described) "From Cazenovia street Bridge, City of Buffalo, to junction of East Branch Cazenovia Creek and West Branch of Cazenovia Creek". These stream segments are classified as Class C and Class B waters respectively

These areas are located southwest of the Site and are shown on Figure 4. New York State Waters.

New York State waters are classified by "best usage" and are defined as follows:

> Class B-The best usages of Class B waters are primary and secondary contact recreation and fishing. These waters shall be suitable for fish propagation and survival.
>
> Class C-The best usages of Class C waters is fishing. These waters shall be suitable for. primary and secondary contact recreation, although other factors may limit the use for these purposes.

Figures

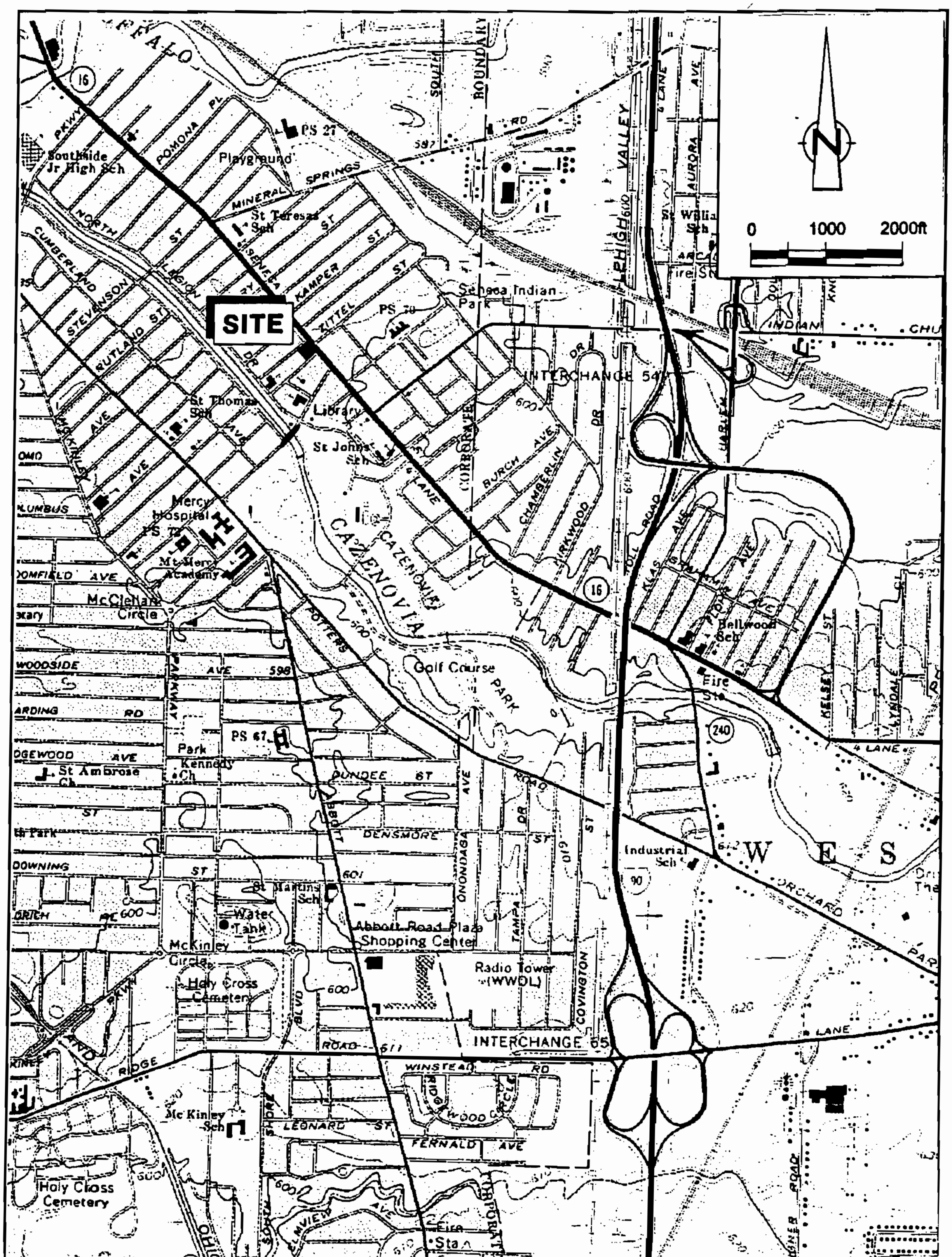


Figure 1. Site Location Plan

Parcel 2 Seneca Street
Buffalo, New York

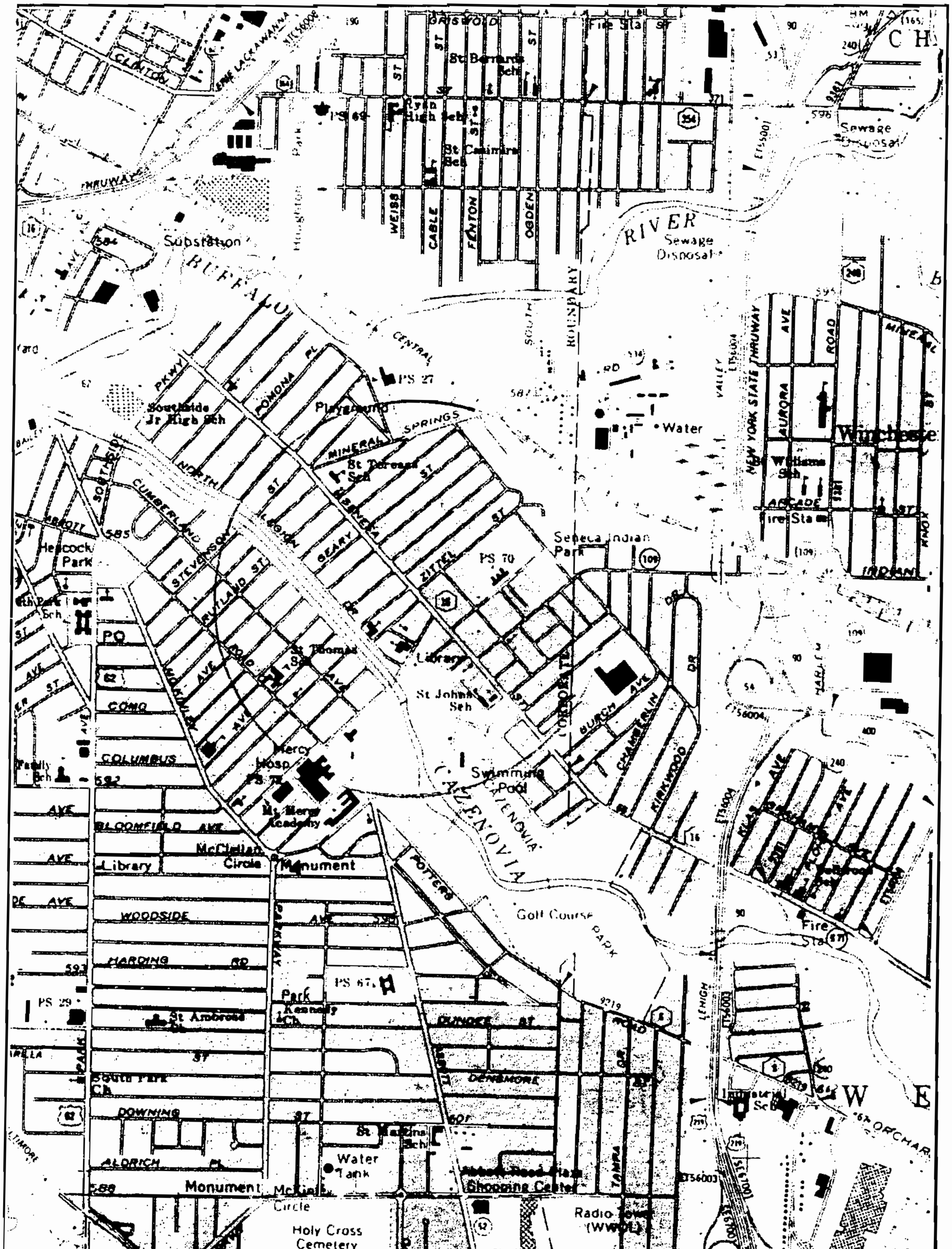


Figure 2. New York State Freshwater Wetlands Map
"Buffalo, New York"
Source: NYSDEC

Parcel 2 Seneca Street
Buffalo, New York

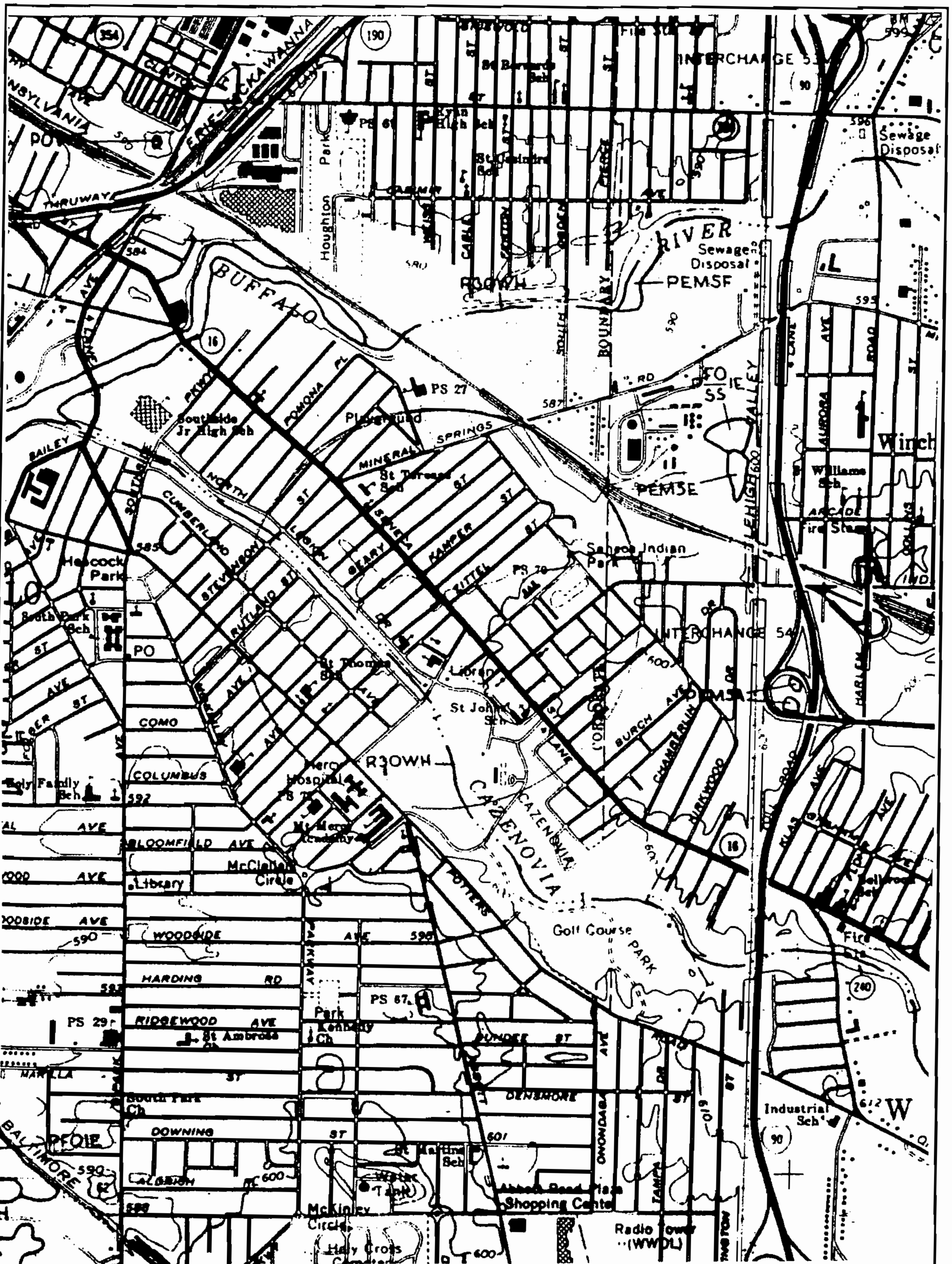


Figure 3. National Wetland Inventory Map "Buffalo, New York"

Source: US Fish and Wildlife Service

Parcel 2 Seneca Street
Buffalo, New York

Figure 4. New York State Waters Map

Parcel 2 Seneca Street
Buffalo, New York

Source: NYSDEC

Attachment

New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7010 • **FAX:** (716) 851-7005
Website: www.dec.state.ny.us

Environmental Conservation 30 YEARS
John P. Cahill
Commissioner

November 28, 2000

Mr. Mark Lindberg
Fine Line Technical Services
12492 Smith Road
Medina, NY 14103

Dear Mr. Lindberg:

Site Investigation, Parcel 2
Seneca Street, Buffalo, NY

I have reviewed the Natural Heritage Data Files in regards to the above-mentioned project as marked on the map provided by you. According to the files, no known species of special management concern including threatened or endangered status and no known habitat of special concern were found on the project site or in the immediate vicinity of the project site.

Please be advised that the absence of data does not necessarily mean that rare or endangered elements, natural communities or other significant habitats do not exist on or adjacent to the proposed site, but rather that our files do not contain any information that indicates the presence of these. Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these cases, we cannot provide a definitive statement on the presence or absence of species, habitats or communities. Nothing in this letter can be substituted for on-site surveys that may be required for environmental assessment.

If I can be of any further assistance, please call me at (716) 851-7010.

Sincerely,

Greg G. Ecker

Greg G. Ecker
Wildlife Technician II

GGE:dcg
ecker\lindberg.ltr

cc: Mr. Russ Biss, Regional Wildlife Manager

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
Wildlife Resources Center - New York Natural Heritage Program
700 Troy-Schenectady Road, Latham, New York 12110-2400
Phone: (518) 783-3932 FAX: (518) 783-3916

John P. Cahill
Commissioner

December 5, 2000

Mark A Lindberg
Fine Line Technical Services
12492 Smith Rd
Medina, NY 14103

Dear Mr. Lindberg:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to the proposed Investigation of "Parcel 2 Seneca Street", site as indicated on the map you provided, including one-half mile radius, located in the City of Buffalo, Erie County.

We have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not mean, however, that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site, but rather that our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals, and plants, significant natural communities, and other significant habitats. For information regarding regulated areas or permits that may be required under state law (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Heidi Krahling jo

Heidi J. Krahling, Information Services
NY Natural Heritage Program

Enc.
cc: Reg. 9, Wildlife Mgr.

Item No.	Waters Index Number	Name	Description	Map Ref. No.	Class	Standards
139	W-1-4 portion as described	Cazenovia Creek	Enters Buffalo River from southeast approximately 6.14 miles above mouth. From mouth to Cazenovia Street Bridge, City of Buffalo.	6	C	C
140	E-1-4 portion as described	Cazenovia Creek	From Cazenovia Street Bridge, City of Buffalo, to junction of East Branch Cazenovia Creek and West Branch Cazenovia Creek.	6, 7	B	B
141	E-1-4-1, 2, 3, 4, 5 and 6 and tribs. as shown on reference map	Tribs. of Cazenovia Creek	Enter from east and south between mouth and Spring Brook.	6, 7	C	C
142	E-1-4-7 and trib.	Spring Brook	Enters Cazenovia Creek from east at Spring Brook.	7	C	C(T)
143	E-1-4-8, 9, 10, 11, 12, 13	Tribs. of Cazenovia Creek	Enter from east and south between Spring Brook and junction of East Branch Cazenovia Creek, and West Branch Cazenovia Creek.	7	C	C
144	E-1-4-14 portion as described	East Branch Cazenovia Creek	Enters Cazenovia Creek from south approximately 0.5 mile west of East Aurora village line. Mouth to hamlet of Holland.	7, 11	B	B
145	E-1-4-14 portion as described	East Branch Cazenovia Creek (Protection Creek above trib. 26)	From hamlet of Holland to source.	11, 12	C	C(T)
146	E-1-4-14-1, 2, 3 and trib.	Tribs of East Branch Cazenovia Creek	Enter from north and south at approximately 0.4, 0.6 and 1.2 miles, respectively, above mouth.	7, 11	C	C
147	E-1-4-14-4 and tribs.	Tannery Brook	Enters East Branch Cazenovia Creek from northeast approximately 1.8 miles above mouth.	7	C	C
148	E-1-4-14-5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 and tribs.	Tribs. of East Branch Cazenovia Creek	Enter from east and west between Tannery Brook and hamlet of Holland.	7, 11	B	B
149	E-1-4-14-22, 23 and tribs.	Tribs. of East Branch Cazenovia Creek	Enter from south at hamlet of Holland and approximately 0.5 mile above hamlet of Holland, respectively.	11	B	B
150	E-1-4-14-24 and trib.	Trib. of East Branch Cazenovia Creek	Enters from east approximately 1.5 miles above hamlet of Holland.	11	C	C(T)
151	E-1-4-14-25	Trib. of East Branch Cazenovia Creek	Enters from west approximately 1.6 miles above hamlet of Holland.	11	C	C
152	E-1-4-14-26	Trib. of East Branch Cazenovia Creek	Enters from south approximately 2.1 miles above hamlet of Holland.	11	C	C(T)
153	E-1-4-14-26-1, 2, 3, 4, 5 and trib.	Subtribs. of East Branch Cazenovia Creek		11	C	C
154	E-1-4-14-27	Trib. of East Branch Cazenovia Creek	Enters from east approximately 2.5 miles above hamlet of Holland.	11	B	B

APPENDIX D

STRATIGRAPHIC AND INSTRUMENTATION LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

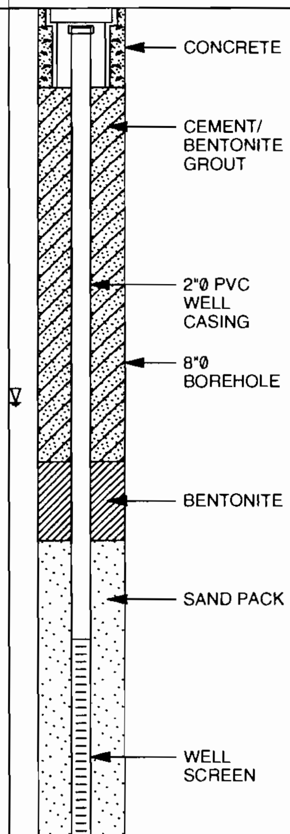
PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-1
DATE COMPLETED: September 14, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

NORTHING: 4790.47 — EASTING: 5034.71
GROUND SURFACE: 592.55 — TOP OF RISER: 592.24

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0	ASPHALT, gravel sub-base	
1	GRAVEL (Fill), some silt, little sand, brown and grey, moist	591.55
4	ML-SILT, little fine sand, grey and brown, dry to moist, medium stiff, laminated	588.55
7.6	SM-SAND, little silt, fine grained, brown, moist to wet - some silt, soft, moist - trace silt, mottled, loose, dark brown, moist to wet - trace silt, fine grained, dark grey, moist to wet, root at 14.5ft BGS, intermittant thin silt lenses	584.95
15.2	SW-SAND, some fine to medium gravel, fine to coarse grained, rounded, grey, wet	577.35
20.4	ML-SILT, some clay, little fine sand, trace fine subangular gravel, grey, soft, sticky	572.15
21.0	END OF BOREHOLE @ 21.0ft BGS	571.55

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
576.55 to 571.55ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
581.05 to 579.05ft AMSL
Material: Bentonite
Sand Pack:
579.05 to 571.55ft AMSL
Material: Silica Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS	X	2.0	15	0.2
2SS	X	2.0	6	0.1
3SS	X	2.0	10	0
4SS	X	2.0	10	0.1
5SS	X	2.0	4	0.2
6SS	X	2.0	4	0.5
7SS	X	2.0	2	0
8SS	X	2.0	2	0
9SS	X	2.0	2	0
10SS	X	2.0	2	0.1

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 09/14/00
CHEMICAL ANALYSIS ◯

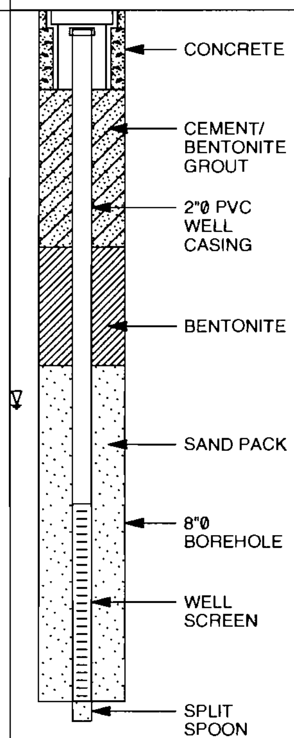
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-2
DATE COMPLETED: September 15, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	NORTHING: 4904.16 EASTING: 5010.91 GROUND SURFACE	591.71
	TOP OF RISER	591.23
	ASPHALT, gravel sub-base	590.71
	GRAVEL (Fill), some sand, grey, dry	590.21
2	SILT (Fill), little fine sand, dark grey, dry to moist, slight odour, medium stiff, trace red brick, ceramic pieces, thin red flakes (above conrete @ 3.5ft BGS)	584.71
8	SW-SAND, some round and subangular gravel, dark grey, wet - moist to wet sandy silt layer from 7.8 to 8.0ft BGS	584.21
	CL-CLAY, some silt, little sand, brown, moist	583.71
10	SW-SAND, little fine gravel, trace silt (in thin lenses), fine to coarse grained, subround, dark grey, wet, trace wood tree root)	574.21
18	CL-CLAY, little silt, grey, moist, soft, sticky	572.71
	END OF BOREHOLE @ 19.0ft BGS	

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
579.21 to 574.21ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
585.71 to 582.71ft AMSL
Material: Bentonite
Sand Pack:
582.71 to 573.71ft AMSL
Material: Silica Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS	X	2.0	9	2.5
2SS	X	2.0	50	1.7
3SS	X	2.0	7	-
4SS	X	2.0	8	1.9
5SS	X	2.0	2	4.5
6SS	X	2.0	3	5.0
7S	X	2.0	2	2.8
8SS	X	2.0	5	1.8
9SS	X	2.0	3	5.5

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 09/15/00
CHEMICAL ANALYSIS ○

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

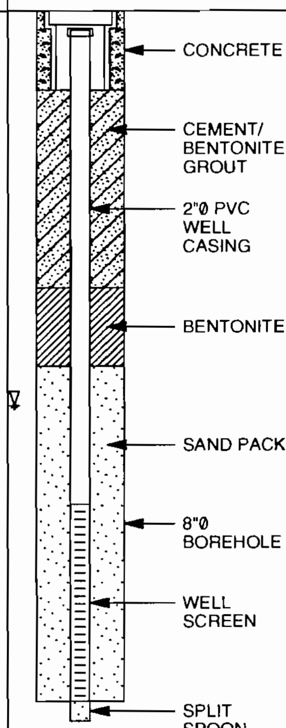
PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-3
DATE COMPLETED: September 14, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

NORTHING: 4883.35
EASTING: 4897.19

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	591.00
	TOP OF RISER	590.33
0	OL-SILTY LOAM (TOPSOIL), brown, dry to moist, soft, vegetation	590.50
	SILT (Fill), little clay and fine sand, brown, dry to moist, stiff, laminated, trace glossy blue slag and gravel from 0.5 to 1.3ft BGS	
	SM-SAND, little silt, fine grained, brown, dry to moist, medium stiff	584.40
	- becomes soft, moist to wet	
	- intermittant thin silty and clay lenses	
	SW-SAND, fine to coarse grained, trace fine founded gravel, brown and grey, wet, few roots (above 13.2ft BGS)	579.90
	CL-CLAY, trace silt, grey and red-brown, moist, soft	573.80
18	END OF BOREHOLE @ 18.0ft BGS	573.00

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
578.50 to 573.50ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
584.00 to 582.00ft AMSL
Material: Bentonite
Sand Pack:
582.00 to 573.00ft AMSL
Material: Silica Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS		2.0	16	0.2
2SS		2.0	15	0.1
3SS		2.0	6	1.8
4SS		2.0	9	0
5SS		2.0	3	0.2
6SS		2.0	2	0.8
7SS		2.0	2	0.3
8SS		2.0	1	-
9SS		2.0	2	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 09/14/00
CHEMICAL ANALYSIS

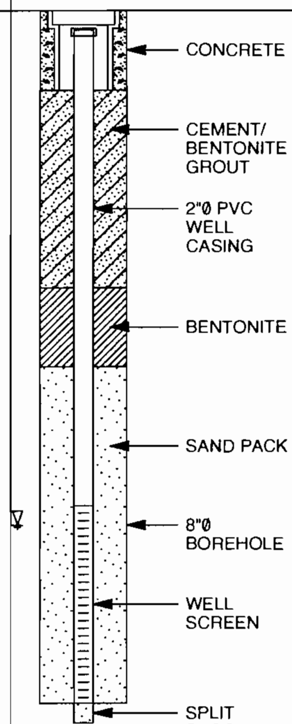
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-4
DATE COMPLETED: September 15, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
NORTHING: 4961.64 EASTING: 4985.81 GROUND SURFACE	591.16
TOP OF RISER	590.51
ASPHALT, gravel sub-base	590.16
GRAVEL (Fill), subangular, some sand, trace silt, gray, dry	587.86
FILL, red brick, coal, metal, dry to moist, no odor	585.96
ML-SILT, little fine sand, brown, dry to moist, medium stiff, laminated	583.06
SM-SAND, little silt, moist, loose - wet with less silt below 9.5ft BGS	580.56
ML-SILT, some fine to medium grained sand, trace fine round gravel, dark grey, moist to wet, soft	579.96
SW-SAND, some fine rounded gravel, little silt, wet, medium stiffness	573.66
CL-CLAY, trace silt, trace fine sand, red-brown, grades to grey, soft, sticky	572.16
END OF BOREHOLE @ 19.0ft BGS	

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
578.66 to 573.66ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
584.16 to 582.16ft AMSL
Material: Bentonite
Sand Pack:
582.16 to 573.16ft AMSL
Material: Silica Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS	☒	2.0	11	0
2SS	☒	2.0	9	0
3SS	☒	2.0	6	0
4SS	☒	2.0	10	0
5SS	☒	2.0	2	0
6SS	☒	2.0	2	0.6
7SS	☒	2.0	2	0.4
8SS	☒	2.0	2	-
9SS	☒	2.0	-	-

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 09/15/00
CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-4A
DATE COMPLETED: September 18, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

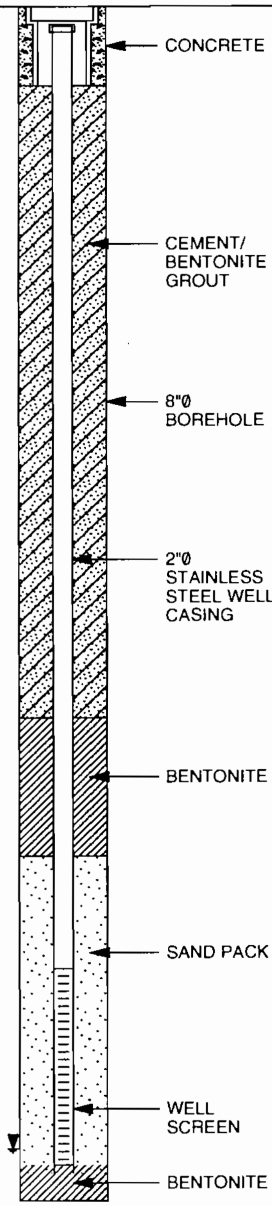
NORTHING: 4959.01
EASTING: 4992.33

	ELEV. ft AMSL
GROUND SURFACE	591.04
TOP OF RISER	590.61

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	ASPHALT, gravel sub-base	590.04
	GRAVEL (Fill), some sand, angular, grey and brown, dry	589.44
	SAND (Fill), some gravel, trace red brick and concrete, moist	580.04
	SW-SAND, some fine rounded gravel, trace silt, small roots, moist, wet - becomes wet below 15ft BGS	573.64
	CL-CLAY, little silt, grey and red-brown, moist, soft, sticky - trace gravel	567.64
	SM-SAND, some silt and rounded gravel, fine to medium, dense, grey, moist - dry to moist below 27ft BGS - spoon refusal @ 29.6ft BGS - auger refusal @ 30.3ft BGS	560.74
	END OF BOREHOLE @ 30.3ft BGS	

Depth scale (ft BGS): 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
566.64 to 561.64ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS		2.0	9	0.1
2SS		2.0	10	0.1
3SS		2.0	19	0.3
4SS		2.0	10	0
5SS		2.0	4	1.0
6SS		2.0	4	0.9
7SS		2.0	4	-
8SS		2.0	3	1.6
9SS		2.0	4	2.6
10SS		2.0		0
11SS		2.0	1	0
12SS		2.0	9	0
13SS		2.0	7	0.1
14SS		2.0	30	0
15SS		0.6	>50	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
STATIC WATER LEVEL

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-4A
DATE COMPLETED: September 18, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
36			Seal: 573.04 to 569.54ft AMSL Material: Bentonite Sand Pack: 569.54 to 561.44ft AMSL Material: Silica Sand					
38								
40								
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

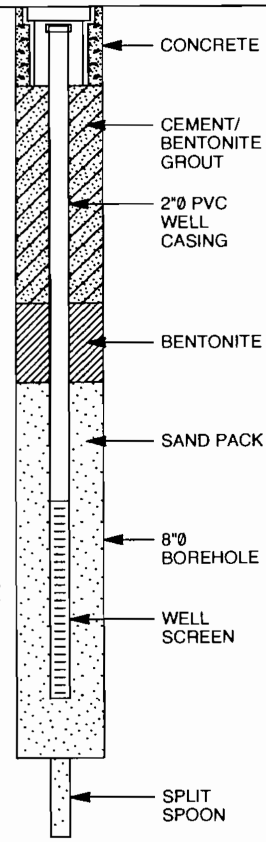
HOLE DESIGNATION: MW-5
DATE COMPLETED: September 14, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

NORTHING: 4838.45
EASTING: 4934.21

GROUND SURFACE: 591.37
TOP OF RISER: 590.76

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0	ASPHALT, gravel sub-base	590.37
1.0	GRAVEL (Fill), some sand, grey and brown, dry	588.77
2.6	ML-SILT, grey, dry to moist, medium stiff - becomes brown below 5.0ft BGS	583.87
7.5	SM-SAND, little silt, fine grained, brown, dry to moist, loose - medium grained sand lens from 7.9 to 8.1 and 8.2 to 8.4ft BGS	581.87
9.5	SW-SAND, little fine to medium gravel, fine to coarse grained, rounded, trace silt in thin lenses, brown, wet	573.77
17.6	CL-CLAY, little silt, trace fine sand, light grey, moist, soft, sticky	570.37
21.0	END OF BOREHOLE @ 21.0ft BGS	

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
578.87 to 573.87ft AMSL
Length: 5ft
Diameter: 3in
Slot Size: 10
Material: Stainless Steel
Seal:
583.87 to 581.87ft AMSL
Material: Bentonite
Sand Pack:
581.87 to 570.37ft AMSL
Material: Silica Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS	X	2.0	10	0
2SS	X	2.0	15	0
3SS	X	2.0	6	0
4SS	X	2.0	7	0
5SS	X	2.0	5	0
6SS	X	2.0	3	0
7SS	X	2.0	3	0
8SS	X	2.0	4	0
9SS	X	2.0	4	0
10SS	X	2.0	0	1.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 09/14/00

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-6
DATE COMPLETED: August 28, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

NORTHING: 4833.31 EASTING: 5029.35
GROUND SURFACE 591.62
TOP OF RISER 591.47

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
0–0.6	ASPHALT, roadway and gravel sub-base	591.02	CONCRETE	1SS	X	0.8	15	-
0.6–6	CLAY with GRAVEL (Fill), red-brown to dark grey-green, clay mottled dark yellow, dry, stiff			2SS	X	0.9	3	0
			CEMENT/ BENTONITE GROUT	3SS	X	0.0	4	0
6–12.5	CLAY with GRAVEL (Fill), light grey, wet, less gravel with depth	585.62	8"Ø BOREHOLE	4SS	X	1.5	6	0
			2"Ø STAINLESS STEEL WELL CASING	5SS	X	0.0	4	0
	- becoming soft below 10ft BGS		BENTONITE	6SS	X	1.4	2	3
12.5–18	SILT (Fill), some fine sand, trace clay, trace fine rounded gravel, dark grey to red-brown, some reddish wood fragments	579.12		7SS	X	1.3	4	2
				8SS	X	0.0	5	2
			SAND PACK	9SS	X	0.0	5	-
18–20	CH-CLAY, trace sand and silt, grey, wet, soft, sticky	573.62	WELL SCREEN	10SS	X	2.0	2	0
20	END OF BOREHOLE @ 20.0ft BGS	571.62						

WELL DETAILS
Screened interval:
576.62 to 571.62ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
581.12 to 578.62ft AMSL
Material: Bentonite
Sand Pack:
578.62 to 571.62ft AMSL
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/28/01

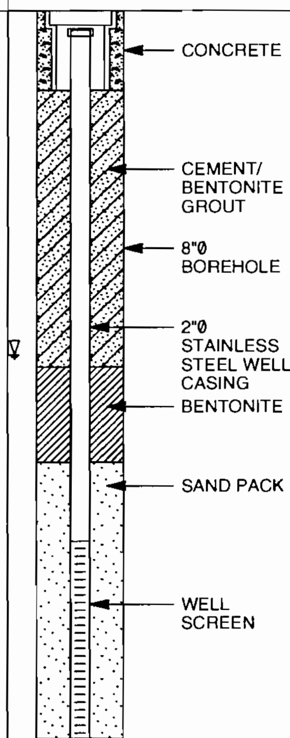
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-7
DATE COMPLETED: September 4, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	NORTHING: 5015.11 EASTING: 5058.47 GROUND SURFACE / TOP OF RISER	590.93 / 590.41					
0–18.4	OVERBURDEN (see overburden stratigraphy for well MW-7A)						
18.4	END OF BOREHOLE @ 18.4ft BGS	572.53					

Depth scale: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34



WELL DETAILS
Screened interval:
577.53 to 572.53ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
581.93 to 579.53ft AMSL
Material: Bentonite
Sand Pack:
579.53 to 572.53ft AMSL
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 09/04/01

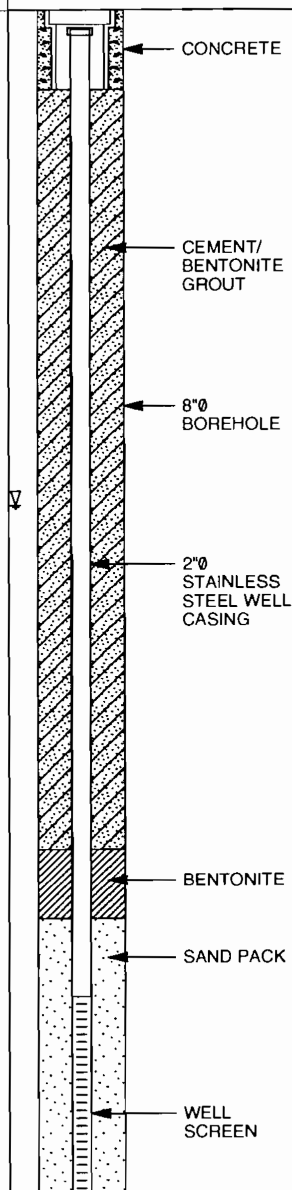
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-7A
DATE COMPLETED: September 4, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	NORTHING: 5018.5 / EASTING: 5055.32 — GROUND SURFACE / TOP OF RISER	590.92 / 590.42
	CONCRETE, gravel sub-base	589.92
	CLAY (Fill), trace to some silt, red-brown, occassional grey mottling, dry, stiff	
10	- becomes moist to wet below 10 ft BGS	579.92
	SILT (Fill), some fine sand, minor gravel, brown, soft	
	- decomposed wood	
	- more gravel	574.92
16	CI-CLAY, trace gravel, grey, soft	
	- more fine rounded gravel below 22.6 ft BGS	564.92
26	ML-SILT, some clay, some rounded moderate to coarse gravel, becoming drier	560.92
30	END OF BOREHOLE @ 30.0ft BGS	

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
565.92 to 560.92ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel

SAMPLE NUMBER	REC (ft)	'N' VALUE	PID (ppm)
1SS	0.7	12	0
2SS	0.9	11	0
3SS	0.7	12	0
4SS	2.0	16	0
5SS	1.0	6	0
6SS	2.0	8	0
7SS	1.3	3	0
8SS	1.1	4	0
9SS	2.0	2	0
10SS	2.0	3	0
11SS	1.3	5	0
12SS	2.0	11	0
13SS	1.1	12	0
14SS	0.8	58	0
15SS	0.8	24	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 09/04/01

OVERBURDEN LOG 15867.GPJ CRA_CORP.GDT 1/22/02

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-7A
DATE COMPLETED: September 4, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36			Seal: 569.72 to 567.92ft AMSL Material: Bentonite Sand Pack: 567.92 to 560.92ft AMSL Material: Silica Sand					
38								
40								
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 09/04/01

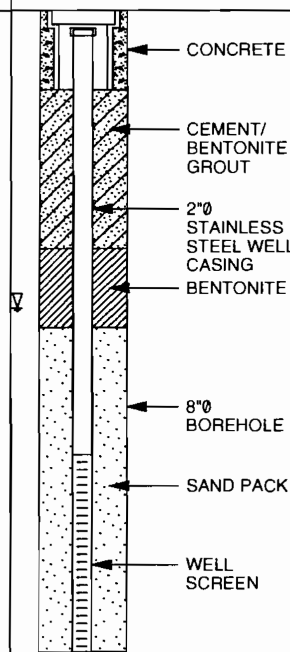
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-8
DATE COMPLETED: August 31, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	NORTHING: 4863.01 EASTING: 4809.01 GROUND SURFACE TOP OF RISER	589.71 588.88					
	OVERBURDEN (see overburden stratigraphy for well MW-8A)						
16.2	END OF BOREHOLE @ 16.2ft BGS	573.51					

Depth scale (ft BGS): 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34



WELL DETAILS
Screened interval:
578.51 to 573.51ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
583.71 to 501.71ft AMSL
Material: Bentonite
Sand Pack:
581.71 to 573.51ft AMSL
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/31/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-8A
DATE COMPLETED: August 31, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

NORTHING: 4867.37 — EASTING: 4814.04
GROUND SURFACE: 589.63 — TOP OF RISER: 589.04

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0.5	TOPSOIL, grass root mat	589.13
0.5–11	SILT (Fill), some clay, little fine sand, orange-brown to brown to red-brown, dry, stiff - becomes wet below 9.2ft BGS - more sand below 9.3ft BGS - decomposed reddish wood @ 10ft BGS	578.63
11–14	SAND (Fill), some silt, some gravel, grey to red-brown, wet, soft	575.63
14–30	CI-CLAY, little silt, grey, soft - more silt, trace fine rounded gravel below 22ft BGS - increasing rounded moderately coarse gravel, drier below 28ft BGS	559.63
30	END OF BOREHOLE @ 30.0ft BGS	

MONITOR INSTALLATION: CONCRETE; CEMENT/ BENTONITE GROUT; 8"Ø BOREHOLE; 2"Ø STAINLESS STEEL WELL CASING; BENTONITE; SAND PACK; WELL SCREEN

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS	X	1.3	12	0
2SS	X	1.7	20	0
3SS	X	1.4	11	0
4SS	X	2.0	9	0
5SS	X	1.7	4	0
6SS	X	1.7	5	0
7SS	X	0.3	7	0
8SS	X	1.5	17	0
9SS	X	1.8	3	0
10SS	X	2.0	2	0
11SS	X	1.9	2	0
12SS	X	0.7	4	0
13SS	X	1.2	22	0
14SS	X	0.8	32	0
15SS	X	0.8	57	0

WELL DETAILS
Screened interval:
564.63 to 559.63ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/31/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-8A
DATE COMPLETED: August 31, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36			Seal: 569.63 to 567.63ft AMSL Material: Bentonite Sand Pack: 567.63 to 559.63ft AMSL Material: Silica Sand					
38								
40								
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ⊻ 08/31/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

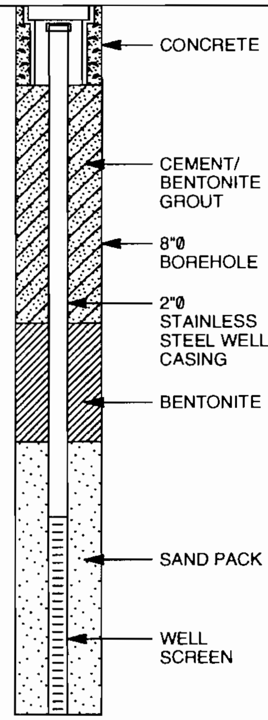
PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-9
DATE COMPLETED: August 29, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

NORTHING: 4989.5 — GROUND SURFACE: 590.27
EASTING: 4950.55 — TOP OF RISER: 589.71

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	CONCRETE, gravel sub-base	589.77
	CLAY (Fill), some silt, little sand, dark green to light brown to dark red-brown, stiff	
8	- becomes very moist and soft below 8 ft BGS	581.07
	SAND (Fill), some silt, some angular gravel red-brown to grey, wet, soft	
12	- wood fragments @ 12 ft BGS	
15.5	- increasing gravel @ 15.5 ft BGS	573.97
	CI-CLAY, trace sand and fine gravel, red-brown, wet, soft	572.37
	END OF BOREHOLE @ 17.9ft BGS	

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
577.37 to 572.37ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
582.27 to 579.27ft AMSL
Material: Bentonite
Sand Pack:
579.27 to 572.37ft AMSL
Material: Silica Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS		0.9	7	35
2SS		2.0	19	60
3SS		1.5	8	20
4SS		1.6	13	30
5SS		1.8	3	6
6SS		1.5	2	15
7SS		2.0	2	10
8SS		0.0	13	-
9SS		1.7	5	2

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

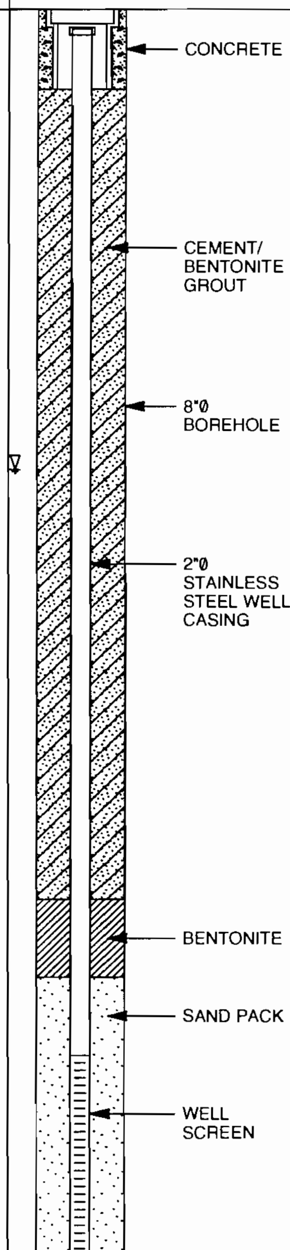
PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-9A
DATE COMPLETED: August 29, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

NORTHING: 4993.28
EASTING: 4954.02
GROUND SURFACE: 590.31
TOP OF RISER: 589.55

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0	OVERBURDEN (see overburden stratigraphy for well MW-9)	
18	CH-CLAY, trace silt, grey to tan-grey, wet, soft	572.31
24	- increasing fine rounded gravel @ 24 ft BGS	
28	- gravel becoming coarser, less clay @ 28 ft BGS	
30	GC-GRAVEL, some sand, trace clay, grey, wet	560.31
31.5	END OF BOREHOLE @ 31.5ft BGS	558.81

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
565.81 to 558.81ft AMSL
Length: 7ft
Diameter: 2in

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS		2.0	4	0
2SS		2.0	6	0
3SS		2.0	2	0
4SS		1.6	16	0
5SS		2.0	105	0
6SS		1.1	37	0
7SS		1.7	47	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/29/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-9A
DATE COMPLETED: August 29, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36			Slot Size: 10 Material: Stainless Steel Seal: 567.81 to 565.81ft AMSL Material: Bentonite Sand Pack: 565.81 to 558.81ft AMSL Material: Silica Sand					
38								
40								
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

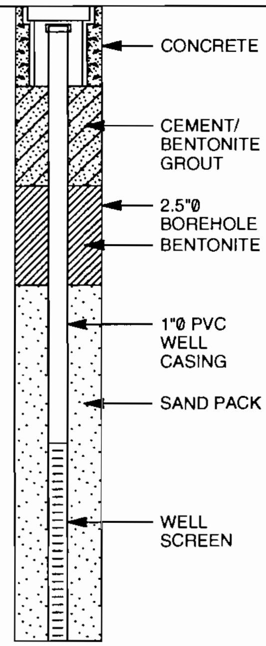
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ⊻ 08/29/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-10
DATE COMPLETED: August 30, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	NORTHING: 4852.6 EASTING: 4834.86 GROUND SURFACE TOP OF RISER	589.42 589.02					
	OVERBURDEN (see overburden stratigraphy for well MW-10A)						
16	END OF BOREHOLE @ 16.0ft BGS	573.42					



WELL DETAILS
Screened interval:
578.42 to 573.42ft AMSL
Length: 5ft
Diameter: 1in
Slot Size: 10
Material: SCH 80 PVC
Seal:
584.92 to 582.42ft AMSL
Material: Bentonite
Sand Pack:
582.42 to 573.42ft AMSL
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ⊻ 08/30/01

OVERBURDEN LOG 15867.GPJ CRA_CORP.GDT 1/22/02

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2

PROJECT NUMBER: 15867

CLIENT: Confidential

LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-10A

DATE COMPLETED: August 30, 2001

DRILLING METHOD: Direct Push

FIELD PERSONNEL: F. Garbe

NORTHING: 4850.37 EASTING: 4832.41

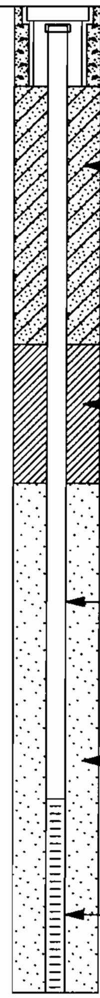
GROUND SURFACE 589.61

TOP OF RISER 589.07

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	TOPSOIL, rootmat	589.11
	CLAY (Fill), some silt, brown, dry - roots, woody debris @ 5 ft BGS - becomes moist below 6.0ft BGS	582.61
	SAND with SILT and GRAVEL (Fill), trace clay, dark brown, moist, clay content increases with depth	580.61
	CLAY with SAND (Fill), some silt, dark brown, occassional black mottling or thin layers - increasing fine to coarse gravel 12.5ft BGS - woody debris @ 14 ft BGS	574.61
	CL-CLAY with SILT, minor fine rounded gravel, grey to brown-grey, wet - decreasing moisture @ 18 ft BGS - more sand and fine rounded gravel below 22.5ft BGS	564.61
	END OF BOREHOLE @ 25.0ft BGS	

Depth scale: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34

MONITOR INSTALLATION



WELL DETAILS

Screened interval:
569.61 to 564.61ft AMSL

Length: 5ft

Diameter: 1in

Slot Size: 10

Material: SCH 80 PVC

Seal:
581.11 to 577.61ft AMSL

Material: Bentonite

Sand Pack:
577.61 to 564.61ft AMSL

Material: Silica Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1		4.0		-
2		3.5		-
3		4.0		-
4		2.6		-
5		4.0		-
6		4.0		-
7		1.4		-

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ▽ 08/30/01

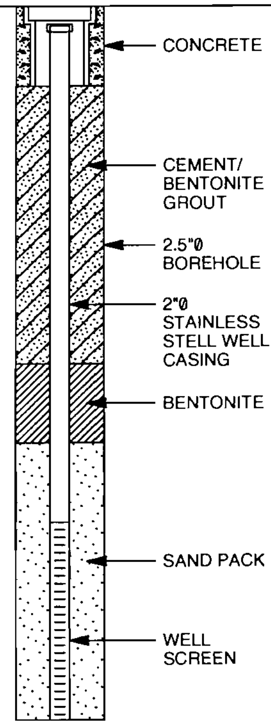
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-11
DATE COMPLETED: August 30, 2011
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	NORTHING: 4979.14 / EASTING: 4986.13 — GROUND SURFACE / TOP OF RISER	590.75 / 590.40					
	OVERBURDEN (see overburden stratigraphy for well MW-11A)						
18	END OF BOREHOLE @ 18.0ft BGS	572.75					

Depth scale (ft BGS): 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34



WELL DETAILS
Screened interval:
577.75 to 572.75ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
581.75 to 579.75ft AMSL
Material: Bentonite
Sand Pack:
579.75 to 572.75ft AMSL
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/30/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

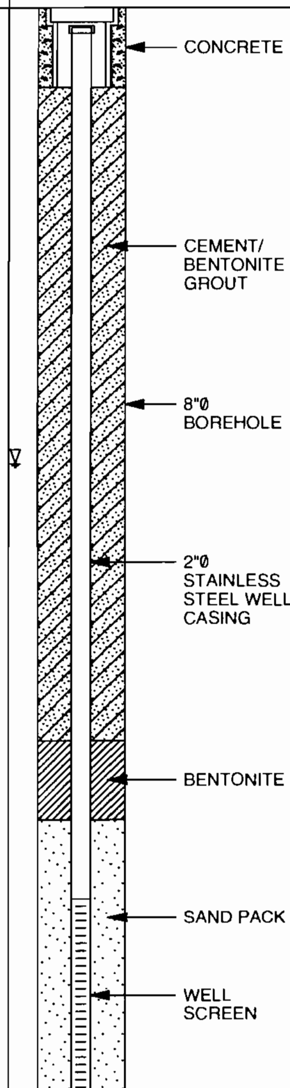
PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-11A
DATE COMPLETED: August 30, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

NORTHING: 4976.34 — EASTING: 4983.22
GROUND SURFACE: 590.73 — TOP OF RISER: 590.20

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0	OL-SILT (TOPSOIL), little clay, brown	590.23
	SILT (Fill), some clay, trace sand, brown to dark brown, dry, friable, occassional grey mottling	
	- more clay below 6.0 ft BGS	
8	CLAY (Fill), some silt, little sand, dark grey, wet, minor black mottling	582.73
	- minor reddish decomposed wood @ 11.2 ft BGS	
	- abundant fine gravel below 12.7 ft BGS	
	- increasing coarser gravel @ 15 ft BGS	
15.5	CL-CLAY, some silt, minor fine gravel, dark red-brown, wet, soft	575.23
	- less sand and gravel, soft below 18 ft BGS	
	- decreasing gravel @ 21.5 ft BGS	
26	CL-CLAY with GRAVEL (TILL), coarse rounded gravel, grey, dry, stiff	564.73
27.5	END OF BOREHOLE @ 27.5ft BGS	563.23

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
568.23 to 563.23ft AMSL
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
572.23 to 570.23ft AMSL
Material: Bentonite
Sand Pack:
570.23 to 563.23ft AMSL

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS	X	1.2	16	-
2SS	X	1.4	20	-
3SS	X	1.8	17	-
4SS	X	2.0	14	-
5SS	X	1.6	4	-
6SS	X	2.0	3	-
7SS	X	1.4	2	-
8SS	X	0.6	4	-
9SS	X	1.5	2	-
10SS	X	1.6	2	-
11SS	X	2.0	2	-
12SS	X	1.1	3	-
13SS	X	0.8	6	-
14SS	X	0.3	65	-

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/30/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-11A
DATE COMPLETED: August 30, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36			Material: Silica Sand					
38								
40								
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

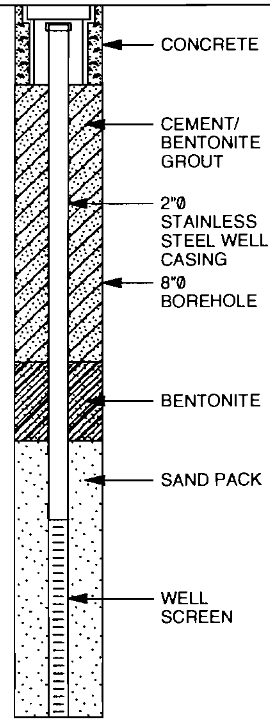
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/30/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-12
DATE COMPLETED: October 30, 2001
DRILLING METHOD: HSA
FIELD PERSONNEL: J. Pietraszek

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	TOP OF RISER	590.09					
0–18	OVERBURDEN (not sampled) (see overburden stratigraphy for well MW-12A)						
18	END OF BOREHOLE @ 18.0ft BGS	18.00					



WELL DETAILS
Screened interval:
13.00 to 18.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: Stainless Steel
Seal:
9.00 to 11.00ft BGS
Material: Bentonite
Sand Pack:
11.00 to 18.00ft BGS
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ⊽ 10/30/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2

PROJECT NUMBER: 15867

CLIENT: Confidential

LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-12A

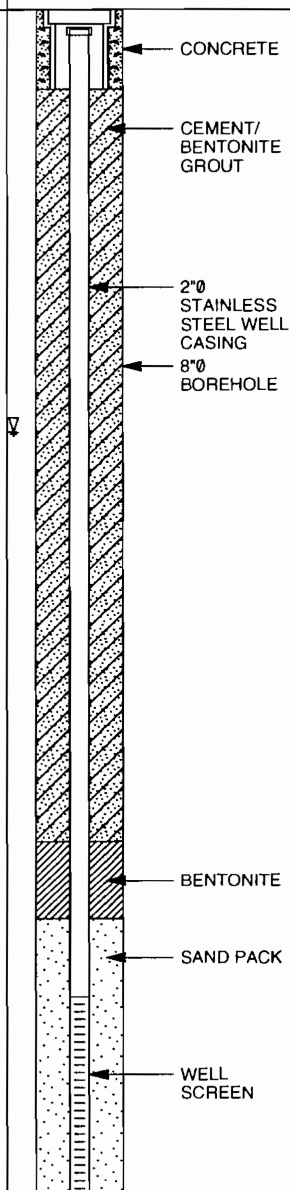
DATE COMPLETED: October 29, 2001

DRILLING METHOD: HSA

FIELD PERSONNEL: J. Pietraszek

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	TOP OF RISER	589.96
0	SOIL (Fill), brown, slightly moist	
4	SILTY CLAY (Fill), some woody debris (roots), brown with grey mottling, slightly moist - increasing clay below 10 ft BGS - becoming grey with red mottling	4.00
12	CLAYEY SILT (Fill), brown with grey mottling	12.00
13	SANDY SILT (Fill), some clay, grey, very moist	13.00
14	GRAVELLY SAND (Fill), fine grained rounded gravel, very wet - gravel becomes angular, fine to medium grained below 16 ft BGS	14.00
18	CL-CLAY, some silt, very moist, dark grey - becomes gravelly below 21 ft BGS	18.00
22	CL-CLAY, dark brown, some red mottling, moist	22.00
	SP-SILTY SAND, little fine gravel, dark grey	22.50
	CL-CLAY, grey, moist, some red mottling	22.70
26	SP-SANDY SILT with FINE GRAVEL, moist, dark grey - clay inclusions @ 27.0 ft BGS	26.00
30	END OF BOREHOLE @ 30.0ft BGS	30.00

MONITOR INSTALLATION



WELL DETAILS

Screened interval: 25.00 to 30.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 10

Material: Stainless Steel

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
SS1	X	0.1	5	0
SS2	X	0.2	12	0
SS3	X	1.2	14	0
SS4	X	1.3	19	0
SS5	X	1.4	9	0
SS6	X	2.0	10	0
SS7	X	0.8	6	0
SS8	X	0.4	5	0
SS9	X	0.8	7	0
SS10	X	2.0	4	0
SS11	X	2.0	5	0
SS12	X	1.8	2	0
SS13	X	2.0	3	0
SS14	X	1.9	3	0
SS15	X	1.8	5	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ∇ 9/29/01

OVERBURDEN LOG 15867.GPJ CRA_CORP.GDT 1/22/02

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2 | HOLE DESIGNATION: MW-12A
PROJECT NUMBER: 15867 | DATE COMPLETED: October 29, 2001
CLIENT: Confidential | DRILLING METHOD: HSA
LOCATION: Buffalo, NY | FIELD PERSONNEL: J. Pietraszek

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
36			Seal: 21.00 to 23.00ft BGS Material: Bentonite Sand Pack: 23.00 to 30.00ft BGS Material: Silica Sand					
38								
40								
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 9/29/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

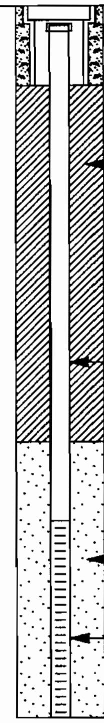
PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: PZ-1
DATE COMPLETED: August 22, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

NORTHING: 4895.68 EASTING: 4852.83
GROUND SURFACE 589.62
TOP OF RISER 589.36

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0–1	ASPHALT, roadway and gravel sub-base	588.62
1–9	CLAY (Fill), some silt, little sand, dark brown, dry, occassional grey mottling - increasing sand @ 6 ft BGS	580.42
9–13	SAND (Fill), some silt and clay, trace gravel, brown - gravel inclusions	576.72
13–18	CI-CLAY with SILT, grey to dark grey to brown, soft	571.62
18	END OF BOREHOLE @ 18.0ft BGS	

MONITOR INSTALLATION



SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1		2.7		-
2		3.5		-
3		3.9		-
4		4.0		-

WELL DETAILS
Screened interval:
576.62 to 571.62ft AMSL
Length: 5ft
Diameter: 1in
Slot Size: 10
Material: SCH 80 PVC
Seal:
587.62 to 578.62ft AMSL
Material: Bentonite
Sand Pack:
578.62 to 571.62ft AMSL
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/22/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: PZ-2
DATE COMPLETED: August 22, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4986.94 EASTING: 4961.25 GROUND SURFACE / TOP OF RISER	590.19 / 590.04						
	ASPHALT, roadway and gravel sub-base	589.19	CONCRETE					
2	CLAY (Fill), some silt, dark brown, stiff			1		1.8		-
4			BENTONITE					
6	- some grey and red mottling		2.5"Ø BOREHOLE	2		4.0		-
8	- becoming very moist							
10			1"Ø PVC WELL CASING	3		4.0		-
12	- increasing sand and fine rounded gravel content, clay becoming wet and soft below 12ft BGS							
14			SAND PACK					
15	- angular gravel and wood @ 15 ft BGS			4		2.3		-
16			WELL SCREEN					
18	END OF BOREHOLE @ 18.0ft BGS	572.19						

WELL DETAILS
Screened interval:
577.19 to 572.19ft AMSL
Length: 5ft
Diameter: 1in
Slot Size: 10
Material: SCH 80 PVC
Seal:
588.19 to 579.19ft AMSL
Material: Bentonite
Sand Pack:
579.19 to 572.19ft AMSL
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/22/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

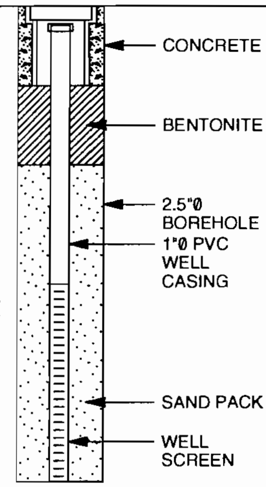
PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: PZ-3
DATE COMPLETED: August 30, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

NORTHING: 4863.62 EASTING: 4816.47
GROUND SURFACE 589.44
TOP OF RISER 589.15

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	ASPHALT, roadway and gravel sub-base	588.44
	CLAY with SILT (Fill), light brown to brown, dry	
	- increasing sand content below 5.0ft BGS	
	- increasing moisture content below 6.0ft BGS	
	- wood fragments @ 8.3ft BGS	581.44
	SAND (Fill), some gravel, black	580.94
	CL-CLAY, some silt, brown, occassional black mottling	577.44
12	END OF BOREHOLE @ 12.0ft BGS	

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
582.44 to 577.44ft AMSL
Length: 5ft
Diameter: 1in
Slot Size: 10
Material: SCH 80 PVC
Seal:
587.44 to 585.44ft AMSL
Material: Bentonite
Sand Pack:
585.44 to 577.44ft AMSL
Material: Silica Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1	0–4	4.0		-
2	4–8	4.0		-
3	8–12	0.8		-

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/30/01

Boring Log

The Fourth River Company

Project No: 1240
Boring No: SB - 1
Page No: 1 / 1
Date Begun: 07/21/99
Date Finished: 07/21/99
Well Installed: no

Client: Walnut Capital
Driller: Zebra Environmental
Method: Geoprobe
Diameter: 2"

Location: Buffalo, NY
Engineer: jch
Elevation: n/a ground
Elevation: n/a TOC/TOR

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	0			1	brown SILT, some Clay (TOPSOIL), little Grass, trace Sand	
				2		
					refusal @ 2' on suspected concrete	
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		

Boring Log

The Fourth River Company

Client:	Walnut Capital	Location:	Buffalo, NY
Driller:	Zebra Environmental	Engineer:	jch
Method:	Geoprobe	Elevation:	n/a ground
Diameter:	2"	Elevation:	n/a TOC/TOR

Project No:	1240
Boring No:	SB - 1A
Page No:	1 / 1
Date Begun:	07/21/99
Date Finished:	07/21/99
Well Installed:	no

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
					ASPHALT	
	0			1	grey SAND, GRAVEL and SLAG (FILL)	
				2	refusal @ 1.5' on suspected concrete	
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		

Boring Log

The Fourth River Company

Client:	Walnut Capital	Location:	Buffalo, NY	Project No:	1240
Driller:	Zebra Environmental	Engineer:	jch	Boring No:	SB - 1B
Method:	Geoprobe	Elevation:	n/a ground	Page No:	1 / 1
Diameter:	2"	Elevation:	n/a TOC/TOR	Date Begun:	07/21/99
				Date Finished:	07/21/99
				Well Installed:	no

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	42		0.5	1, 2, 3, 4	brown SILT, some Clay, little Grass (TOPSOIL) brown f SAND and CLAYEY SILT brown and grey SILTY CLAY	
	48		0.5	5, 6, 7, 8	brown CLAYEY SILT and f SAND	damp @ 8'
SB-1B, 3	46		0.5	9, 10, 11, 12	brown SAND and SILT, some Rock fragments, some Wood	wet @ 10'
	42		0.5	13, 14, 15, 16	brown SAND and SILT, some Clay grey SAND and GRAVEL, some Clay	wet
				17, 18, 19, 20	boring terminated @ 16' SB-1B GW sampled	

Boring Log
The Fourth River Company

Client:	Walnut Capital	Location:	Buffalo, NY	Project No:	1240
Driller:	Zebra Environmental	Engineer:	jch	Boring No:	SB - 2
Method:	Geoprobe	Elevation:	n/a ground	Page No:	1 / 1
Diameter:	2"	Elevation:	n/a TOC/TOR	Date Begun:	07/21/99
				Date Finished:	07/21/99
				Well Installed:	no

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	0			1 2	ASPHALT grey SLAG, SAND and GRAVEL (FILL)	
				3 4 5 6 7 8 9 10 11 12	refusal @ 2' on suspected concrete	
				13 14 15 16 17 18 19 20		

Boring Log
The Fourth River Company

Client: Walnut Capital
Driller: Zebra Environmental
Method: Geoprobe
Diameter: 2"

Location: Buffalo, NY
Engineer: jch
Elevation: n/a ground
Elevation: n/a TOC/TOR

Project No: 1240
Boring No: SB - 3
Page No: 1 / 1
Date Begun: 07/21/99
Date Finished: 07/21/99
Well Installed: no

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	42		0	1 2 3 4	brown SILT, some Clay, some Grass (TOPSOIL) brown SILTY CLAY, some f Sand	tree root @ 3'
	48		0.5	5 6 7 8	brown SILTY CLAY, some f Sand, trace Roots	
	42		0.5	9 10 11 12	brown f SAND, some Silt, trace Gravel, rock fragments	wet @ 10'
SB-3, 4	18		6	13 14 15 16	brown f SAND and GRAVEL, trace rock fragments	wet
	36		2	17 18 19 20	brown c SAND and GRAVEL, trace Silt	wet

boring terminated @ 20'

Boring Log
The Fourth River Company

Client:	Walnut Capital	Location:	Buffalo, NY
Driller:	Zebra Environmental	Engineer:	jch
Method:	Geoprobe	Elevation:	n/a ground
Diameter:	2"	Elevation:	n/a TOC/TOR

Project No:	1240
Boring No:	SB - 4
Page No:	1 / 1
Date Begun:	07/21/99
Date Finished:	07/21/99
Well Installed:	no

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	42		0.5	1–4	ASPHALT; grey SLAG, GRAVEL and SAND (FILL); brown SILTY CLAY	
	42		0.5	5–8	brown SILTY CLAY, some Clayey Silt, trace Sand, trace Gravel, trace Wood @ 8'	damp @ 8'
	48		0.5	9–12	brown c SAND, some Gravel, some brown to grey Silt, trace Clay	wet @ 10'
SB - 4, 4	24		1.5	13–16	brown c SAND and GRAVEL, some brown to grey Silt, trace Wood	wet
				17–20	boring terminated @ 16'	

Boring Log
The Fourth River Company

Client:	Walnut Capital	**Location:**	Buffalo, NY	**Project No:**	1240
Driller:	Zebra Environmental	**Engineer:**	jch	**Boring No:**	SB - 5
Method:	Geoprobe	**Elevation:**	n/a ground	**Page No:**	1 / 1
Diameter:	2"	**Elevation:**	n/a TOC/TOR	**Date Begun:**	07/21/99
				Date Finished:	07/21/99
				Well Installed:	no

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	42		0.5	1	grey SLAG and SAND, some Mulch	
				2		
				3	brown to grey SILTY CLAY	
				4		
	48		0.5	5	brown w/light grey mottling SILTY CLAY, trace Slag	
				6		
				7		
				8		
	48		0.5	9	brown w/light grey SILTY CLAY, trace Sand and Gravel	
				10		
				11		
				12		
SB - 5, 4	48		0.5	13	brown SILTY CLAY, some grey mf Sand, trace Gravel	damp
				14		
				15		
				16		
	48		0.5	17	grey SILTY CLAY, some f Sand, trace Gravel	wet @ 16'
				18		
				19		
				20		

boring terminated at 20'

Boring Log
The Fourth River Company

Client:	Walnut Capital	**Location:**	Buffalo, NY	**Project No:**	1240
Driller:	Zebra Environmental	**Engineer:**	jch	**Boring No:**	SB - 6
Method:	Geoprobe	**Elevation:**	n/a ground	**Page No:**	1 / 1
Diameter:	2"	**Elevation:**	n/a TOC/TOR	**Date Begun:**	07/21/99
				Date Finished:	07/21/99
				Well Installed:	no

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	42		0.5	1–4	brown MULCH, some Sand and Gravel (FILL) (1–2); brown SILT and CLAY, trace Gravel (2–4)	
	48		0.5	5–8	brown SILT and CLAY, some Clayey Silt, trace Gravel	
SB - 6, 3	48		0.5	9–12	brown SILT and CLAY, some Clayey Silt, trace Gravel	wet @ 12'
	48		0.5	13–16	brown to grey SILTY CLAY, some c Sand and Gravel, trace Wood	wet
				17–20	boring terminated @ 16' SB-7 GW sampled	

Boring Log

The Fourth River Company

Client:	*Walnut Capital*	Location:	*Buffalo, NY*
Driller:	*Zebra Environmental*	Engineer:	*jch*
Method:	*Geoprobe*	Elevation:	*n/a* ground
ameter:	*2"*	Elevation:	*n/a* TOC/TOR

Project No:	*1240*
Boring No:	*SB - 7*
Page No:	*1 / 1*
Date Begun:	*07/21/99*
Date Finished:	*07/21/99*
Well Installed:	*no*

Sample umber	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	44		0.5	1 2 3 4	*ASPHALT* *grey SLAG, SAND and GRAVEL (FILL)* *brown to black SILT and CLAY*	
	48		0.5	5 6 7 8	*brown SILT, some mf Sand, some Silty Clay*	
SB - 7, 3	48		0.5	9 10 11 12	*brown SILT, some mf Sand, some Silty Clay, trace Gravel*	*wet @ 10'*
	48		0.5	13 14 15 16	*grey mf to c SAND, some Silt, trace Gravel, trace Clay, trace Wood*	*wet*
				17 18 19 20	*boring terminated @ 16'*	

Boring Log

The Fourth River Company

Client: *Walnut Capital*
Driller: *Zebra Environmental*
Method: *Geoprobe*
Diameter: *2"*

Location: *Buffalo, NY*
Engineer: *jch*
Elevation: *n/a* ground
Elevation: *n/a* TOC/TOR

Project No: *1240*
Boring No: *SB - 8*
Page No: *1 / 1*
Date Begun: *07/21/99*
Date Finished: *07/21/99*
Well Installed: *no*

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
	42		0.5	1 2 3 4	ASPHALT grey SLAG, SAND and GRAVEL (FILL) brown to grey SILT and CLAY, trace Sand	
SB - 8, 2	48		1	5 6 7 8	brown to grey SILT and CLAY, some Sand and Gravel (FILL)	damp @ 8'
	24		0.5	9 10 11 12	brown m SAND, some Gravel, some brown to grey Silt and Clay	damp to wet
	24		0.5	13 14 15 16	brown to grey SILT, some Sand and Gravel, trace Clay	wet
				17 18 19 20	boring terminated @ 16'	

Boring Log

The Fourth River Company

Project No:	1240
Boring No:	SB - 9
Page No:	1 / 1
Date Begun:	07/21/99
Date Finished:	07/21/99
Well Installed:	no

Client:	Walnut Capital	Location:	Buffalo, NY		
Driller:	Zebra Environmental	Engineer:	jch		
Method:	Geoprobe	Elevation:	n/a	ground	
Diameter:	2"	Elevation:	n/a	TOC/TOR	

Sample Number	Recovery (in)	Blows per 6-inch	HNu (ppm)	Depth	Classification	Notes
					ASPHALT	
				1	grey SAND, GRAVEL and SLAG (FILL)	
SB - 9, 1	44		1.5	2		oil or tar-like substance @ 2'
				3	dark brown SILT and SAND	
				4		
				5	brown and grey SILT and CLAY, trace Sand and Gravel	
	48		0.5	6		
				7		
				8		
				9	brown mf SAND, some Silt, some Gravel, trace Clay	
	24		0.5	10		
				11		wet @ bottom
				12		
				13	brown to grey m SAND, some Silt and Clay, some Gravel, trace Wood @ 14'	
	48		0.5	14		wet
				15		
				16		
					boring terminated @ 16'	
				17		
				18		
				19		
				20		

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2

PROJECT NUMBER: 15867

CLIENT: Confidential

LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-11

DATE COMPLETED: September 1, 2000

DRILLING METHOD: HSA

FIELD PERSONNEL: K. Lynch

NORTHING: 4795.84
EASTING: 4986.39

GROUND SURFACE: 592.48 ft AMSL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0	ASPHALT, gravel sub-base	
1	GRAVEL (Fill), some sand, fine, angular, grey, dry to moist	591.48
4	ML-SILT, little fine sand and clay, trace fine gravel, grey and brown, dry to moist, mottled, laminated, stiff	588.48
11.6	SW-SAND, little silt, fine to medium grained, rounded and subrounded, grey, dry to moist - wet below 12.2ft BGS	580.88
13.0	END OF BOREHOLE @ 13.0ft BGS	579.48

SOIL BORING INSTALLATION: ASPHALT; 8"Ø BOREHOLE; CEMENT/ BENTONITE GROUT

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1SS		2.0	8	0
2SS		2.0	4	0
3SS		2.0	8	0
4SS		2.0	9	0
5SS		2.0	5	0
6SS		2.0	7	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 09/01/00
CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-12
DATE COMPLETED: September 13, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4824.5 EASTING: 5027.21 GROUND SURFACE	591.59						
	asphalt	590.59	ASPHALT					
	GRAVEL (Fill), some sand, grey, dry	589.69						
2	ML-SILT, little sand, brown and grey, dry to moist, laminated, stiff			1SS	X	2.0	8	0.1
4			8"Ø BOREHOLE	2SS	X	2.0	12	0
6			CEMENT/ BENTONITE GROUT	3SS	X	2.0	16	0.3
8				4SS	X	2.0	7	0.6
	SW-SAND, trace fine rounded gravel, brown, wet	582.69	▽					
10				5SS	X	2.0	2	0
	END OF BOREHOLE @ 11.0ft BGS	580.59						

Depth scale: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 09/13/00
CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-13
DATE COMPLETED: September 13, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4848.26 EASTING: 4969.84 GROUND SURFACE	591.33						
	ASPHALT, gravel sub-base	590.33	ASPHALT					
	GRAVEL (Fill), some sand, trace iron slag, brown and grey, dry to moist	588.93		1SS		2.0	14	0
	ML-SILT, trace sand, grey, dry to moist, laminated, medium stiffness		8"Ø BOREHOLE	2SS		2.0	12	0
			CEMENT/ BENTONITE GROUT	3SS		2.0	9	0.2
		582.63		4SS		2.0	4	0
	SM-SAND, trace silt, fine grained, moist to wet, loose	580.33		5SS		2.0	1	1.1
	END OF BOREHOLE @ 11.0ft BGS							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-14
DATE COMPLETED: September 13, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4879.95 EASTING: 4943.64 GROUND SURFACE	590.48						
	ASPHALT, gravel sub-base		ASPHALT					
	GRAVEL (Fill), some sand, grey, dry	589.48						
2				1SS		2.0	14	0
	ML-SILT, little fine sand, brown with grey, dry to moist, stiff, laminated	587.38						
4			8"Ø BOREHOLE	2SS		2.0	18	0.1
			CEMENT/ BENTONITE GROUT					
6	SM-SAND, little silt, fine to medium grained, brown, dry to moist - wet below 7.5ft BGS	584.68		3SS		2.0	6	0.3
8				4SS		2.0	2	0.3
	END OF BOREHOLE @ 9.0ft BGS	581.48						
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/13/00
CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-15
DATE COMPLETED: September 13, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4925.01 EASTING: 4994.24 GROUND SURFACE	590.76						
	ASPHALT, gravel sub-base	589.76	ASPHALT					
2	GRAVEL (Fill), some sand, grey and brown, dry	588.36		1SS	X	2.0	24	0.3
4	RUBBLE FILL, concerete, red-brick, metallic slag, coal, silt (lumpy), dry		8"Ø BOREHOLE	2SS	X	2.0	28	0.1
6	- hard concrete slab from 6.6 to 7.0ft BGS			3SS	X	2.0	18	0.1
8	SM-SAND, little silt, fine to medium grained, gray and brown, wet, strong chemical odor	583.76	▽ CEMENT/ BENTONITE GROUT	4SS	X	2.0	5	-
10				5SS	X	2.0	2	0.6
12	- roots below 12.5ft BGS			6SS	X	2.0	1	43
14	END OF BOREHOLE @ 13.0ft BGS	577.76						
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/13/00
CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-16/16A
DATE COMPLETED: September 18, 2000
DRILLING METHOD: HSA
FIELD PERSONNEL: K. Lynch

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4938.15 EASTING: 5023.03 GROUND SURFACE	590.99						
	ASPHALT, gravel sub-base	589.99	ASPHALT					
2	GRAVEL (Fill), some sand, trace coal, concrete and red brick, dry - sprinkler wires and tubing			1SS	X	2.0	20	-
4	- split spoon advances through void from 3.5 to 5.0ft BGS - auger to 5.0ft BGS, moved to SB-16A	585.99	8"Ø BOREHOLE	2SS	X	2.0	0	-
6	ML-SILT, dark brown with tan and black discoloration, dry to moist, medium stiff, laminated	582.99	CEMENT/ BENTONITE GROUT	3SS	X	2.0	8	0
8	SM-SAND, little silt, brown, moist to wet - wet, grey		∇	4SS	X	2.0	6	5
10	- roots	579.99		5SS	X	2.0	2	0.9
12	SW-SAND, little fine rounded gravel, fine to coarse grained, grey, wet, slight sceptic odor	577.99		6SS	X	2.0	5	0.9
	END OF BOREHOLE @ 13.0ft BGS							

Depth scale: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 09/18/00
CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-17
DATE COMPLETED: August 22, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION
	NORTHING: 4939.14 EASTING: 5021.03 GROUND SURFACE	591.05	
0.0	ASPHALT, roadway and gravel sub-base		ASPHALT
1.5	CLAY (Fill), some silt and angular gravel, tan to brown	589.55	2.5"Ø BOREHOLE
	- more sand below 4.0ft BGS		
	- wood, brick and coal fragments @ 6.0ft BGS		CEMENT/ BENTONITE GROUT
8.0	CL-SILTY CLAY, dark brown to green-brown	583.05	∇
12.0	END OF BOREHOLE @ 12.0ft BGS	579.05	

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1	X	2.0		-
2	X	2.0		-
3	X	2.0		-
4	X	2.0		-
5	X	2.0		-
6	X	2.0		-

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/22/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-18
DATE COMPLETED: August 22, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4948.9 EASTING: 4999.35 GROUND SURFACE	590.87						
	ASPHALT, roadway and gravel sub-base	589.57	ASPHALT	1		2.0		>2000
2	SAND with SILT (Fill), black			2		2.0		-
4			2.5"Ø BOREHOLE					
	- brick fragments @ 5.0ft BGS		CEMENT/ BENTONITE GROUT	3		2.0		-
6	- moist with wood fragments @ 6.0ft BGS							
				4		2.0		-
8	END OF BOREHOLE @ 8.0ft BGS	582.87						
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-19
DATE COMPLETED: August 20, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION
	NORTHING: 4923.35 EASTING: 5011.08 GROUND SURFACE	591.07	
	ASPHALT, roadway and gravel sub-base		ASPHALT
2	GRAVEL (Fill), some sand, red brick fragments, dry	589.57	
4	CLAY (Fill), some silt, some angular gravel and wood fragments, trace brick	588.07	2.5"Ø BOREHOLE
6	- moist with more sand @ 6.0ft BGS		CEMENT/ BENTONITE GROUT
8	- wood fragments @ 8.0 ft BGS		
10	ML-SILT, some clay and sand, trace gravel, dark brown to tan, occassional yellow and black clay mottling, wet	582.07	∇
12	END OF BOREHOLE @ 12.0ft BGS	579.07	

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1		2.0		-
2		2.0		1079
3		2.0		-
4		2.0		>2000
5		2.0		-
6		2.0		>2000

Depth scale: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/20/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-21
DATE COMPLETED: August 20, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 4926.27 EASTING: 5032.95 GROUND SURFACE	591.55						
	ASPHALT, roadway and gravel sub-base	590.55	ASPHALT	1		2.0		>2000
	GRAVEL (Fill), some sand	590.05						
2	CLAY (Fill), some silt, dark brown, dry, stiff		2.5"Ø BOREHOLE	2		2.0		>2000
4	SILT (Fill), some gravel, dark brown, dry	587.45		3		2.0		>2000
	- more sand below 5.5ft BGS							
6			CEMENT/ BENTONITE GROUT	4		2.0		>2000
8				5		2.0		>2000
	- wet with more angular gravel below 9.5ft BGS							
10	- more tan brown sand with yellow mottling below 10.5ft BGS			6		2.0		>2000
12	END OF BOREHOLE @ 12.0ft BGS	579.55						
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/20/2001

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-22
DATE COMPLETED: August 22, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

NORTHING: 4920.93
EASTING: 4908.58

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	GROUND SURFACE	589.71						
	ASPHALT, roadway and gravel sub-base	589.11	ASPHALT					
	CLAY (Fill), some silt, some sand, trace gravel, brown to yellowish brown to tan, dry		2.5"Ø BOREHOLE	1	X	2.0		-
2			CEMENT/ BENTONITE GROUT	2	X	2.0		-
4				3	X	2.0		-
6	- wood fragments @ 6.0ft BGS			4	X	2.0		-
8	- becomes very moist and soft with more silt below 8.0ft BGS		∇	5	X	2.0		-
10	- becomes wet with more fine rounded gravel and silt below 10ft BGS			6	X	2.0		-
	- wet with more coarse sand below 11.5ft BGS							
12	END OF BOREHOLE @ 12.0ft BGS	577.71						
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/22/2001

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-23
DATE COMPLETED: August 22, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4973.68 EASTING: 4959.32 GROUND SURFACE	590.91						
	ASPHALT, roadway and gravel sub-base	590.41	ASPHALT					
	SAND with GRAVEL (Fill), yellowish brown	589.91		1	X	2.0		-
2	CLAY with SILT (Fill), some gravel, dark brown to black, dry, stiff		2.5"Ø BOREHOLE	2	X	2.0		-
4				3	X	2.0		-
6	- less sand and gravel below 6.0ft BGS			4	X	2.0		-
8	- moist to wet and soft with less clay below 8.0ft BGS		CEMENT/ BENTONITE GROUT	5	X	2.0		-
10	GRAVEL with COARSE SAND (Fill), some silt, dark brown to black, wet	580.41		6	X	2.0		-
12	- more silt and clay below 12.5ft BGS			7	X	2.0		-
14				8	X	2.0		-
16	END OF BOREHOLE @ 16.0ft BGS	574.91						
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/22/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2

PROJECT NUMBER: 15867

CLIENT: Confidential

LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-24

DATE COMPLETED: August 20, 2001

DRILLING METHOD: Direct Push

FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION
	NORTHING: 4914.12 EASTING: 4972.7 GROUND SURFACE	590.36	
	ASPHALT, roadway and gravel sub-base	589.36	ASPHALT
2	SILT with SAND and GRAVEL (Fill), dark brown to black	586.36	2.5"Ø BOREHOLE
4	SAND (Fill), some gravel, dry	585.56	CEMENT/ BENTONITE GROUT
	SILT with SAND and GRAVEL (Fill), light grey, wet	584.36	
6	CL-CLAY, some silt, light brown with yellow mottling	581.36	
8	END OF BOREHOLE @ 9.0ft BGS		⊽

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1	⊠	2.0		-
2	⊠	2.0		0
3	⊠	2.0		-
4	⊠	2.0		0
5	⊠	2.0		0
6	⊠	2.0		0.3

Depth scale: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ⊽ 08/20/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-25
DATE COMPLETED: August 20, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4915.58 EASTING: 4937.64 GROUND SURFACE	591.28						
	ASPHALT, roadway and gravel sub-base		ASPHALT	1		2.0		-
2	SILT (Fill), some gravel and sand, light tan to tan-yellow, grading to brown, dry, stiff	589.78		2		2.0		0
4	ML-SILT, some clay, light brown to tan, dry	587.28	2.5"Ø BOREHOLE	3		2.0		0
6			CEMENT/ BENTONITE GROUT	4		2.0		0
8	- wet below 9.0 ft BGS			5		2.0		0
10				6		2.0		-
12	END OF BOREHOLE @ 12.0ft BGS	579.28						
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/20/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-26
DATE COMPLETED: August 20, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

NORTHING: 4828.42
EASTING: 4979.68
GROUND SURFACE: 591.96

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
0	ASPHALT, roadway and gravel sub-base	590.96	ASPHALT	1	X	2.0		0
1.0	GRAVEL (Fill), some sand, dry	590.16						
1.8	CL-CLAY, some silt, dark brown to black, occassional green mottling, stiff - moist with more sand and silt below 6.5ft BGS	582.46	2.5"Ø BOREHOLE; CEMENT/ BENTONITE GROUT	2	X	2.0		0.8
				3	X	2.0		0
				4	X	2.0		0
				5	X	2.0		0
9.5	ML-SILT, some sand and clay, trace gravel, very moist - wet with more sand below 11.0ft BGS	579.96		6	X	2.0		0
12.0	SM-SAND with SILT and CLAY, some gravel, wet	575.96		7	X	2.0		-
				8	X	2.0		-
16.0	END OF BOREHOLE @ 16.0ft BGS							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 08/20/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-27
DATE COMPLETED: August 20, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4809.1 EASTING: 5003 GROUND SURFACE	592.43						
	ASPHALT, roadway and gravel sub-base	591.43	ASPHALT	1	X	2.0		1.4
2	GRAVEL (Fill), some sand, dry	588.93	2.5"Ø BOREHOLE	2	X	2.0		0
4	ML-SILT, some clay, trace sand, occassional black and yellow mottling, dry			3	X	2.0		0
6	- more sand below 6.0ft BGS			4	X	2.0		0
8		583.13	CEMENT/ BENTONITE GROUT	5	X	2.0		0
10	CL-CLAY with SILT and SAND, trace gravel, grey, wet			6	X	2.0		0
12		578.93		7	X	2.0		0
14	SM-SAND, some silt, trace clay, trace wood, dark brown to black, wet			8	X	2.0		0
16	END OF BOREHOLE @ 16.0ft BGS	576.43						

18
20
22
24
26
28
30
32
34

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/20/01

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2

PROJECT NUMBER: 15867

CLIENT: Confidential

LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-28

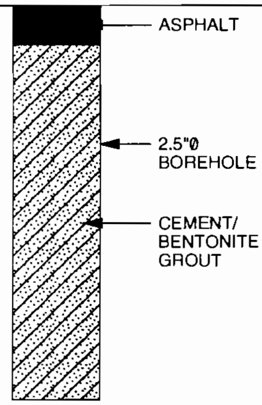
DATE COMPLETED: August 20, 2001

DRILLING METHOD: Direct Push

FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	NORTHING: 4923.86 EASTING: 5054.1 GROUND SURFACE	591.15
	ASPHALT, roadway and gravel sub-base	590.15
	GRAVEL (Fill), some sand	589.15
2	CL-CLAY, some sand and silt, yellow-tan-brown, dry	
6	- moist below 6.5ft BGS	
8	- tan, wet, with more clay below 8.0ft BGS	
10	END OF BOREHOLE @ 10.0ft BGS	581.15

SOIL BORING INSTALLATION



SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
1		2.0		-
2		2.0		161
3		2.0		93.5
4		2.0		58.6
5		2.0		-

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Seneca St. Parcel #2
PROJECT NUMBER: 15867
CLIENT: Confidential
LOCATION: Buffalo, NY

HOLE DESIGNATION: SB-29
DATE COMPLETED: August 20, 2001
DRILLING METHOD: Direct Push
FIELD PERSONNEL: F. Garbe

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	SOIL BORING INSTALLATION	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
	NORTHING: 4894.68 EASTING: 5077.72 GROUND SURFACE	591.14						
0	SILT and CLAY (Fill), some gravel, light brown			1		2.0		0
2	CL-CLAY, some silt, dark brown, dry	589.14		2		2.0		0
			2.5"Ø BOREHOLE					
			CEMENT/ BENTONITE GROUT	3		2.0		0
				4		2.0		0
8	- wet below 8.0 ft BGS			5		2.0		0
				6		2.0		0
11.5	GM-GRAVEL with SILT, some clay, wet	579.64						
12	END OF BOREHOLE @ 12.0ft BGS	579.14						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 08/20/01

OVERBURDEN LOG 15867.GPJ CRA_CORP.GDT 1/22/02

APPENDIX E

WELL DEVELOPMENT AND PURGING RECORDS

WELL DEVELOPMENT LOGS

14.9°c Air

MW-1 Well Development
9-21-00 K. Lynch

Method - Surge with bailer, pump with peristaltic w/ dedicated Teflon tubing. 2" ∅ well

Depth 21.2' BTOC
IWL 9.14' BTOC
12.06' × .16 = 1.93 gal/vol

Start 10:00

Volume	Gals	pH	Cond	Temp °C	Comments
(1) BAIL *	2	6.80	1840	16.2°c	Cloudy, Silty Dk Color
2	4	6.98	1760	15.7°	Same
3 *	6	6.91	1780	15.5°	Clearer
4	8	6.94	1820	15.5°	Clearing
5 *	10	6.96	1810	15.5°	Same
6	12	6.99	1740	15.9°	Very cloudy Brown
7 *	14	6.97	1770	15.8°	Clearing
8	16	6.94	1790	15.7°	cloudy Brown
9 *	18	6.96	1740	15.8°	Clearing
10	20	6.89	1770	16.7°	Clearing
11	22	7.00	1790	15.7°	Clearer
12	24	7.00	1790	15.8°	Clear, Very Sl. cldy no odor no sheen

FROM BOTTOM

TOP OF WATER

End: 11:00

Final W/L = 13.1' BTOC.

* Surge well with Bailer

MW-5 Well Development
9-21-00 K. Lynch

(63)

Method: Surge with bailer; pump with peristaltic pump w/ dedicated Teflon Tubing

Depth 17.10' 2" ∅ well
IWL 8.08'
9.02 × .16 = 1.44 Gal/volume

Start 11:20

Volume	Gals	pH	Cond	Temp °C	Comments
1	1.5	6.81	900	17.2°	cloudy Brown, Heavy seds
2	3.0	6.64	825	16.9°	Same
3	4.5	6.52	957	16.8°	Same Clearing
* 4	6.0	6.37	947	16.9°	cloudy, Brown, Heavy Sed
5	7.5	6.41	934	17.1°	
* + MOVE TUBING TO TOP OF WATER					
6	9.0	6.51	988	17.1°	Clearing after cloudy
7	10.5	6.53	1092	16.5°	Clear, Sl. cldy
8 *	12.0	6.51	980	16.5°	Cloudy Brown
9	13.5	6.48	950	16.5	Clear Sl. cldy
10	15.0	6.46	942	16.6°	Clear, colorless no sheen no odor

Bottom

Top of Water

Final Water Level = 12.1' BTOC
End 12:10

* Surge well with bailer

MW-3 Development 9-21-00
K. Lynch

Method: Bailer to surge well, pump with peristaltic and dedicated teflon tubing

Depth - 17.0' BTOC
IWL 7.7
9.3 × .16 = 1.48 Gal/vol

Start: 1330

	Volume		Gals	pH	Cond	Temp °C	Comments
Bailed	1		1.5	6.67	690	15.1°	Cloudy no odor or sheen
from	2		3.0	6.76	920	15.0°	
bottom	3	*	4.5	6.65	939	14.8°	Clearing Same
	4		6.0	6.69	860	14.3°	Cloudy Brown, Seds
	5		7.5	6.64	890	14.3°	Same
	6	*	9.0	6.60	920	14.4°	Same
	7		10.5	6.53	980	14.3°	Clearing
	8	*	12.0	6.55	990	14.4°	Sediment Laden Brown
Top of Water	9		13.5	6.69	990	14.2°	Same
	10	*	15.0	6.73	985	14.4°	Clearing
	11		16.5	6.77	980	14.4°	Cloudy Brown - Seds
	12	*	18.0	6.85	980	14.4°	Clearing
	13		19.5	6.98	988	14.5°	Clearing
	14		21.0	6.87	980	14.5	Clearing
	15		22.5	6.90	980	14.6°	Clear - Sl cldy
	16		24.0	6.91	980	14.6°	no sheen no odor

1500 W/L = 10.0' BTOC

MW-2 Development 9-21-00 65 KHL

Method - Bailer & Peristaltic Pump with Dedicated teflon Tubing

Depth 17.4' 2" ø well
IWL 8.2
Start 1530 9.2' × .16 = 1.47 gal/vol

Volume		Gal	pH	Cond	Temp °C	Comment
1		1.5	7.03	1800?	15.7°	Cloudy - Dk Brn, Sediments
2		3.0	6.99	1830	16.0°	Same
3		4.5	6.87	1800	16.0°	Same
4	*	6.0	6.94	1740	16.0°	Same
5		7.5	6.89	1690	15.7°	Same
6		9.0	6.87	1650	15.7°	Same Clearer
7	*	10.5	6.89	1630	16.1°	Clearing
8		12.0	6.89	1610	16.0°	SlCloudy
9	*	13.5	6.80	1680	16.2°	Cloudy Dk Brn
10		15.0	LCD Gone on pH meter			
11	*					
12						
13						
14						
15						

Purge 15 vol to Clear.

1625 end.

Final W/L = 11.3' BTOC

9/22/00

1330 - Onsite - picked up drums on way.

1400 W/L 4A = 11.12' BTOC
4 = 9.67' BTOC

1435 Start purging water from MW-4 - Use Bailer & Peristaltic

1520 Done - 12+ Volumes removed water clear.

1530 - Start MW-4A - Well goes dry - pumped ~ 3 Gal - W/L drops below 22' - will no longer pump - bail ~ 2 more gallons - well dry.

1610 Attempt to set up Telog transducer - Computer ~~has~~ NO installed Serial port - Done - pick up Secure drums, place cones behind bldg.

1718 Leave site

KPL

MW-4 Development 9/22/00 (61)
K. Lynch

Method - Bailer & Peristaltic Pump with Dedicated Teflon Tubing

Depth 17.05'
W/L 9.67'
9.38' x .16 = 1.50 gal/vol

Start 1435

Vol	Gal	pH	Cond	Temp	Comment
1	1.5	6.72	642	18.0°	Very cldy Dk brown Seds
2	3.0	6.95	801	17.4°	Same
3	4.5	6.82	774	17.3°	Same
4 *	6.0	6.75	700	17.1°	Clearing
5	7.5	6.90	504	17.3°	Cloudy Brown
4 = 11.32'		4A = 11.12' BTOC	W/L 1451		
6 *	9.0	6.76	631	16.9°	Clearing - Same
* ↓ Keon TOP					
7	10.5	6.89	581	17.3°	Cloudy Brown
8	12.0	6.85	497	17.2°	Same
9	13.5	6.83	537	16.9°	Clearing Cloudy
10 *	15.0	6.79	542	16.9°	Sl. Cldy
		~~6.76~~	~~654~~	~~17.3°~~	~~Cloudy~~
11	16.5	6.76	654	17.3°	Sl. Cldy
12	18.0	6.73	2160?	16.9°	Very Sl. Cldy

Final W/L 10.50' + 4A = 11.12' 1520

MW-4A Development 9-22-00 KL

Method Peristaltic Pump & Bailer -

Vol ~~Gal~~ Depth 29.95' BTOC
IWL 11.12' BTOC
18.33 x .16 = 2.93 G

Vol	Gal	pH	Cond	Temp °C	WQ
1	3	7.42	2300	16.1°	very cldy Heavy sed. Load
Pumped 3 gal +/-			- Reached	< 23' -	won't p
Bail	6	7.46	1620	15.8°	Same
	Well Dry -		W/C = 28.73' BTOC.		

9/26 1630 Purged 4 Gal - No readings w/ Bailer - Well Dry. Install X-ducer to monitor recovery.

KL

Tue - 9/26/00 Overcast 45°F KPL (69)

0800 Onsite w/ operating computer to do water level round and slug tests.

0830 Begin Water levels

Well	Time	W/L BTOC
MW-1	0835	8.12'
MW-5	0836	7.11'
MW-3	0837	6.74'
MW-2	0838	7.26'
MW-4A	0839	11.43'
MW-4	0840	6.64'

* Heavy Rain over Weekend

Slugs used are 1.5" Ø x 36" Long Solid PVC w/ Blunt ends.
Volume = 0.275 Gallons or 0.03

Set up Xducers #1504 (1453?)(Kia C Asset Tag) & #7687 (C-0300C) ... test. - Fl. H2O - both 20 PSI for 0-46' Water.
Decon both Xducers + Cables.

MW-1 Slug test

1130 J. Pietrezak onsite
1150 J. Pietrezak leaves site
Leave

1430 KL to N.F.
1630 KL onsite. - Download Xducer - 4A
Purge Well Dry - Install Xducer to monitor Recovery

#15867
11/20/01 F.Garbe
Field File

MW-6

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. RFI PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/11/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: teflon bailer / dedicated tubing & peristaltic pump

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-6

WELL TYPE (diameter/material): 2"⌀ stainless steel

MEASURING POINT ELEVATION: rim€

STATIC WATER DEPTH: 10.35 ft. below rim ELEVATION: 581.12

BOTTOM DEPTH: 19.60 ft below rim ELEVATION: 571.87

WATER COLUMN LENGTH: 9.25'

SCREENED INTERVAL: 5'

WELL VOLUME: 1.48 Gals (≈ 1½ Gals)

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

volumes 1 through 7: NO parameters measured. water very turbid, brown, silty

	UNITS	8	9	10	11	12	13	14	15
VOLUME PURGED (volume/total volume):	Gals.	1½ Gals 12 Gals	1½ Gals 13½	1½ Gals 15 Gals	1½ Gals 16½	1½ 18 Gals	1½ 19½	1½ 21	1½ 22½
FIELD pH:	—	6.02	6.09	6.15	6.21	6.11	6.26	6.20	6.18
FIELD TEMPERATURE:	°F	67.1	65.1	65.1	65.3	64.4°	63.3°	62.6°	63.0
FIELD CONDUCTIVITY:	umhos/cm	1650	1700	1690	1730	1610	1460	1420	1480
CLARITY/TURBIDITY VALUES:	NTU's	1024	930	920	996	108	43.8	74.3	44.6
COLOR:	—	Lt. brown	Lt. Brown	Lt. Brown	Lt. Brown	mod. Lt. Brown	very Lt Brown	clear	clear
ODOR:	—	NO	NO	NO	NO	NO	NO	NO	NO
COMMENTS:	-	turbid	turbid	turbid	turbid	clearing	clear	clear	clear

COPIES TO: File

Total: → 15 volumes purged
22½ Gals to
NTU < 50

MW-7

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. RFI   PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/13/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: peristaltic pump & tubing

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-7

WELL TYPE (diameter/material): 2" Ø stainless steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 9.27 ft. Below TOC   ELEVATION: 581.14

BOTTOM DEPTH: 17.95 ft. Below TOC   ELEVATION: 572.46

WATER COLUMN LENGTH: 8.68 ft

SCREENED INTERVAL: 5 ft.

WELL VOLUME: 1.39 Gals (≈ 1½ Gal)

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals Gals	1½ 1½	1½ 3	1½ 4½	1½ 6	1½ 7½	
FIELD pH:	–	NA	NA	6.36	6.51	6.53	
FIELD TEMPERATURE:	°F	NA	NA	62.2°	62.5°	62.2°	
FIELD CONDUCTIVITY:	umhos/cm	NA	NA	2520	1980	2080	
CLARITY/TURBIDITY VALUES:	NTU's	NA	NA	262	73	26	
COLOR:	–	v. dark-Brn	Lt. Brown	Lt tan tint	clear w/ v. Lt tan tint	clear	
ODOR:	–	No	No	No	No	No	
COMMENTS:	–	very turbid	mod. turbid	mod. turbid	clear	clear	

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Purged 5 vols (7½ gals) to NTU < 50

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MW-7A

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St RFI PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/13/01 & 9/17/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: teflon bailer

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-7A

WELL TYPE (diameter/material): 2" ϕ Stainless Steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 12.60 ft below TOC ELEVATION: 577.82

BOTTOM DEPTH: 29.48 ft below TOC ELEVATION: 560.94

WATER COLUMN LENGTH: 16.88 ft.

SCREENED INTERVAL: 5 ft.

WELL VOLUME: 2.7 Gals (≈2 3/4 Gals)

9/13/01 Purged 3 vols to dryness, no Field parameters, very Turbid

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

9/17/01 Purge vols 4-6 to dryness

	UNITS	4 ~~1~~	5 ~~2~~	6 ~~3~~	~~4~~	~~5~~	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals	2 3/4	2 3/4	2 3/4			
	Gals	11	13 3/4	16 1/2*			
FIELD pH:	-	6.78	6.62	6.54			
FIELD TEMPERATURE:	°F	60.3°	59.2°	59.4°			
FIELD CONDUCTIVITY:	umhos/cm	1800	1790	1880			
CLARITY/TURBIDITY VALUES:	NTUs	>2000	>2000	>2000			
COLOR:	-	tan-Brn	tan-Brn	tan-Brn			
ODOR:	-	Nc	Nc	Nc			
COMMENTS:	-	very turbid	very turbid	very turbid *Dryness			

COPIES TO: File

Purged 6 vols (16 1/2 Gals) to dryness twice. NTUs still >50 (very turbid)

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. RFI

PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/13/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: Peristaltic pump & tubing

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-8

WELL TYPE (diameter/material): 2" ϕ stainless steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 8.21 ft below TOC — ELEVATION: 580.67

BOTTOM DEPTH: 15.73 ft. below TOC — ELEVATION: 573.15

WATER COLUMN LENGTH: 7.52 ft

SCREENED INTERVAL: 5 ft

WELL VOLUME: 1.2 Gals (≈ 1¼ Gals)

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals	1¼	1¼	1¼	1¼	1¼	
	Gals	1¼	2½	3¾	5	6¼	
FIELD pH:	–	NA	NA	6.87	6.84	6.63	
FIELD TEMPERATURE:	°F	NA	NA	59.2°	59.6°	58.1°	
FIELD CONDUCTIVITY:	umhos/cm	NA	NA	1560	1380	1460	
CLARITY/TURBIDITY VALUES:	NTUs	NA	NA	217	78	40	
COLOR:	–	black	Brown	(w/ tan tint) Clear	clear w/ v. lt tan tint	clear	
ODOR:	–	No	No	No	NO	No	
COMMENTS:	–	v. turbid	mod. turbid	clear	clear	Clear	

COPIES TO: File

Purged 5 vols (6¼ Gals) to NTU < 50

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/13/01 & 9/17/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: teflon bailer

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-8A

WELL TYPE (diameter/material) 2" ∅ stainless steel

MEASURING POINT ELEVATION: rim / =

STATIC WATER DEPTH: 9.48 ft below TOC ELEVATION: 579.56

BOTTOM DEPTH: 29.04 ft below TOC ELEVATION: 560.00

WATER COLUMN LENGTH: 19.56 ft

SCREENED INTERVAL: 5 ft

WELL VOLUME: 3.13 Gals (≃3 1/4 Gals)

9/13/01 Purge vols 1-2 to dryness. No Field parameters. Very turbid, brown.
9/14/01 Purge 1 vol. to dryness (# 3) no parameters - turbid.
9/17/01 Purge vols ~~4-5~~ 4-5 to dryness (1 vol = 2 1/2 G.

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	~~1~~ 4	~~2~~ 5	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals Gals	2 1/2 1~~1~~ 1/2	2 1/2 12 1/4*				
FIELD pH:	-	6.51	6.42				
FIELD TEMPERATURE:	°F	57.7°	58.0°				
FIELD CONDUCTIVITY:	umhos/cm	680	720				
CLARITY/TURBIDITY VALUES:	NTUs	1403	1330				
COLOR:	-	Lt tan Brn	Lt tan Brn				
ODOR:	-	No	No				
COMMENTS:	-	-	*Dry @ 3/4 Gal (3/10 vol)				

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END Development @ 4 vols Purged → To dryness twice with NTUs > 50.

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MW-9
PG 1

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. RFI PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/12/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: Poly tubing & peristaltic pump

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-9

WELL TYPE (diameter/material) 2" ø stainless steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 8.24 ft below TOC ELEVATION: 581.42

BOTTOM DEPTH: 15.15 ft below TOC ELEVATION: 574.56

WATER COLUMN LENGTH: 6.86 ft

SCREENED INTERVAL: 5 ft.

WELL VOLUME: = 1.09 Gals (≈1¼ Gals)

9/12/01 Purged 4 vols
no field parameters,
v. brown, v. turbid.
lots of sediment
continued..
Dry at 4th volume end

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	5 X	6 X	7 X	8 X	9 X	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals Gals	1¼ 6¼	1¼ 7½*	1¼ 8¾	1¼ 9	1¼ 10¼	
FIELD pH:	—	6.36	6.30	6.56	6.50	6.54	
FIELD TEMPERATURE:	°F	65.0°	65.3°	65.2°	65.0°	65.1°	
FIELD CONDUCTIVITY:	umhos/cm	1600	1430	1450	1420	1390	
CLARITY/TURBIDITY VALUES:	NTU's	326	325	148	180	170	
COLOR:	-	Lt Brown	Lt. Brown	Lt yellow tint	Lt. yellow tint	Lt. yellow tint	
ODOR:	-	No	No	No	No	No	
COMMENTS:	-	slightly turbid	slightly turbid * Dryness	mod. turbid	mod. turbid	mod. turbid	

COPIES TO: File cont-on PG 2

→ Dry @ 4th vol. & 6th vol.
returns w/in 10 mins

MW-9
PG 2

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St RFI　　PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/12/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: peristaltic pump & poly tubing

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-9

WELL TYPE (diameter/material): 2" ⌀ stainless steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 8.29 ft below TOC　　ELEVATION: 581.42

BOTTOM DEPTH: 15.15 ft. below TOC　　ELEVATION: 574.56

WATER COLUMN LENGTH: 6.86 ft

SCREENED INTERVAL: 5 ft.

WELL VOLUME: = 1.09 Gals (≃ 1 1/4 Gals)

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	10	11	12	13	14	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	
	Gals	11 1/2	12 3/4	14	15 1/4	16 1/2	
FIELD pH:	–	6.70	6.62	6.84	6.73	6.74	
FIELD TEMPERATURE:	°F	66.0°	65.2°	65.0°	65.3°		
FIELD CONDUCTIVITY:	umhos/cm	1320	1220	1180	1200	1240	
CLARITY/TURBIDITY VALUES:	NTU	132	148	118	62	33	
COLOR:	–	Lt yellow Brn tint	Lt yellow Brn tint	Lt. yellow Brown	clear	clear	
ODOR:	–	NO	NO	NO	NO	NO	
COMMENTS:	–	mildly turbid	mildly turbid	mildly turbid	clear	clear	

COPIES TO: File　　→ Purged 14 vols (17 1/2 Gals) to NTU < 50

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MW-9A

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St RFI PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/12/01 & 9/17/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: teflon bailer & poly cord

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-9A

WELL TYPE (diameter/material): 2" Ø stainless steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 12.83 ft below TOC ELEVATION: 576.72

BOTTOM DEPTH: 29.02 ft. below TOC ELEVATION: 560.53

WATER COLUMN LENGTH: 16.11 ft

SCREENED INTERVAL: 5 feet

WELL VOLUME: 2.59 Gals (≈ 2½ Gals)

9/12/01 Purge vols 1-7 w/ No Field parameters - very turbid
Purge vols 8-10
9/17/01 Purge vols 11-13.

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	8 (9/12/01)	9 (9/12/01)	10 (9/12/01)	11 (9/17/01)	12 (9/17/01)	13 (9/17/01)
VOLUME PURGED (volume/total volume):	Gals	2½	2½	2½	2¾	2¾	2¾
	Gals	20	22½	25	27¾	30½	33¼
FIELD pH:	-	6.89	6.92	7.20	7.64	7.56	7.12
FIELD TEMPERATURE:	°F	61.3°	61.0°	60.7°	61.9°	62.5°	61.0°
FIELD CONDUCTIVITY:	umhos/cm	400	420	470	630	580	520
CLARITY/TURBIDITY VALUES:	NTUs	1196	1220	1470	>2000	>2000	1455
COLOR:	--	Lt tan Brn	Lt. tan Brown	Lt tan Brown	tan-grey	Lt. grey	Lt grey
ODOR:	-	NO	NO	NO	NO	NO	NO
COMMENTS:	-	turbid	turbid	turbid	Turbid	turbid	turbid

COPIES TO: File → Purged 13 vols (33¼ Gals) w/ NTU still > 50

MW-10

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/13/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: Peristaltic pump & tubing

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-10

WELL TYPE (diameter/material): 1" ϕ PVC

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 8.41 ft below TOC ELEVATION: 580.61

BOTTOM DEPTH: 15.33 ft below TOC ELEVATION: 573.80

WATER COLUMN LENGTH: 6.92 ft

SCREENED INTERVAL: 5 ft

WELL VOLUME: 0.28 Gals (≃ 1/4 Gal)

9/13/01 Purge 4 vols (1-4) to dryness. No Field parameters. V. Brn & turbid

9/20/01 Purged vols*5-15, sampled later that day. Took approx alternate volume readings (below)

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	Vol # → ~~UNITS~~	6	8	9	13	14	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gal	1/4	1/4	1/4	1/4	1/4	
	Gal	1 1/2	2	2 1/4	3 1/4	3 1/2	
FIELD pH:	-	7.05	6.80	6.60	6.55	6.41	
FIELD TEMPERATURE:	°F	61.3°	59.5°	59.8°	60.8°	60.9°	
FIELD CONDUCTIVITY:	umhos/cm	830	920	940	970	940	
CLARITY/TURBIDITY VALUES:	NTUs	>2000	949	>2000	974	792	
COLOR:	-	red-Brn	Grey tint	Grey	Brn	Grey-Brn	
ODOR:	-	No	No	No	No	No	
COMMENTS:	-	v. turbid	mod. turbid, clearing	turbid	turbid	turbid	

COPIES TO: File

Purged 15 vols (3 3/4 Gals) with Purge to dryness on 9/13/01 & intermittent dryness (temporary) on 9/20/01. NTUS never < 50. Sampled later on 9/20/01

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MW-10A

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St RFI PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/13/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: Peristaltic pump & tubing

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-10A

WELL TYPE (diameter/material): 1" ∅ PVC

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 11.05 ft below TOC ELEVATION: 578.02

BOTTOM DEPTH: 28.02 ft below TOC ELEVATION: 561.05

WATER COLUMN LENGTH: 16.97 ft

SCREENED INTERVAL: 5 ft.

WELL VOLUME: .70 Gals (≃ 3/4 Gals)

9/13/01 vols 1-3 purged w/out Field parameters Very brn very turb. to brown, mod. turbid

9/20/01 Purge vols #4-#8 (then sample). Below

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	4	5	6	7	8	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals Gals	3/4 3	3/4 3 3/4	3/4 4 1/2	3/4 5 1/4	3/4 6	
FIELD pH:	-	7.15	7.08	7.23	7.17	7.20	
FIELD TEMPERATURE:	°F	60.0°	60.0°	58.3°	57.2°	56.7°	
FIELD CONDUCTIVITY:	umhos/cm	640	740	700	630	650	
CLARITY/TURBIDITY VALUES:	NTUs	706	>2000	820	1054	1520	
COLOR:	-	Brn	Brn	Brn	Brn	Brn	
ODOR:	-	No	No	No	No	No	
COMMENTS:	-	turbid	turbid	turbid	turbid	turbid	

COPIES TO: RK

Purged 8 vols (6 Gals) w/ NTUs never less than 50. Sampled later on 9/20/01

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MW - 11
PG 1

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. RFI PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/11/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: teflon bailer / tubing & peristaltic pump

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-11

WELL TYPE (diameter/material): 2" ϕ stainless steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 9.18 ft below TOC ELEVATION: 581.22

BOTTOM DEPTH: 17.52 ft. below TOC ELEVATION: 572.88

WATER COLUMN LENGTH: 8.34 ft.

SCREENED INTERVAL: 5 ft.

WELL VOLUME: 1.33 Gals (≃ 1 1/3 Gals)

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals Gals	1 1/3 1 1/3	1 1/3 2 2/3	1 1/3 4	1 1/3 5 1/3	1 1/3 6 2/3	
FIELD pH:	–	NA	NA	7.04	6.72	6.70	
FIELD TEMPERATURE:	°F	NA	NA	63.6°	64.2°	62.9°	
FIELD CONDUCTIVITY:	umhos/cm	NA	NA	770	830	810	Con't PG 2
CLARITY/TURBIDITY VALUES:	NTUs	NA	NA	587	395	92	
COLOR:	–	Brown	Lt. Brown	Lt. Brown	Lt. yellow Brown	Lt yellow tint	
ODOR:	–	NO	No	NO	No	NO	
COMMENTS:	–	very turbid	turbid	turbid, clearing	mod. turbid	clear (v. Ltly turbid)	

COPIES TO: File

MW-11
PG 2

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. RFI PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/11/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: teflon bailer / Peristaltic pump & tubing

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-11

WELL TYPE (diameter/material): 2" ϕ stainless steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 9.18 ft. below TOC ELEVATION: 581.22

BOTTOM DEPTH: 17.52 ft. below TOC ELEVATION: 572.88

WATER COLUMN LENGTH: 8.34 ft.

SCREENED INTERVAL: 5'

WELL VOLUME: 1.33 Gals (≈1⅓ Gals)

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	6	7	8	9	10	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals Gals	1⅓ 8	1⅓ 9⅓	1⅓ 10⅔	1⅓ 12	1⅓ 13⅓	 13½ Gals
FIELD pH:	–	6.67	6.68	6.65	6.69	6.57	–
FIELD TEMPERATURE:	°F	62.6°	62.7	63.1°	62.6°	63.1°	-
FIELD CONDUCTIVITY:	umhos/cm	700	808	814	867	866	-
CLARITY/TURBIDITY VALUES:	NTUs	86	134	76	62	46	-
COLOR:	-	Lt yellow Brn tint	Lt. yellow tint	Lt. yellow tint	Lt. yellow tint	clear	-
ODOR:	-	No	No	No	No	No	-
COMMENTS:	-	Clear	clear	clear	clear	clear	-

COPIES TO: File

Purged 10 volumes
(13½ Gals)
to NTU < 50

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MW-11A

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: Parcel 2 - Seneca St. RFI PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 9/11/01 - 9/17/01

DEVELOPMENT CREW MEMBERS: F. Garbe

PURGING METHOD: teflon bailer / peristaltic pump & tubing

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW-11A

WELL TYPE (diameter/material): 2" φ stainless steel

MEASURING POINT ELEVATION: rim (=

STATIC WATER DEPTH: 11.60 ft below TOC ELEVATION: 578.60

BOTTOM DEPTH: 27.00 ft below TOC ELEVATION: 563.20

WATER COLUMN LENGTH: 15.40 ft.

SCREENED INTERVAL: 5'

WELL VOLUME: 2.46 Gals (≃2½ Gals)

9/11/01 1 vol. purged
v. turbid
No parameters

9/12/01 3 vols purged
v. turbid
No parameters
dry at 3rd vol.
+1 vol to dry later

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	~~1~~ 7	~~2~~ 8	~~3~~ 9	~~4~~	~~5~~	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gals	2½	2½	2½			
	Gals	17.5	20	22.5			
FIELD pH:	-	6.30	6.37	6.32			
FIELD TEMPERATURE:	°F	62.6°	62.5°	62.6°			
FIELD CONDUCTIVITY:	umhos/cm	940	660	690			
CLARITY/TURBIDITY VALUES:	NTU's	1227	1114	1190			
COLOR:	-	Lt. Brown	Lt Brown	Lt. Brown			
ODOR:	-	No	No	No			
COMMENTS:	-	turbid	turbid	turbid			

COPIES TO: File

→ Purged 9 vols
(22.5 Gals) to
dryness 3 times
w/ NTU still >50

9/14/01 2 vols purged
(to dry)
No parameters,
v. turbid.

9/17/01 3 vols to dry
(#7-#9)

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WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: 2137 Seneca St PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 11-27-01

DEVELOPMENT CREW MEMBERS: J. Pietraszek

PURGING METHOD: Teflon Bailer / Peristaltic Pump

SAMPLE NO.: GW-112701-JP-001

SAMPLE TIME: 1315

WELL INFORMATION

WELL NUMBER: MW12

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: 8.0' toc ELEVATION:

BOTTOM DEPTH: 16.55' toc ELEVATION:

WATER COLUMN LENGTH: 8.55'

SCREENED INTERVAL: 13'-18' bgs

WELL VOLUME: 1.5 gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	gal/ft						
FIELD pH:	—	6.50	6.54	6.81	6.59	6.61	
FIELD TEMPERATURE:	°F	60.8	60.4	60.6	60.8	60.4	
FIELD CONDUCTIVITY:	µmhos/cm	1910	1880	1900	1810	1830	
CLARITY/TURBIDITY VALUES:	NTU	1000+	1000+	1000+	741	736	
COLOR:		Dk. Brn	"	"	"	"	
ODOR:		none	"	"	"	"	
COMMENTS:							

(ove)

COPIES TO:

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WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: 2137 Seneca St - Parcel 2 Site PROJECT NO.: 15867

DATE OF WELL DEVELOPMENT: 11/27/01, 11/29/01, 11/30/01

DEVELOPMENT CREW MEMBERS: J. Pietraszek

PURGING METHOD: Teflon Bailer / ~~Peri~~ JP

SAMPLE NO.: GW-113001-JP-010

SAMPLE TIME: 0830

WELL INFORMATION

WELL NUMBER: MW-12A

WELL TYPE (diameter/material): 2" ø PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: ELEVATION:

BOTTOM DEPTH: 29.35' (toc) ELEVATION:

WATER COLUMN LENGTH: 18.70'

SCREENED INTERVAL: 25' - 30' bgs

WELL VOLUME: 3.0 gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (imp) or 0.16 gallons (us)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):		3.0 gal	6.0 gal				
FIELD pH:	—	6.68	8.13				
FIELD TEMPERATURE:	°F	58.5	56.4				
FIELD CONDUCTIVITY:	µmhos/cm	2210	1940				
CLARITY/TURBIDITY VALUES:	NTU	898	999				
COLOR:		dk. brn turbid	dk brn, turbid				
ODOR:		—	—				
COMMENTS:		Dry @ 4.5 gal	Dry @ 3.3 gal				

COPIES TO:

WELL PURGING RECORDS

Purge Record
Well : MW-1
Date : 10/4/00
Crew : KPL
Method : Peristaltic Pump - Teflon tubing
@ Top of water column

Depth : 21.20'
Water : 9.11'

12.09 x .16 = 1.93 Gal/vol

Start 1300

Vol	Gal	pH	Cond ms/m	Temp °C	Turb.
1	2.0	7.09	1.765	16.4°	200
Cloudy, brown, no odor, fine seds, no sheen					
2	4.0	6.75	2.25	16.1°	48
Sl. Cldy, tan, no odor, no sheen, fine seds					
3	6.0	6.81	2.13	16.1°	8.7
V. Sl. Cldy, colorless to Lt. Tan, no sheen, no odor					
4	8.0	6.88	1.858	16.1°	1.3
Clear Colorless, no sheen, no odor					

End 1315

KPL

Sampling Record
Well # MW-1
Date : 10/4/00
Time : 1315
Crew : K. Lynch
Method - Peristaltic for Metals, CN, SVOCs. Teflon Bailer for VOCs

Sample ID W-100400-KL-002
Sample Containers: 2X 40ml VOC w/ HCl
2X 1l SVOC, 1X .5l Metals w/HNO3,
1X 500 ml w/NaOH for CN.

pH	Cond	Temp	Turb.
6.86	2.26	16.1°C	0.6

Clear, colorless, no sheen, no odor, no seds

C of C # N-0472

Inst. Control # Hazco pH/Cond # 14263
Turb. DRT 15 T-000436

KPL

Purge Record
Well : MW-2
Date : 10/5/00
Crew : KPL
Method : Peristaltic w/ Dedicated Teflon Tubing

Depth 17.40'
Water 8.10
9.30 x .16 = 1.49 gal/vol

0950 Start

Vol	Gal	pH	Cond	Temp °C	Turb
1	1.5	6.67	1.073	17.6	16.0
Sl. Cldy, sl. yellow, no sheen, sl sulfur odor					
2	3.0	6.93	1.48	16.8°	60
Sl. Cloudy - Lt Brown - Trace Seds, no sheen, sulfur					
3	4.5	7.07	2.070	16.7	4.0
Clear, no odor, no sheen, sl. yellow color					

1003 End 6 Gal purged

KPL

Sample Record
Well MW-2
Date 10/5/00
Time 1015
Crew KPL
Method Peristaltic - SVOCs, metals, CN
Bailer - Teflon - VOCs

Sample ID W-100500-KL-005
Sample Containers 2X40ml VOC - HCl
2X1l SVOC, 1X.5l Metals - HNO_3
1X.5l CN - NaOH

pH	Cond	Temp	Turb
7.11	2090	16.3°C	1.3

Clear, colorless, no sheen, no odor, no Seds.

C of C # N-00473
Inst. #s Horiba - HAZCO # 14263
DRT-15 - Turbidity T-00436

KPL

Purge Record

Well : MW-3
Date : 10/4/00
Crew : KPC
Method : Peristaltic Pump

Depth : 17.0'
Water : 7.66'

9.34' X .16 = 1.49 Gal /Vol

Vol	Gal	pH	Cond	Temp°C	Turb.
1	1.5	6.94	2.090	15.6°	16.3
Sl. Cldy - Brown, no sheen, no odor					
2	3.0	6.81	1.610	15.4°	13.3
Clearer, sl green-brown color, no odor, no sheen					
3	4.5	6.73	0.790	15.3°	6.8
V. Sl. Cldy, sl. green-br. color, no sheen or odor					
4	6.0	6.68	0.527	15.3°	4.6
Clear, colorless to sl. green-brown, no odor no sheen					

KPL

Sample Record

Well MW-3
Date 10/4/00
Time 1530
Crew KPL
Method Peristaltic Pump (SVOCs + CN + Metals)
Bailer-Teflon (VOCs)

Sample ID W-100400-KL-004 + MS + MSD

Sample Containers 6X40 ml + 6 X 1l + 3X500 ml + 3X500 ml
(VOC, SVOC, metals, CN.)

pH	Cond	Temp	Turb.
6.82	0.466	15.4°	1.03

Clear, colorless, no sheen, no odor, no seds

C of C # N-0472

Inst. # Horiba pH/cond
Hazco 14263
Turbidity - T00436

KPL

Purge Record

Well MW-4
Date 10/5/00
Crew KPL
Method Peristaltic Pump - dedicated)
Teflon Tubing

Depth 17.05'
Water 7.40
9.65' x .16 = 1.54 Gal/Vol)

Start ~~1035~~

Vol	Gal	pH	Cond	Temp °C	Turb
1	1.5	7.45	0.863	17.7°	12.
V. sl. cldy, sl. yellow, no sheen, no odor					
2	3.0	7.15	~~1.48~~ 1.510	17.3°	74.8
Cldy, lt. brown, few seds, no sheen, no odor					
3	4.5	6.93	1.775	16.9°	27.3
V. sl. cldy, yellow, no sheen, no odor					
4	6.0	6.90	2.21	16.8°	3.1
Clear, V. sl. yellow, no sheen, no odor					

End 1051 7.0 Gal purged

KPL

89

Sample Record

Well: MW-4
Date: 10/5/00
Time: 1100
Crew: KPL
Method: Peristaltic SVOCs, Metals, CN
Teflon Bailer - VOCs

Sample ID W-100500-KL-006 + Duplicate
as W-100500-KL-007 @ 1300

Bottles - each set: 2X40ml VOCs + HCl
2X1L SVOCs; 1X500ml Metals - HNO_3
1X500ml CN - NaOH

Sample Data:

pH	Cond	Temp	Turb.
6.91	2.30	17.0°	0.93

Clear, colorless, no sheen, no odor, no Sediments

C of C #: N-00473
Inst. #: Horiba - Hazco 14263
Turbidity - T-0436

KPL

Purge Record
Well MW-4A
Date 10/4/00
Crew KPC
Method Teflon Bailer -

Depth 29.45'
W/L 11.25'
18.20' x .16 = 2.91 Gal

Start Time: 0940

Vol	Gals	SU pH	MS/m Cond	°C Temp	NTU Turb.
1	3.0	6.68	.239	14.4	170

Cloudy: Green-gray color, few gray sedies
no odor

Vol	Gals	SU pH	MS/m Cond	°C Temp	NTU Turb.
2	5.0 gal - Dry - < 6" water in well	6.77	.350	13.1°	>200

Tan color, very cloudy, no odor.
Lots of Seds
1020 end

79

Sample Record
Well 4A
Date 10/4/00
Crew KPC
Time 1440
Method - Teflon Bailer
W/L = 13.5' BTOC

Sample No W-100400-KL-003
Sample Containers 2 X 40 ml VOC - HCl
2 X 1 l SVOC; 1 X 500 ml Metals - HNO_3
1 X 500 ml CN - NaOH, 1 X 500 ml
Diss. TAL Metals - FIELD FILT. - HNO_3

pH	Cond	Temp	Turb
6.79	1.881	13.8°	12.75

Sl. Cldy, brown, no sheen, no odor,
few sediments

C of C# N-0472

Instrument #'s Horiba Hazco 14263
DRT-15 T-00436

Purge Record
Well : MW-5
Date : 10/4/00
Crew KPL
Method Peristaltic pump w/ dedicated teflon Tubing

Depth 17.10'
Water 7.98'
9.12' x .16 = 1.46 gal

Start 1355

Vol	Gal	pH	Cond	Temp	Turb
1	1.5	7.01	1.201	17.9°	5.14
Sl. cldy, yellow, trace sed, no odor, no sheen					
2	3.0	6.81	1.302	17.6°	10.0
Same					~~1.45~~
3	4.5	6.72	2.020	16.8°	1.45

Clear, colorless, no sheen, no odor
1408 hrs
End

KPL

Sample Record
Well # 5
Date 10/4/00
Time 1415
Crew KPL
Method Peristaltic pump & Teflon Tubing (Metals, CN, SVOCs) Bailer - teflon for VOCs

Sample ID W-100400-KL-002

Sample Containers 2X40ml TCL VOC w/ HCl, 2X1L STARS SVOCs, 1X500ml TAL Metals w/HNO_3, 1X500ml

pH	Cond	Temp	Turb
6.66	1.687	16.8°	0.31

Clear, colorless, no sheen, no odor

C of C # N-0472

Inst. control # 5 Horiba - Hazco 14263
Turb. DRT 15 = T00436

KPL

Field File

WELL PURGING FIELD INFORMATION FORM

JOB# 15867 - - -

SITE/PROJECT NAME: Parcel 2 - Seneca St. RFI

WELL# MW-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
09 19 01	09 19 01	1.6	8.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

PURGING DEVICE: G
SAMPLING DEVICE: G

A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A
SAMPLING DEVICE: A

A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ______
SAMPLING DEVICE: ______

A - TEFLON; B - TYGON; C - ROPE; X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ______ A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	592.24 (m/ft)	GROUNDWATER ELEVATION	581.22 (m/ft)
DEPTH TO WATER	11.02 (m/ft)	WELL DEPTH	21.10 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (μm/cm) ~~AT 25°C~~	SAMPLE TEMPERATURE ~~°C~~ °F
6.35	44.1	1720	64.3
6.49	36.3	1760	64.3
6.53	47.2	1770	64.8
6.48	45.0	1760	64.5
6.53	43.2	1690	64.2

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: NONE COLOR: Light Grey TURBIDITY: turbid

WEATHER CONDITIONS: WIND SPEED NONE DIRECTION — PRECIPITATION Y/N OUTLOOK Yes/expected

SPECIFIC COMMENTS: Purged 5 volumes (8.0 Gals) via teflon bailer & poly cord, dedicated sampled immediately (10:30 AM). Sample id W-091901-FG-MW1

Sampled 3x40ml VOA vials for TCL VOAs

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA DATE 9/19/01 PRINT Frank Garbe SIGNATURE Frank Garbe

WELL PURGING FIELD INFORMATION FORM

JOB# 15867 - - -

SITE/PROJECT NAME: Parcel 2 - Seneca St. RFI WELL# MW-2

WELL PURGING INFORMATION

092001	092001	11.2	62
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: G A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X- ______ PURGING OTHER (SPECIFY)
B - PERISTALTIC PUMP E - PURGE PUMP H - WATERRA®
SAMPLING DEVICE: G C - BLADDER PUMP F - DIPPER BOTTLE X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A A - TEFLON D - PVC X- ______ PURGING OTHER (SPECIFY)
B - STAINLESS STEEL E - POLYETHYLENE
SAMPLING DEVICE: A C - POLYPROPYLENE X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ A - TEFLON D - POLYPROPYLENE F - SILICONE X- ______ PURGING OTHER (SPECIFY)
B - TYGON E - POLYETHYLENE G - COMBINATION TEFLON/POLYPROPYLENE
SAMPLING DEVICE: ____ C - ROPE X- ______ (SPECIFY) X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION 591.23 (m/ft) GROUNDWATER ELEVATION 581.18 (m/ft)
DEPTH TO WATER 10.05 (m/ft) WELL DEPTH 17.31 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm)	SAMPLE TEMPERATURE
6.56	>200	2200	66.7 °F
6.82	>200	2220	65.8 °F
6.98	46.0	2370	65.9 °F
6.94	28.0	2340	66.3 °F
6.97	26.6	2370	66.2 °F

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: NONE COLOR: dk grey-green TURBIDITY: turbid

WEATHER CONDITIONS: WIND SPEED mod. gusts DIRECTION from NW PRECIPITATION Y/N OUTLOOK cloudy/64°F

SPECIFIC COMMENTS Purged 5 volumes (6.4 Gals) via dedicated teflon bailer from 13:40 Pm to 15:20 Pm. Sampled w/ dedicated bailer at 15:40 PM for 3 x 40 ml VOA vials (TCL VOCs). Sample Id W-092001-FG-MW2

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA 9/20/01 DATE Frank Garbe PRINT [signature] SIGNATURE

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 -

SITE/PROJECT NAME:

WELL# MW2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
11 29 01	11 29 01	1.5	6.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: B
SAMPLING DEVICE: G

A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C
SAMPLING DEVICE: A

A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ______
SAMPLING DEVICE: ______

A - TEFLON; B - TYGON; C - ROPE; X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ______ A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION ______ (m/ft)
GROUNDWATER ELEVATION ______ (m/ft)
DEPTH TO WATER 8.15 (m/ft)
WELL DEPTH 17.3 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) AT 25°C	SAMPLE TEMPERATURE (°C)
9.8	13	19400	59.1 °F
9.3	1	21600	60.9 °F
9.5	3	21600	60.4 °F
9.4	3	21800	60.7 °F

FIELD COMMENTS

SAMPLE APPEARANCE: ______ ODOR: ______ COLOR: ______ TURBIDITY: clear

WEATHER CONDITIONS: WIND SPEED ______ DIRECTION ______ PRECIPITATION Y N OUTLOOK rain

SPECIFIC COMMENTS Sample ID: GW-112901-JP-009 (3 x 40ml VOC)

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 2/6/02 PRINT: J Pietraszek SIGNATURE: [signature]

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WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 - - -

SITE/PROJECT NAME: Parcel 2 - Seneca St RFI

WELL# MW-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
092001	092001	1.2	6.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: G — A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA® — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: G — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A — A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON, B - TYGON, C - ROPE, X- ______ (SPECIFY), D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ____ — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION 590.33 (m/ft) GROUNDWATER ELEVATION 580.82 (m/ft)

DEPTH TO WATER 9.51 (m/ft) WELL DEPTH 17.05 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) ~~AT 25°C~~	SAMPLE TEMPERATURE ~~(°C)~~ °F
6.68	>2000	880	62.6
6.67	682	940	61.3
6.58	805	920	61.8
6.52	771	950	62.6
6.50	570	960	61.8

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: None COLOR: red-brn TURBIDITY: turbid

WEATHER CONDITIONS: WIND SPEED moderate gusts DIRECTION from NW PRECIPITATION Y/N OUTLOOK None expected

SPECIFIC COMMENTS Purged 5 volumes (6.0 gals) from 10AM-11AM with dedicated teflon bailer & poly cord. Sampled at 11:20 AM w/ bailer for 3x 40 ml VOA vials (for TCL VOCs). Sample id W-092001-FG-MW3.

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA 9/20/01 Frank Garbe [signature]

DATE PRINT SIGNATURE

WELL PURGING FIELD INFORMATION FORM

JOB# 15867-

SITE/PROJECT NAME: Parcel 2 - Seneca St. RFI

WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
092401	092401	1.2	3.8

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE): Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE): Y

PURGING DEVICE: B — A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: G — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C — A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE – tubing; D - PVC; E - POLYETHYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON; B - TYGON; C - ROPE; X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ____ — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45: ____ — A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 590.51 (m/ft)

GROUNDWATER ELEVATION: 581.13 (m/ft)

DEPTH TO WATER: 9.38 (m/ft)

WELL DEPTH: 17.05 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) ~~AT 25°C~~	SAMPLE TEMPERATURE ~~(°C)~~ °F
6.86	154	3910	65.3
6.87	135	4100	65.3
6.93	127	4100	65.1

FIELD COMMENTS

SAMPLE APPEARANCE: ______ ODOR: ______ COLOR: ______ TURBIDITY: ______

WEATHER CONDITIONS: WIND SPEED None DIRECTION NA PRECIPITATION Y/N: N OUTLOOK ______

SPECIFIC COMMENTS: Purged 3 volumes (3.75 Gals) from 10[40] to 11[00] by peristaltic pump & dedicated poly tubing. First volume brown color & turbid then clearing rapidly to light grey & clear by end of 1st volume. (1st volume had H_2S odor). Sampled at 11[10] with dedicated teflon bailer for 3 x 40 ml VOA vials (TCL VOCs). Sample id W-092401-F6-MW4.

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 09/24/01 PRINT: Frank Garbe SIGNATURE: Frank Garbe

WELL PURGING FIELD INFORMATION FORM

JOB# 15867-

SITE/PROJECT NAME:

WELL# MW4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
112801	112801	1.5	7.5

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: B — A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ~~B~~G — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C — A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE - tubing; D - PVC; E - POLYETHYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ______ — A - TEFLON; B - TYGON; C - ROPE; X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ______ — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ______ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: ______ (m/ft) GROUNDWATER ELEVATION: ______ (m/ft)

DEPTH TO WATER: 7.5 (m/ft) WELL DEPTH: 17.05 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (μm/cm) AT 25°C	SAMPLE TEMPERATURE (°C/°F)
10.4	4	670	60.4 °F
10.7	1	980	61.5 °F
11.4	1	1370	61.5 °F
11.5	0	1520	61.8 °F
11.3	0	1590	61.7 °F

FIELD COMMENTS

SAMPLE APPEARANCE: ______ ODOR: — COLOR: clear TURBIDITY: none

WEATHER CONDITIONS: WIND SPEED ______ DIRECTION ______ PRECIPITATION Y/N OUTLOOK Sl. rain

SPECIFIC COMMENTS: Took the duplicate sample on this well aswell. Sample ID: GW-112801-JP-003. Dup. Sample ID: GW-112801-JP-004. (3x40ml VOC each)

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 2/6/02 PRINT: J. Pietraszek SIGNATURE: [signature]

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 -

SITE/PROJECT NAME: Parcel2 - Seneca St. RFI

WELL# MW-4A

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
092401	092401	2.7	4.8

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X- ____ PURGING OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE		X- ____ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	A	A - TEFLON	D - PVC		X- ____ PURGING OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING DEVICE	A	C - POLYPROPYLENE			X- ____ SAMPLING OTHER (SPECIFY)
PURGING DEVICE		A - TEFLON	D - POLYPROPYLENE	F - SILICONE	X- ____ PURGING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	
SAMPLING DEVICE		C - ROPE	X- ____ (SPECIFY)		X- ____ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION 590.61 (m/ft) — ft

GROUNDWATER ELEVATION 578.10 (m/ft) — ft

DEPTH TO WATER 12.51 (m/ft) — ft

WELL DEPTH 29.22 (m/ft) — ft

pH	TURBIDITY	CONDUCTIVITY	SAMPLE TEMPERATURE
7.05 (std)	29.5 (ntu)	690 (µm/cm) AT 25°C	58.6 °F
7.53 (std)	>200.0 (ntu)	780 (µm/cm) AT 25°C	58.7 °F
(std)	(ntu)	(µm/cm) AT 25°C	(°C)
(std)	(ntu)	(µm/cm) AT 25°C	(°C)
(std)	(ntu)	(µm/cm) AT 25°C	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: NONE COLOR: clear TURBIDITY: clear

WEATHER CONDITIONS: WIND SPEED None DIRECTION NA PRECIPITATION Y/N — N OUTLOOK cloudy, 68°F

SPECIFIC COMMENTS Purged 1 1/2+ volumes (4.75 Gallons) to dryness with dedicated teflon bailer & poly cord, 1st volume black/turbid becoming dark grey, turbid, silty & then dry (at 1 8/13 ths volumes). Purged from 11:20 to 11:55. Let well recharge until 12:30. Sampled with dedicated teflon bailer for TCL VOC's (3x 40 ml VOA vials). Sample id W-092401-FG-MW4A. Sample was clear.

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE 09/24/01 PRINT Frank Garbe SIGNATURE Frank Garbe

CRA 1001 (29) Rev. 6, September 13, 1999, Form SP-10

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 -

SITE/PROJECT NAME: ______

WELL# MW4A

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
11 28 01	11 29 01	2.8	

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: B
SAMPLING DEVICE: G

A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C
SAMPLING DEVICE: A

A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE - tubing; D - PVC; E - POLYETHYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ______
SAMPLING DEVICE: ______

A - TEFLON; B - TYGON; C - ROPE; X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ______ A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION ______ (m/ft)
GROUNDWATER ELEVATION ______ (m/ft)
DEPTH TO WATER 11.88 (m/ft)
WELL DEPTH 29.22 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) AT 25°C	SAMPLE TEMPERATURE
10.9	14.8	830	55.2 °F
9.0	7.4	790	55.7 °F
			(°C)
			(°C)
			(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: ______ ODOR: ______ COLOR: Sl. cloudy TURBIDITY: ______

WEATHER CONDITIONS: WIND SPEED ______ DIRECTION ______ PRECIPITATION Y/N OUTLOOK rain

SPECIFIC COMMENTS: Sample ID: GW-112901-JP-007 (3x40ml VOC)

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE	PRINT	SIGNATURE
2/6/02	J. Pietraszek	[signature]

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 - - -

SITE/PROJECT NAME: Parcel 2 - Seneca St RFI

WELL# MW-5

WELL PURGING INFORMATION

09 19 01	09 19 01	1.1	6.2
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: G — A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA® — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: G — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A — A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON, B - TYGON, C - ROPE, X- ______ (SPECIFY), D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ____ — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45: ____ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 590.76 (m/ft)

GROUNDWATER ELEVATION: 580.81 (m/ft)

DEPTH TO WATER: 9.95 (m/ft)

WELL DEPTH: 17.04 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) ~~AT 25°C~~	SAMPLE TEMPERATURE ~~(°C)~~ °F
6.42	68.3	59.0	66.4
6.35	78.0	64.0	65.6
6.37	61.3	68.0	66.2
6.36	49.0	71.0	65.7
6.42	47.6	92.0	65.4

FIELD COMMENTS

SAMPLE APPEARANCE: → Some red sediments ODOR: None COLOR: red-Brown tint TURBIDITY: mostly turbid

WEATHER CONDITIONS: WIND SPEED None DIRECTION — PRECIPITATION Y/N OUTLOOK Yes/expected

SPECIFIC COMMENTS Purged 5 volumes (6¼ Gals) via dedicated teflon bailer & poly cord, sampled immed. (12:10 PM) via bailer. Sample id W-091901-FG-MW5. Sampled for 3 x 40ml VOA vials for TCL VOAs.

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 9/19/01 PRINT: Frank Garbe SIGNATURE: Frank Garbe

F DUPLICATE

WELL PURGING FIELD INFORMATION FORM

JOB# 15867-

SITE/PROJECT NAME: Parcel2 - Seneca St. RFI

WELL# MW-6 "MW-15"

WELL PURGING INFORMATION

092401	092401	1.5	6.3
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: G — A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA®; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: G — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A — A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON, B - TYGON, C - ROPE, X- ______ (SPECIFY), D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ____ — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45: ____ — A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 591.47 (m/ft)

GROUNDWATER ELEVATION: 580.94 (m/ft)

DEPTH TO WATER: 10.53 (m/ft)

WELL DEPTH: 19.60 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) ~~AT 25°C~~	SAMPLE TEMPERATURE (~~°C~~ °F)
6.79	21.4	1640	64.8
6.50	35.6	1660	64.7
6.68	32.2	1640	64.6
6.49	28.6	1610	64.2
6.56	31.7	1630	63.9

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: None COLOR: ~~green-yellow~~ Grey TURBIDITY: mod. to lightly turbid

WEATHER CONDITIONS: WIND SPEED None DIRECTION NA PRECIPITATION Y/N OUTLOOK cloudy/rain occ., 68°

SPECIFIC COMMENTS: Purged with dedicated teflon bailer (from 14[15] to 15[00]) 6 volumes (6.25 Gals). Purge water ~~[illegible]~~ remained green-grey, mod. turbid throughout. Sampled w/ dedicated teflon bailer @ 15[10] (Sample id W-092401-FG-MW6) and sampled DUPLICATE (W-092401-FG-MW15 at "14:30"). Sample was mod. turbid, light yellow green to grey. Both original & duplicate had TCL VOAs (3x 40ml VOA vials) & TCL SVOC's (2x1 liter amber glass bottles) collected.

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA — DATE: 9/24/01 — PRINT: Frank Garbe — SIGNATURE: Frank Garbe

CRA 1001 (29) Rev. 6, September 13, 1999, Form SP-10

WELL PURGING FIELD INFORMATION FORM

JOB# 15867-

SITE/PROJECT NAME: Parcel 2 - Seneca Street RFI WELL# MW-7

WELL PURGING INFORMATION

092401	092401	1.4	4.0
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: B
SAMPLING DEVICE: G

A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C
SAMPLING DEVICE: A

A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE – tubing; D - PVC; E - POLYETHYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ______
SAMPLING DEVICE: ______

A - TEFLON; B - TYGON; C - ROPE X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ______ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION 590.41 (m/ft)
GROUNDWATER ELEVATION 581.02 (m/ft)
DEPTH TO WATER 9.39 (m/ft)
WELL DEPTH 117.95 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	SAMPLE TEMPERATURE
6.71 (std)	57 (ntu)	2200 (μm/cm) ~~AT 25°C~~	61.9 ~~(°C)~~ °F
6.74 (std)	96 (ntu)	2360 (μm/cm) ~~AT 25°C~~	62.0 ~~(°C)~~ °F
6.69 (std)	24 (ntu)	2100 (μm/cm) ~~AT 25°C~~	61.8 ~~(°C)~~ °F
(std)	(ntu)	(μm/cm) AT 25°C	(°C)
(std)	(ntu)	(μm/cm) AT 25°C	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: None COLOR: clear TURBIDITY: clear

WEATHER CONDITIONS: WIND SPEED None DIRECTION NA PRECIPITATION Y/N OUTLOOK occ. rain/cloudy/68°F

SPECIFIC COMMENTS Purged 3 volumes (4.0 Gals) with peristaltic pump & dedicated poly. tubing from 15:45 to 16:30. Well not dry - purge water brown/turbid rapidly becoming clear. Sampled with dedicated teflon bailer at 16:30 for TCL VOCs (3 x 40ml VOA vials) and TCL SVOCs (2 x 1-liter amber glass). Sample clear.

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 9/24/01 PRINT: Frank Garbe SIGNATURE: Frank Garbe

WELL PURGING FIELD INFORMATION FORM

JOB# 15867--

SITE/PROJECT NAME: Parcel 2 - Seneca St RFI

WELL# MW-7A

WELL PURGING INFORMATION

092001	092001	27	74
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

PURGING DEVICE: G
SAMPLING DEVICE: G
A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®
X- ____ PURGING OTHER (SPECIFY)
X- ____ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A
SAMPLING DEVICE: A
A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE
X- ____ PURGING OTHER (SPECIFY)
X- ____ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____
SAMPLING DEVICE: ____
A - TEFLON; B - TYGON; C - ROPE; X- ____ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE
X- ____ PURGING OTHER (SPECIFY)
X- ____ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 590.42 (m/ft) — ft
GROUNDWATER ELEVATION: 577.97 (m/ft) — ft
DEPTH TO WATER: 12.45 (m/ft) — ft
WELL DEPTH: 29.48 (m/ft) — ft

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) AT 25°C	SAMPLE TEMPERATURE
6.18	96.4	1530 (~~AT 25°C~~)	60.6 °F
6.81	63.9	1470 (~~AT 25°C~~)	58.3 °F
7.12	76.7	1380	61.3 °F
			(°C)
			(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: Clear ODOR: None COLOR: Clear TURBIDITY: clear

WEATHER CONDITIONS: WIND SPEED Mod gusts DIRECTION from NW PRECIPITATION Y/N — N OUTLOOK cloudy, 64°F

SPECIFIC COMMENTS Purged 8:10-9:40Am 2 vols + 2.0 Gals (7.4 Gals tot.) to dry via dedicated bailer. Sampled at 14:05 via bailer. Sample id W-092001-FG-MW7A Collected 3 x 40 ml VOA vials (for TCL VOAs) & 2 x 40 ml VOA vials for NYSDEC split

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA DATE 9/20/01 PRINT Frank Garbe SIGNATURE Frank Garbe

WELL PURGING FIELD INFORMATION FORM

JOB# 15867-

SITE/PROJECT NAME: Parcel 2 - Seneca St.

WELL# MW-8

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
092401	092401	1.2	3.8

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

PURGING DEVICE: B
SAMPLING DEVICE: G

A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®

X- ________ PURGING OTHER (SPECIFY)
X- ________ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C
SAMPLING DEVICE: A

A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE - tubing; D - PVC; E - POLYETHYLENE

X- ________ PURGING OTHER (SPECIFY)
X- ________ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____
SAMPLING DEVICE: ____

A - TEFLON; B - TYGON; C - ROPE; X- ________ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE

X- ________ PURGING OTHER (SPECIFY)
X- ________ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 588.88 (m/ft) — ft

DEPTH TO WATER: 8.42 (m/ft) — ft

GROUNDWATER ELEVATION: 580.46 (m/ft) — ft

WELL DEPTH: 15.73 (m/ft) — ft

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) AT 25°C	SAMPLE TEMPERATURE
7.52	17.2	1490	59.5 °F
7.18	3.5	1520	59.4 °F
7.07	4.0	1590	60.2 °F

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: None COLOR: clear TURBIDITY: clear

WEATHER CONDITIONS: WIND SPEED None DIRECTION NA PRECIPITATION Y/N — Y OUTLOOK cloudy/lt rain, 68°F

SPECIFIC COMMENTS: Purged with peristaltic pump & dedicated poly. tubing (from 12:15 to 12:28) 3 volumes (3.75 Gals). Well not dry - purge water clear/less than 50 NTUs. Sampled at 13:00 with dedicated teflon bailer and poly cord for TCL VOC's (3 x 40 ml VOA vials). Sample id W-092401-FG-MW8. Sample clear.

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 9/24/01 PRINT: Frank Garbe SIGNATURE: Frank Garbe

WELL PURGING FIELD INFORMATION FORM

JOB# 15867 - - -

SITE/PROJECT NAME: Parcel 2 - Seneca St. RFI　WELL# MW-8A

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
092001	092001	2.8	4.8

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)　Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)　Y

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X-	
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®		PURGING OTHER (SPECIFY)
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE		X-	
						SAMPLING OTHER (SPECIFY)
PURGING DEVICE	A	A - TEFLON	D - PVC		X-	
		B - STAINLESS STEEL	E - POLYETHYLENE			PURGING OTHER (SPECIFY)
SAMPLING DEVICE	A	C - POLYPROPYLENE			X-	
						SAMPLING OTHER (SPECIFY)
PURGING DEVICE		A - TEFLON	D - POLYPROPYLENE	F - SILICONE	X-	
		B - TYGON	E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE		PURGING OTHER (SPECIFY)
SAMPLING DEVICE		C - ROPE X- (SPECIFY)			X-	
						SAMPLING OTHER (SPECIFY)
FILTERING DEVICES 0.45		A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM		

FIELD MEASUREMENTS

WELL ELEVATION	589.04 (m/ft)	GROUNDWATER ELEVATION	576.84 (m/ft)
DEPTH TO WATER	12.20 (m/ft)	WELL DEPTH	29.04 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) AT 25°C	SAMPLE TEMPERATURE (°C)
7.38	629	1200 (~~AT 25°C~~)	57.7 °F
NA	NA	MA	NA

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: None COLOR: Light Brown TURBIDITY: turbid

WEATHER CONDITIONS: WIND SPEED mod gusts DIRECTION from NW PRECIPITATION Y/N OUTLOOK cloudy/64°F

SPECIFIC COMMENTS Purged 1 vol & 2 Gals (4.8 Gals) via dedicated teflon bailer to dryness. Sampled with dedicated bailer at 13:20. Sampled 3 x 40 ml VOA vials (TCL VOCs). Sample id W-092001-FG-MW8A

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA　DATE 9/20/01　PRINT Frank Garbe　SIGNATURE Frank Garbe

WELL PURGING FIELD INFORMATION FORM

JOB# 15867 - --

SITE/PROJECT NAME: Parcel 2 - Seneca St.

WELL# MW-9

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
092101	092101	1.0	5.2

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE: B — A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA® — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: G — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C — A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE — tubing; D - PVC; E - POLYETHYLENE — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ______ — A - TEFLON; B - TYGON; C - ROPE; X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE — X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ______ — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ______ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	589.71 (m/ft)	GROUNDWATER ELEVATION	581.11 (m/ft)
DEPTH TO WATER	8.61 (m/ft)	WELL DEPTH	15.15 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	SAMPLE TEMPERATURE
6.85 (std)	53.4 (ntu)	1660 (µm/cm) ~~AT 25°C~~	65.1 ~~(°C)~~ °F
6.86 (std)	42.7 (ntu)	1520 (µm/cm) AT 25°C	65.0 ~~(°C)~~ °F
6.97 (std)	30.1 (ntu)	1440 (µm/cm) ~~AT 25°C~~	64.4 ~~(°C)~~ °F
6.96 (std)	6.2 (ntu)	1380 (µm/cm) ~~AT 25°C~~	63.9 ~~(°C)~~ °F
6.90 (std)	4.7 (ntu)	1340 (µm/cm) ~~AT 25°C~~	63.8 ~~(°C)~~ °F

FIELD COMMENTS

SAMPLE APPEARANCE: clear ODOR: None COLOR: clear TURBIDITY: clear (50 < NTU)

WEATHER CONDITIONS: WIND SPEED None DIRECTION NA PRECIPITATION Y/N OUTLOOK Sunny / 68°F

SPECIFIC COMMENTS: Purged 5 volumes (5 1/4 Gals) w/ peristaltic pump & dedicated tubing from 14:30 to 14:45. Sampled w/ dedicated teflon bailer at 14:50, for 3 x 40 ml VOA vials (TCL VOAs) (Sample id W092101-F6-MW9.

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA — DATE: 9/21/01 — PRINT: Frank Garbe — SIGNATURE: Frank Garbe

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 -

SITE/PROJECT NAME: 2137 Seneca St - Parcel 2 Site

WELL# MW9

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
11 27 01	11 27 01		9.1

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

PURGING DEVICE: B — A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA®; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: G — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON, B - TYGON, C - ROPE, X- ______ (SPECIFY), D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ____ — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: ~~6.95~~ JP (m/ft)

GROUNDWATER ELEVATION: (m/ft)

DEPTH TO WATER: 6.95 (m/ft)

WELL DEPTH: 15.15 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) AT 25°C	SAMPLE TEMPERATURE (°C/°F)
6.4	4.3	2150	62.7 °F
6.6	31.6	1580	62.4 °F
6.7	8.6	1490	61.8 °F
6.6	5.7	1440	61.8 °F (out)
6.6	8.7	1350	61.7 °F

FIELD COMMENTS

SAMPLE APPEARANCE: clear ODOR: none COLOR: clear TURBIDITY: min. to none

WEATHER CONDITIONS: WIND SPEED 0 DIRECTION — PRECIPITATION Y/N (Y) OUTLOOK lt. rain

SPECIFIC COMMENTS: Had to put peristaltic on a low speed to allow for recharge. Water started out cloudy, but cleared up rather quickly.

Sample : GW-112701-JP-002

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 11/27/01 PRINT: Jane Pietraszek SIGNATURE: Pietraszek

WELL PURGING FIELD INFORMATION FORM

JOB# 15867.

SITE/PROJECT NAME: Parcel 2 - Seneca St. RFI

WELL# MW-9A

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
09 21 01	09 21 01	2.8	9.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

PURGING DEVICE	G	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X- ____ PURGING OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	G	C - BLADDER PUMP	F - DIPPER BOTTLE		X- ____ SAMPLING OTHER (SPECIFY)

PURGING DEVICE	A	A - TEFLON	D - PVC	X- ____ PURGING OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE	
SAMPLING DEVICE	A	C - POLYPROPYLENE		X- ____ SAMPLING OTHER (SPECIFY)

PURGING DEVICE		A - TEFLON	D - POLYPROPYLENE	F - SILICONE	X- ____ PURGING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	
SAMPLING DEVICE		C - ROPE	X- ____ (SPECIFY)		X- ____ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	589.55 (m/ft)	GROUNDWATER ELEVATION	577.98 (m/ft)
DEPTH TO WATER	11.57 (m/ft)	WELL DEPTH	29.02 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) ~~AT 25°C~~	SAMPLE TEMPERATURE (~~°C~~ °F)
7.43	521.	480.	61.6
7.60	1424.	4410.	60.0
7.86	870.	470.	58.2

FIELD COMMENTS

SAMPLE APPEARANCE: → ~~clea~~ F6 ODOR: NONE COLOR: tan-grey TURBIDITY: turbid

WEATHER CONDITIONS: WIND SPEED NONE DIRECTION NA PRECIPITATION Y/N OUTLOOK SUNNY/68°F

SPECIFIC COMMENTS Purged 3 volumes (9.0 Gals) w/ dedicated teflon bailer & poly cord from 15:15 to 16:00 (Well did not clear during development). Sampled with dedicated teflon bailer at 16:10 for 3x40 ml VOA vials (TCL VOCs). Sample id W-092101-FG-MW9A

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA 9/21/01 Frank Garbe Frank Garbe

DATE PRINT SIGNATURE

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 -

SITE/PROJECT NAME:

WELL# MW9A

WELL PURGING INFORMATION

11 28 01	11 28 01	2.8	11.2
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: G — A - SUBMERSIBLE PUMP, D - GAS LIFT PUMP, G - BAILER, B - PERISTALTIC PUMP, E - PURGE PUMP, H - WATERRA®, C - BLADDER PUMP, F - DIPPER BOTTLE; X- PURGING OTHER (SPECIFY)

SAMPLING DEVICE: G — X- SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A — A - TEFLON, D - PVC, B - STAINLESS STEEL, E - POLYETHYLENE, C - POLYPROPYLENE; X- PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- SAMPLING OTHER (SPECIFY)

PURGING DEVICE: — A - TEFLON, D - POLYPROPYLENE, F - SILICONE, B - TYGON, E - POLYETHYLENE, G - COMBINATION TEFLON/POLYPROPYLENE, C - ROPE, X- (SPECIFY); X- PURGING OTHER (SPECIFY)

SAMPLING DEVICE: — X- SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45: — A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: . (m/ft)

GROUNDWATER ELEVATION: . (m/ft)

DEPTH TO WATER: 11.20 (m/ft)

WELL DEPTH: 29.02 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) AT 25°C	SAMPLE TEMPERATURE
11.6	70	420	55.5 °F
11.0	39	630	56.1 °F
11.1	14.4	620	55.5 °F
11.0	48	570	56.0 °F
			(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: — COLOR: clear TURBIDITY: none

WEATHER CONDITIONS: WIND SPEED DIRECTION PRECIPITATION Y/N OUTLOOK Sl. rain

SPECIFIC COMMENTS Sample ID: GW-112801-JP-006 (3x40ml voc)

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 2/6/02 PRINT: J. Pietraszek SIGNATURE:

CRA 1001 (29) Rev. 6, September 13, 1999, Form SP-10

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 - - -

SITE/PROJECT NAME: Parcel 2 - Seneca St RFI

WELL# MW-10

WELL PURGING INFORMATION

09 20 01	09 20 01	4	5.5
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: B — A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®

X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: X

X- Peristaltic tubing — SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C — A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE

X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: C — tubing

X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON; B - TYGON; C - ROPE; D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE

X- ______ (SPECIFY)

X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ____

X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	589.02 (m/ft)	GROUNDWATER ELEVATION	583.60 (m/ft)
DEPTH TO WATER	5.42 (m/ft)	WELL DEPTH	15.33 (m/ft)

	pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) ~~AT 25°C~~	SAMPLE TEMPERATURE (°C) °F
4th	7.05	>2000	830	61.3
	6.80	949	920	59.5
5th	6.60	>2000	940	59.8
4th	6.55	974	970	60.8
4th "	6.41	792	940	60.9

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: None COLOR: brown TURBIDITY: mod. turbid

WEATHER CONDITIONS: WIND SPEED moderate gusts DIRECTION from NW PRECIPITATION Y/N No OUTLOOK None

SPECIFIC COMMENTS

Purged 10 volumes (4 Gals) w/ peristaltic pump & dedicated polypropylene tubing. Purged from 10 AM to 11 AM. Sampled using only polypropylene tubing as a suction lift device at 14:30 PM. Collected 3x40 ml VOA vials (TCL VOAs) & 2 x 1 Liter amber glass (for TCL SVOCs). also collected 2x40 ml VOA vials for NYSDEC split. Sample id W-092001-FG-MW10

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA 9/20/01 Frank Garbe Frank Garbe

DATE PRINT SIGNATURE

WELL PURGING FIELD INFORMATION FORM

JOB# 15867 - - -

SITE/PROJECT NAME: Parcel 2 - Seneca St RFI

WELL# MW-10A

WELL PURGING INFORMATION

092001	092001	.7	.
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: B — A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA®

X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: X

X- Peristaltic tubing — SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C — A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE —tubing, D - PVC, E - POLYETHYLENE

X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: C

X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON, B - TYGON, C - ROPE, X- ______ (SPECIFY), D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE

X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ____

X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 589.07 (m/ft)

GROUNDWATER ELEVATION: 578.05 (m/ft)

DEPTH TO WATER: 11.02 (m/ft)

WELL DEPTH: 28.02 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	SAMPLE TEMPERATURE
7.15 (std)	70.6 (ntu)	640 (µm/cm) ~~AT 25°C~~	60.0 °F
7.08 (std)	>2000 (ntu)	740 (µm/cm) ~~AT 25°C~~	60.0 °F
7.23 (std)	820 (ntu)	700 (µm/cm) ~~AT 25°C~~	58.3 °F
7.17 (std)	1054 (ntu)	630 (µm/cm) ~~AT 25°C~~	57.2 °F
7.20 (std)	1520 (ntu)	650 (µm/cm) ~~AT 25°C~~	56.7 °F

FIELD COMMENTS

SAMPLE APPEARANCE: → ODOR: None COLOR: Brown TURBIDITY: turbid

WEATHER CONDITIONS: WIND SPEED mod. gusts DIRECTION from NW PRECIPITATION Y/N OUTLOOK None expected

SPECIFIC COMMENTS Purged 5 volumes (3 3/4 Gals) via peristaltic pump and dedicated tubing (polypropylene). Purged from 11:35 AM to 12:15 PM. Sample at 12:20 PM using peristaltic tubing polypropylene tubing as suction lift device. Collected 3x 40 ml VOA vials for TCL VOCs Sample id W-092001-FG-MW10A

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA 9/20/01 Frank Garbe [signature]

DATE PRINT SIGNATURE

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 - – –

SITE/PROJECT NAME: Parcel 2 - Seneca St RFI

WELL# MW-11

WELL PURGING INFORMATION

09 21 01	09 21 01	1.3	6.7
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

PURGING DEVICE: B
SAMPLING DEVICE: G

A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C
SAMPLING DEVICE: A

A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE – tubing; D - PVC; E - POLYETHYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____
SAMPLING DEVICE: ____

A - TEFLON; B - TYGON; C - ROPE X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE

X- ______ PURGING OTHER (SPECIFY)
X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 590.40 (m/ft) — ft
GROUNDWATER ELEVATION: 581.11 (m/ft) — ft
DEPTH TO WATER: 9.29 (m/ft) — ft
WELL DEPTH: 17.52 (m/ft) — ft

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) ~~AT 25°C~~	SAMPLE TEMPERATURE ~~(°C)~~ °F
6.70	23.7	680	64.5
6.86	8.3	730	63.7
6.78	12.0	720	63.2
6.90	18.0	700	63.5
6.94	5.1	780	62.8

FIELD COMMENTS

SAMPLE APPEARANCE: Clear ODOR: None COLOR: yellow brn tint TURBIDITY: clear

WEATHER CONDITIONS: WIND SPEED None DIRECTION NA PRECIPITATION Y/N N OUTLOOK Sunny / 68°F

SPECIFIC COMMENTS Purged 5 volumes (6.7 Gals) w/ peristaltic pump & dedicated tubing from 12:50pm to 13:10pm. Sampled w/ dedicated teflon bailer at 13:30 pm for 9 x 40 ml VOA VIALS (TCL VOCs) and included sample volume for MS/MSD. Sample id W-092101-FG-MW11

6 x 1 liter glass amber bottles (TCL SVOCS)

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA 9/21/01 Frank Garbe Frank Garbe

DATE PRINT SIGNATURE

WELL PURGING FIELD INFORMATION FORM

JOB# 1 5 8 6 7 -

SITE/PROJECT NAME:

WELL# M W 1 1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
1 1 2 8 0 1	1 1 2 8 0 1	1.6	1/8

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE) — Y

PURGING DEVICE: B — A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA®; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: G — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C — A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: A — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____ — A - TEFLON; B - TYGON; C - ROPE; X- ______ (SPECIFY); D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: ____ — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE   B - PRESSURE   C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION ______ (m/ft)   GROUNDWATER ELEVATION ______ (m/ft)

DEPTH TO WATER ~~17.52~~ TP 7.60 (m/ft)   WELL DEPTH 17.52 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (μm/cm) AT 25°C	SAMPLE TEMPERATURE
10.7	5.7	950	59.7 °F
10.7	.7	1050	59.5 °F
10.7	1	1150	60.2 °F
			(°C)
			(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: —   ODOR: clear   COLOR: none   TURBIDITY: ______

WEATHER CONDITIONS: WIND SPEED ______ DIRECTION ______ PRECIPITATION Y/N (Y) OUTLOOK sl. rain

SPECIFIC COMMENTS Sample ID: GW-112801-JP-005 (3X40ml VOC)

MS/MSD taken at this well (3x40ml VOC each)

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA   DATE ______   PRINT ______   SIGNATURE ______

WELL PURGING FIELD INFORMATION FORM

JOB# 15867 - - -

SITE/PROJECT NAME: Parcel 2 - Seneca St. RFI   WELL# MW-11A

WELL PURGING INFORMATION

092001	092001	2.4	6.5
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)   SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: G   SAMPLING DEVICE: G
A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA®
X- ____ PURGING OTHER (SPECIFY)
X- ____ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A   SAMPLING DEVICE: A
A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE
X- ____ PURGING OTHER (SPECIFY)
X- ____ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: ____   SAMPLING DEVICE: ____
A - TEFLON, B - TYGON, C - ROPE, X- ____ (SPECIFY), D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE
X- ____ PURGING OTHER (SPECIFY)
X- ____ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 ____ A - IN-LINE DISPOSABLE   B - PRESSURE   C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION 590.20 (m/ft)   GROUNDWATER ELEVATION 578.29 (m/ft)
DEPTH TO WATER 11.91 (m/ft)   WELL DEPTH 27.00 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	SAMPLE TEMPERATURE
6.96 (std)	69.1 (ntu)	880 (μm/cm) ~~AT 25°C~~	63.4 ~~(°C)~~ °F
7.15 (std)	1207 (ntu)	870 (μm/cm) ~~AT 25°C~~	59.9 ~~(°C)~~ °F
(std)	(ntu)	(μm/cm) AT 25°C	(°C)
(std)	(ntu)	(μm/cm) AT 25°C	(°C)
(std)	(ntu)	(μm/cm) AT 25°C	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: →   ODOR: None   COLOR: Light brown   TURBIDITY: mod. turbid

WEATHER CONDITIONS: WIND SPEED mod. gusts   DIRECTION from NW   PRECIPITATION Y/N   OUTLOOK cloudy/64°F

SPECIFIC COMMENTS Used dedicated teflon bailer to purge 2 vols + 1.7 Gals (6.5 Gals) to dryness from 13:45 PM to 14:05. Used dedicated bailer to sample at 15:15 PM for 3 x 40 ml VOA vials (TCL VOCs). Sample id W-092001-FG-MW11A

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA   DATE 9/20/01   PRINT Frank Garbe   SIGNATURE Frank Garbe

CRA 1001 (29) Rev. 6, September 13, 1999, Form SP-10

WELL PURGING FIELD INFORMATION FORM

JOB# 15862.

SITE/PROJECT NAME:

WELL# MW11A

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
112801	112901	2.5	5.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.........DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.........DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE: G
SAMPLING DEVICE: G

A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA®

X- ________ PURGING OTHER (SPECIFY)
X- ________ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: A
SAMPLING DEVICE: A

A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE

X- ________ PURGING OTHER (SPECIFY)
X- ________ SAMPLING OTHER (SPECIFY)

PURGING DEVICE:
SAMPLING DEVICE:

A - TEFLON, B - TYGON, C - ROPE, X- ________ (SPECIFY), D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE

X- ________ PURGING OTHER (SPECIFY)
X- ________ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45: A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: (m/ft)
GROUNDWATER ELEVATION: (m/ft)
DEPTH TO WATER: 11.25 (m/ft)
WELL DEPTH: 27.0 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/cm) AT 25°C	SAMPLE TEMPERATURE
10.5	2.8	1070	57.2 °F
8.7	9.4	980	56.4 °F
			(°C)
			(°C)
			(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: ________ ODOR: ________ COLOR: ________ TURBIDITY: cloudy

WEATHER CONDITIONS: WIND SPEED ________ DIRECTION ________ PRECIPITATION Y/N OUTLOOK rain

SPECIFIC COMMENTS: Sample ID: GW-112901-JP-008 (3x40ml VOC)

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

CRA

DATE: 2/6/02 PRINT: J Pietraszek SIGNATURE:

APPENDIX F

WASTE MANIFESTS

CWMI

(3)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	N.Y.R.0.0.0.0.9.6.1.3.1
Manifest Document No.	
2. Page 1 of 1	

3. Generator's Name and Mailing Address
FRANCHISE FINANCE CORP OF AMER
2137 SENECA ST
BUFFALO NY 14210-2366

4. Generator's Phone (716) 297-6150

5. Transporter 1 Company Name: Buffalo Fuel Corp	6. US EPA ID Number: NYR.0.0.0.0.45.7.24	A. Transporter's Phone: 800 208 9089
7. Transporter 2 Company Name:	8. US EPA ID Number:	B. Transporter's Phone:
9. Designated Facility Name and Site Address: CWM CHEMICAL SERVICES, LLC. 1550 BALMER RD. MODEL CITY NY 14107	10. US EPA ID Number: NYD049836679	C. Facility's Phone: (716)754-823

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL -03	1	DF	1 gallon 55 gallons 4 gallons	458 lbs 55 gal
b. NON REGULATED MATERIAL -04	3	DM	2700 lbs	900 lbs DM
c.				
d.				

D. Additional Descriptions for Materials Listed Above
a. CR7602
b. CR7603

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
CHEMTREC Emergency Response Number (800)424-9300 WMI Contract
SERVICE REQUEST #

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
GARY D. LaLiBERTY	Gary D. La Liberty	05	09	01

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
DAVID FOUST	David Foust	05	09	01

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space
11ab - profiles reversed - JS

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
JONATHAN SCHEARER	Jonathan Schearer	05	09	01

GENERATOR / TRANSPORTER / FACILITY

ORIGINAL - RETURN TO GENERATOR

NYB9543519

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please type or print. Do not staple.

(Hazardous Waste Manifest 5/00)

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the NYS Department of Environmental Conservation (518) 457-7362

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No.: NYR000096113 — Manifest Doc. No.: 00091
2. Page 1 of 1

Information within heavy bold line is not required by Federal Law.

A. NYB9543519

3. Generator's Name and Mailing Address:
FRANCHISE FINANCE CORP. OF AMER
2137 SENECA ST
BUFFALO NY 14210-2366

B. Generator's ID: SAME

4. Generator's Telephone Number: (716) 297-6150

5. Transporter 1 (Company Name): Buffalo Fuel Corp
6. US EPA ID Number: NYR000045724

C. State Transporter's ID: 4C522R NY
D. Transporter's Telephone: 800 205 4?

7. Transporter 2 (Company Name):
8. US EPA ID Number:

E. State Transporter's ID
F. Transporter's Telephone ( )

9. Designated Facility Name and Site Address:
CWM CHEMICAL SERVICES, LLC.
1550 BALMER RD.
MODEL CITY NY 14107

10. US EPA ID Number: NYD049836679

G. State Facility ID
H. Facility Telephone: 716 754-8231

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers Number	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, HAZARDOUS WASTE, LIQUID, N.O.S, 9, NA3082, III, (D039, D040)	~~002~~ 001	~~DF~~ DA	65 gallons	~~83~~ gal	EPA D039 / STATE
b. RQ, HAZARDOUS WASTE, LIQUID, N.O.S, 9, NA3082, III (D039, D040)	2	DF	434 ~~217~~	P	EPA D039 / STATE
c.					EPA / STATE
d.					EPA / STATE

J. Additional Descriptions for Materials listed Above
a. CR7604 D040
b. CR7604 D040
c.
d.

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
CHEMTREC Emergency Response Number (800)424-9300 WMI Contract
SERVICE REQUEST #

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

If I am large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a smaller generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Gary D. LaLiberty — Signature: [signature] — Mo. Day Year: 05 09 91

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: David Faust — Signature: [signature] — Mo. Day Year: 05 09 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Mo. Day Year

FACILITY

19. Discrepancy Indication Space
Line a - 13 & 14, 65G
12 - Split drums up without putting on next lower line Ka,b = T

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: JONATHAN SCHEARER — Signature: Jonathan Schearer — Mo. Day Year: 05 09 91

COPY 5-GENERATOR - MAILED BY TSD FACILITY

(5)

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. NYR000096131	Manifest Document No. 69496	2. Page 1 of 1

3. Generator's Name and Mailing Address
FRANCHISE FINANCE CORP OF AMER
2137 SENECA ST
BUFFALO NY 14210-2366
4. Generator's Phone (716) 297-6150

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
FRANKS VACUUM TRUCK	NYD982792814	7162842132
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone

9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
CWM CHEMICAL SERVICES, L.L.C. 1550 BALMER ROAD MODEL CITY NY 14107	NYD049836679	(716)754-8231

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON REGULATED MATERIAL 08	15	DM	10.500	
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
a. CR7602

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
CHEMTREC Emergency Response Number (800)424-9300 WMI Contract
SERVICE REQUEST # ______________

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Frank Garbe	Frank Garbe	01	29	02

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
LEE BOEHRINGER	Lee Boehringer	01	29	02

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
JONATHAN SCHEARER	Jonathan Shearer	01	30	02

GENERATOR

TRANSPORTER

FACILITY

ORIGINAL RETURN TO GENERATOR

APPENDIX G

WASTEWATER DISCHARGE PERMIT

Permit No.: 01-12-TP081

Expiration Date: December 31, 2002
Date Paid: November 29, 2001

BUFFALO SEWER AUTHORITY

TEMPORARY DISCHARGE PERMIT

Permittee: **CONESTOGA-ROVERS ASSOCIATES**

Location Address: **2055 Niagara Falls Blvd. Niagara Falls, New York 14304**

The above named Permittee is hereby approved to discharge **Groundwater** only, from

GE CAPITAL FRANCHISE FINANCE CORP.
2137 SENECA STREET, BUFFALO, NEW YORK

to the Buffalo Sewer Authority facilities in accordance with the Buffalo Sewer Authority Regulations, Article VI, Section 14, and subject to the following conditions:

ARTICLE 1 CONDITIONS OF ACCEPTANCE

The discharge of the approved waste by the Permittee shall be subject to the following conditions:

a. Times, Location & Rate

The following location is designated for discharge during the hours listed and subject to the limit for rate of discharge specified:

Location: (see attached map)

Time Discharge is Permitted: 7:00am to 7:00pm

Limit on Rate of Discharge: 300 gals per day during dry weather only

b. Operations

The Permittee shall maintain cleanliness, minimize odors and protect the Buffalo Sewer Authority facilities during the permittee's operations. The Permittee shall not permit any condition to arise which may pose a threat to public health, safety or welfare.

c. Samples and Analyses

The Buffalo Sewer Authority may from time to time, require the Permittee to sample and analyze its waste discharges. Such sampling and analyses shall be performed and results submitted by a New York State Dept. of Health certified laboratory. The analyses required shall be as specified by the Buffalo Sewer Authority, which also reserves the right, at its convenience, to sample wastes discharged by the Permittee.

d. Refusal to Discharge
The Buffalo Sewer Authority may refuse the Permittee permission to discharge wastes at any time and for any reason whatsoever, for the protection of sewer facilities against damage or flooding; to assure the proper operation and maintenance of said facilities; or to protect public health, safety or welfare.

e. Local Limits

Except as otherwise specified in this permit, the permit holder shall comply with all specific prohibitions, limits on pollutants or pollutant parameters set forth in the Buffalo Sewer Authority Sewer Use Regulations, as amended from time to time, and such prohibitions, limits and parameters shall be deemed pretreatment standards for purposes for the Clean Water Act.

ARTICLE 2 REGULATIONS

The Permittee must conform to all Buffalo Sewer Authority regulations and appropriate Federal, State and County Statutes, rules, mandates, directives, and orders concerning the collection, transportation, treatment and disposal of wastewaters.

ARTICLE 3 INSURANCE AND INDEMNIFICATION

The Permittee, agrees to indemnify and hold harmless the Buffalo Sewer Authority and its agents and employees against any and all claims resulting from work performed under this permit. The permittee shall be solely responsible for any and all injury or damage to its employees or property arising from use of Buffalo Sewer Authority facilities under this permit.

In the event of any alteration, non-renewal or cancellation of these policies, at least (45) forty-five days advance notice shall be given to the Industrial Waste Section, Bird Island Treatment Plant, 90 West Ferry Street, Buffalo, New York 14213 - before such change shall be effective.

ARTICLE 4 TERMINATION FOR VIOLATION OF AGREEMENT

In the event of a violation of any of the terms and conditions of this permit by the Permittee or upon the failure to pay the charges herein specified, the Buffalo Sewer Authority shall terminate the permit by service of notice of termination by registered mail at the Permittee's office address as set forth above.

ARTICLE 5 PERMITTEE APPROVAL

Official ANTHONY YING
Print Name

Title V-P - TREASURER
Print

Signature

Date 12/13/01

ARTICLE 6 BUFFALO SEWER AUTHORITY APPROVAL

Approved as to Content:

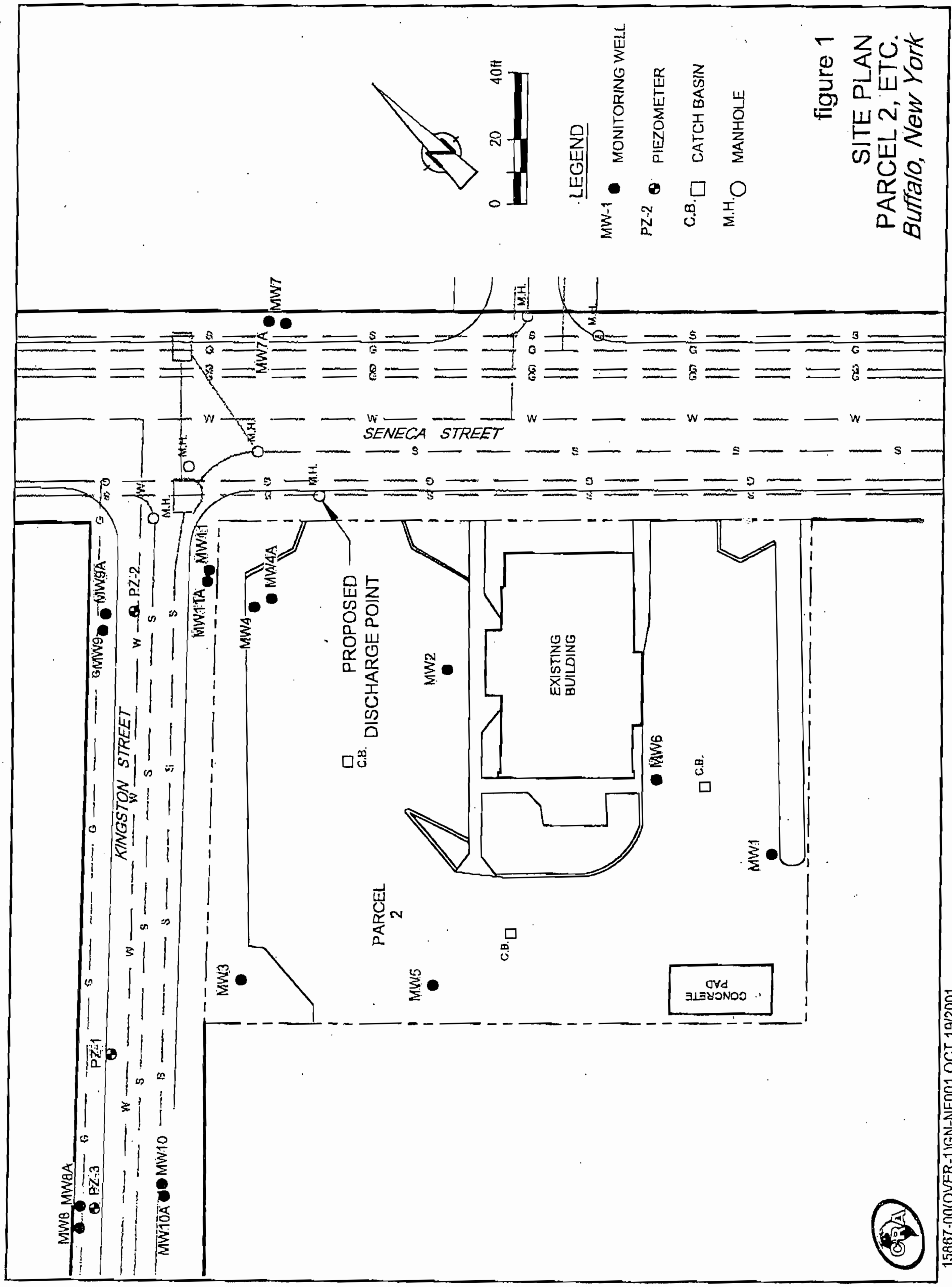
Signature
Industrial Waste Administrator

Date 12/19/01

Effective this 18th day of Dec., 2001

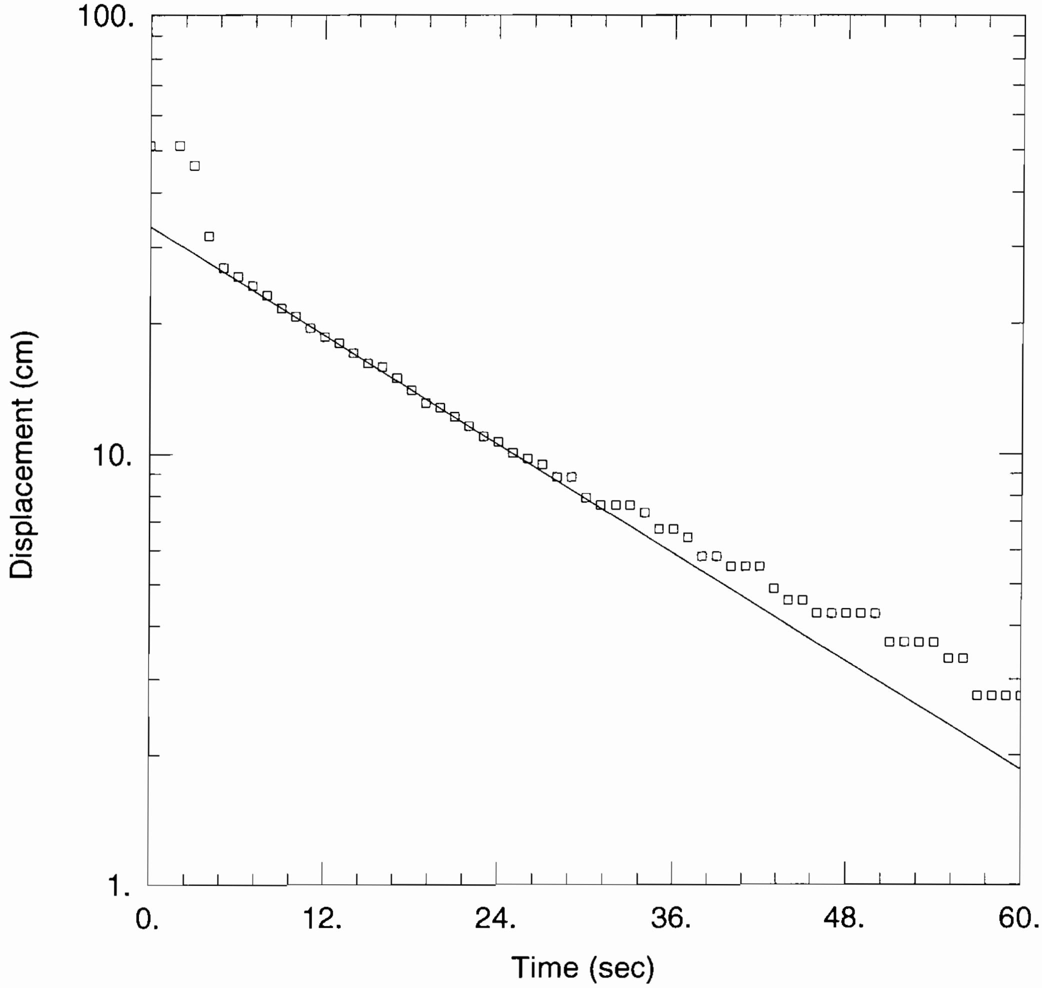
General Manager
Buffalo Sewer Authority

Permit No. 01-12-?981



APPENDIX H

HYDRAULIC CONDUCTIVITY CALCULATIONS



MW-1 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW1f1.aqt
Date: 01/11/02
Time: 08:48:48

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 334. cm
Anisotropy Ratio (Kz/Kr): 1.

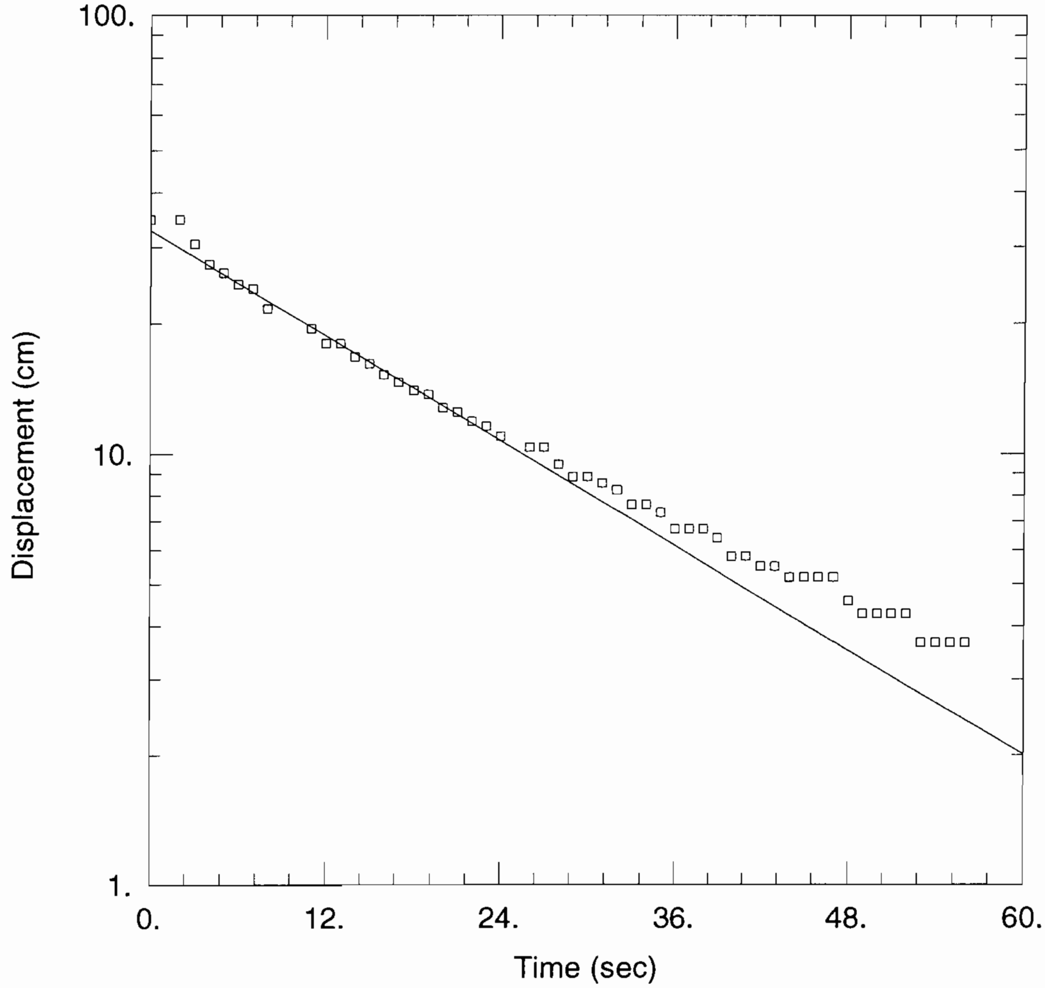
WELL DATA (MW-1)

Initial Displacement: 51.2 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 334. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.00246 cm/sec
y0 = 33.45 cm



MW-1 FALLING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW1f2.aqt
Date: 01/11/02 Time: 08:50:19

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 334. cm Anisotropy Ratio (Kz/Kr): 1.

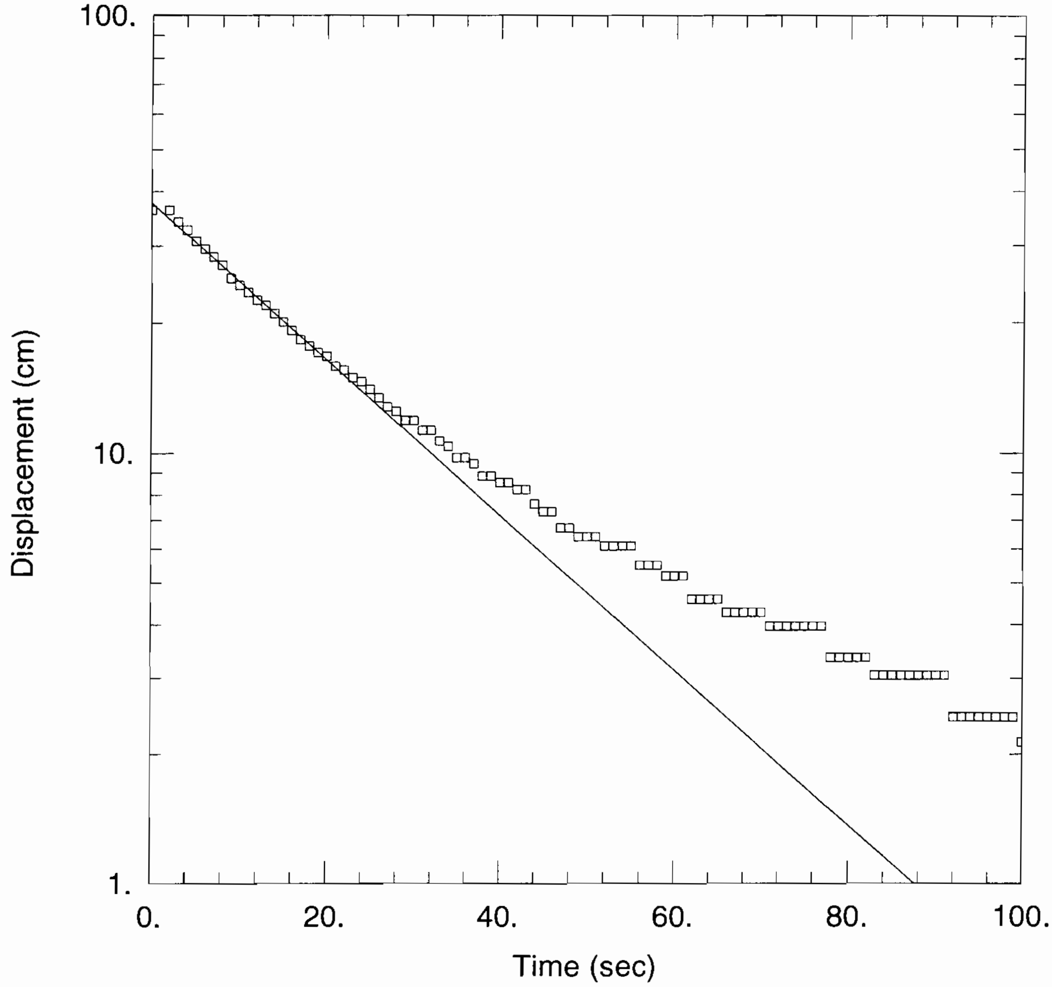
WELL DATA (MW-1)

Initial Displacement: 34.7 cm Water Column Height: 334. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002375 cm/sec y0 = 32.81 cm



MW-1 RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW1r1.aqt
Date: 01/11/02
Time: 08:51:51

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 334. cm
Anisotropy Ratio (Kz/Kr): 1.

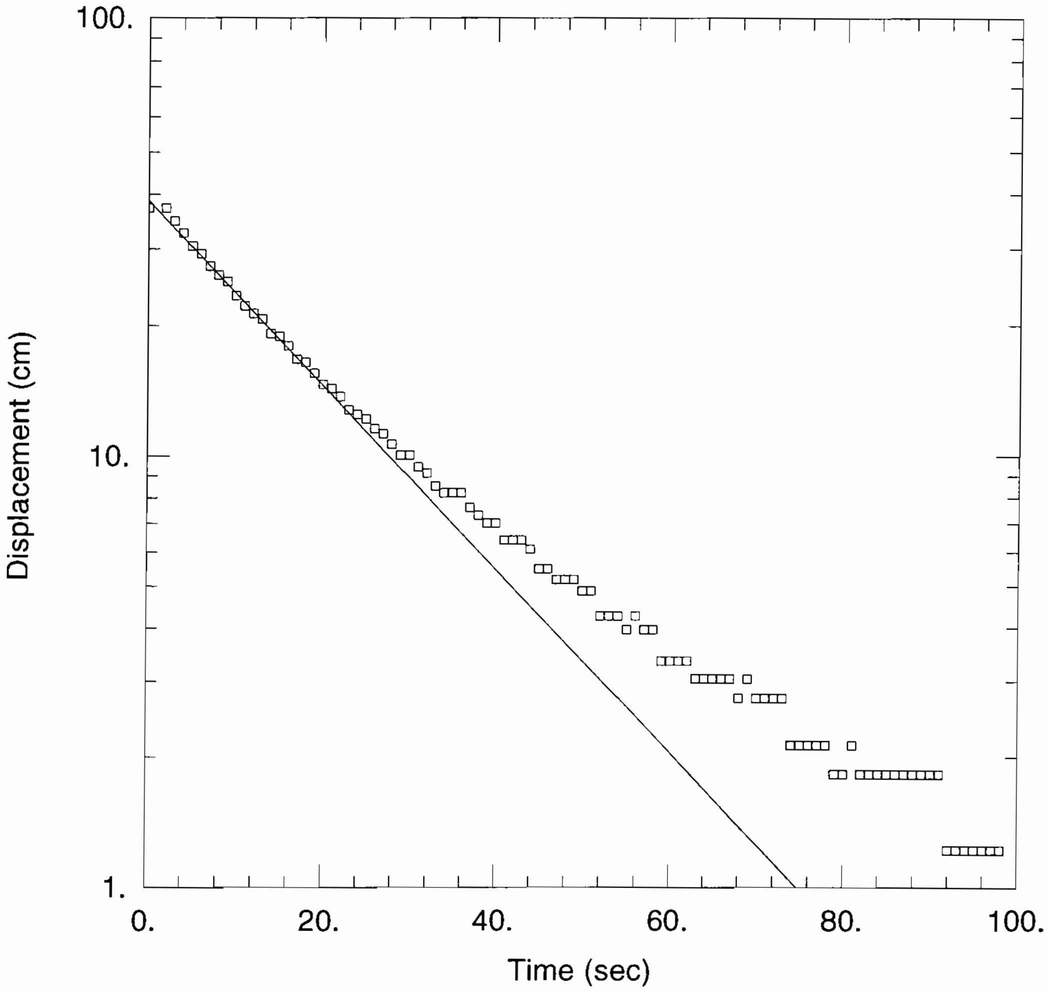
WELL DATA (MW-1)

Initial Displacement: 36.3 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 334. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.002113 cm/sec
y0 = 37.64 cm



MW-1 RISING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW1r2.aqt
Date: 01/11/02 Time: 08:52:59

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 334. cm Anisotropy Ratio (Kz/Kr): 1.

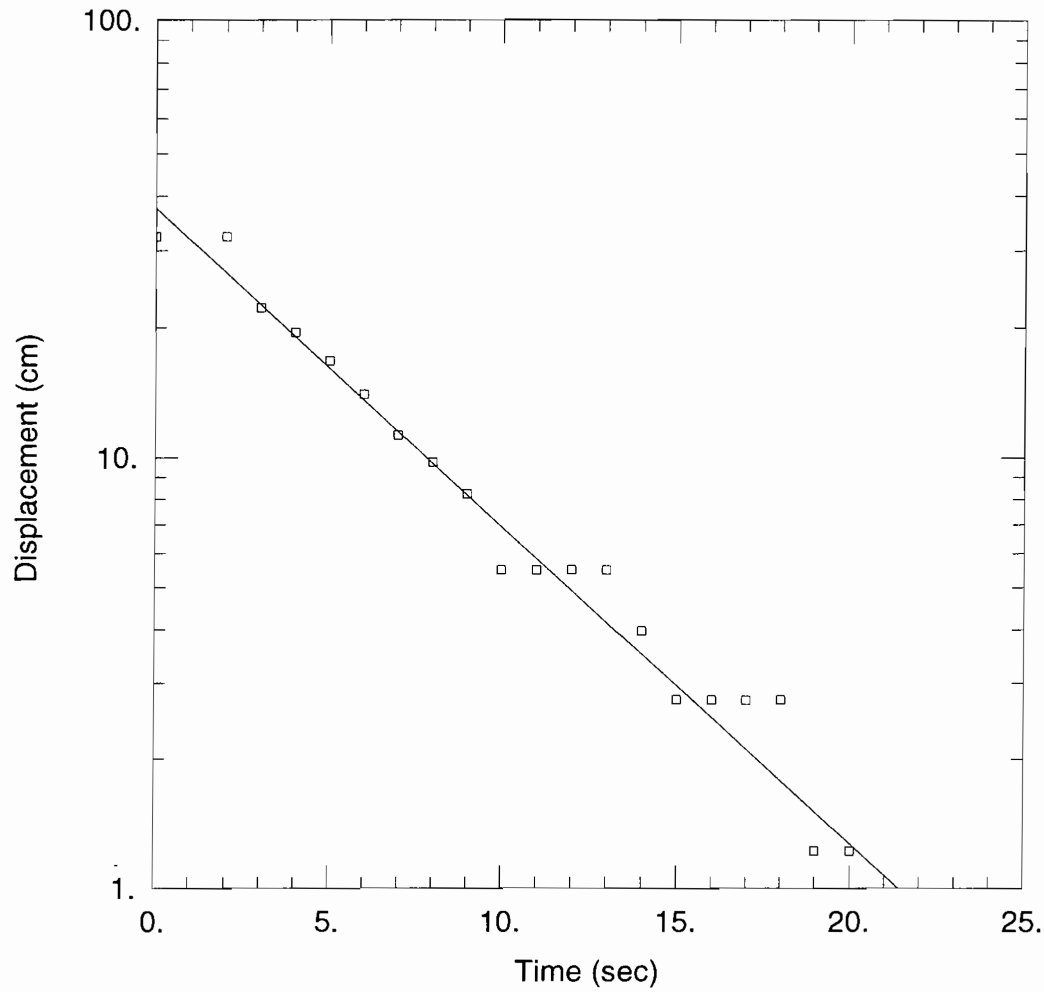
WELL DATA (MW-1)

Initial Displacement: 37.2 cm Water Column Height: 334. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002495 cm/sec y0 = 38.75 cm



MW-2 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW2f1.aqt
Date: 01/11/02 Time: 08:54:10

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

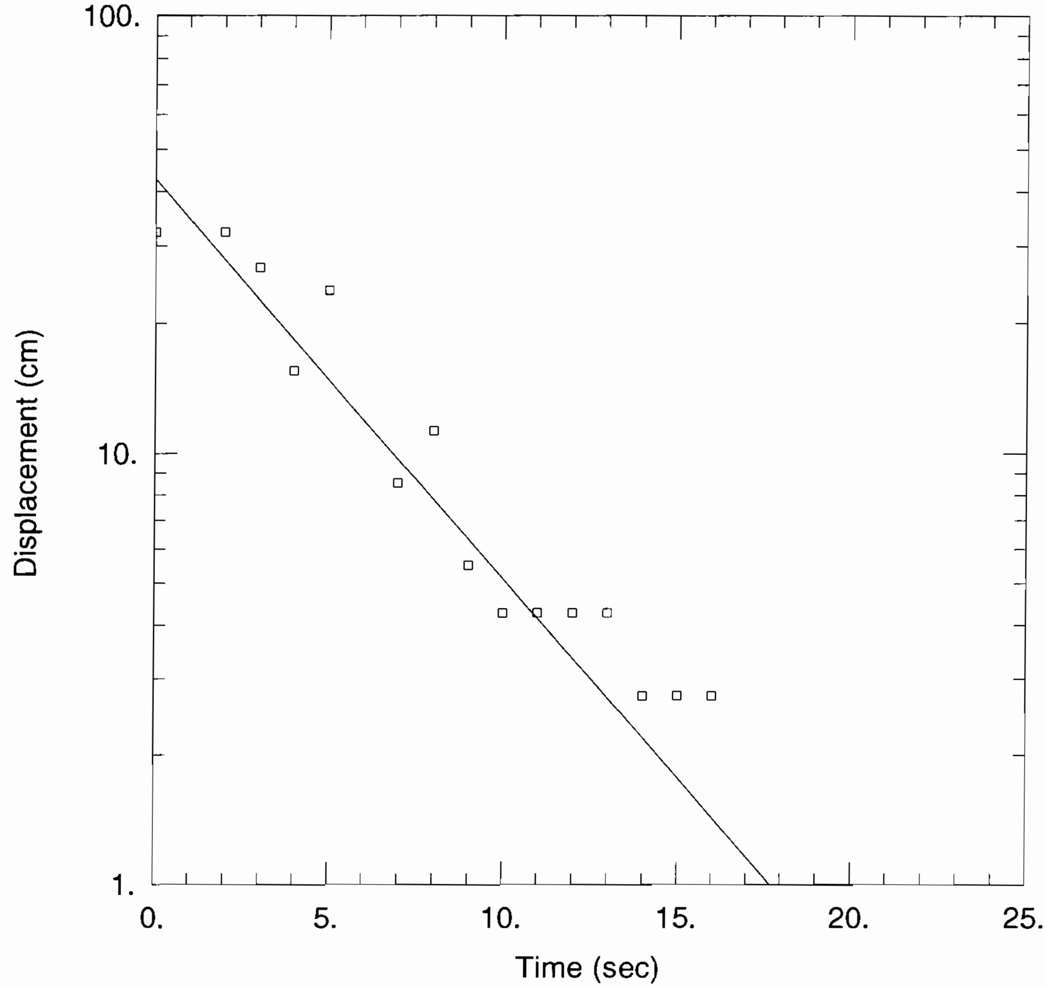
Saturated Thickness: 274. cm Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 32.3 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 274. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.008259 cm/sec
y0 = 37.52 cm



MW-2 FALLING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW2f2.aqt
Date: 01/11/02 Time: 09:04:38

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

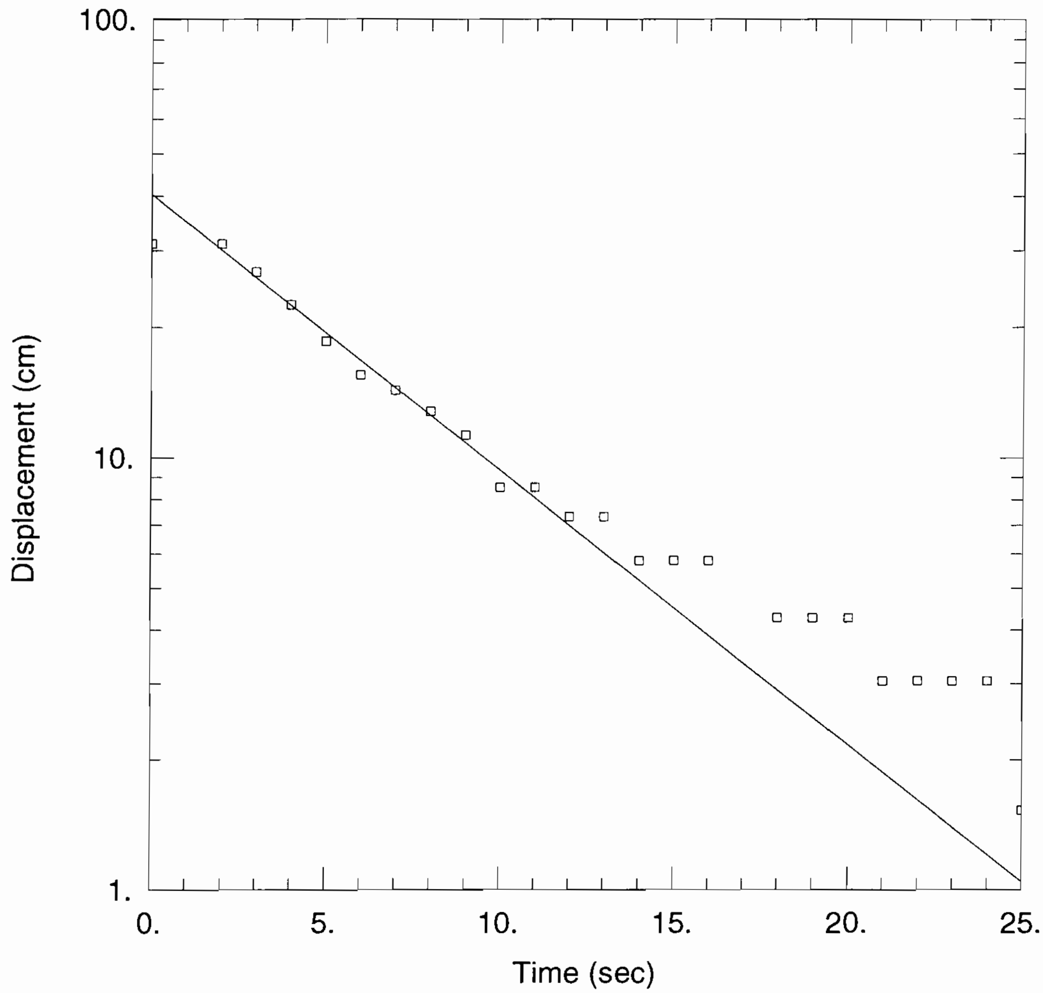
Saturated Thickness: 274. cm Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 32.3 cm Water Column Height: 274. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.01034 cm/sec y0 = 42.7 cm



MW-2 RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW2r1.aqt
Date: 01/11/02 Time: 09:06:30

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

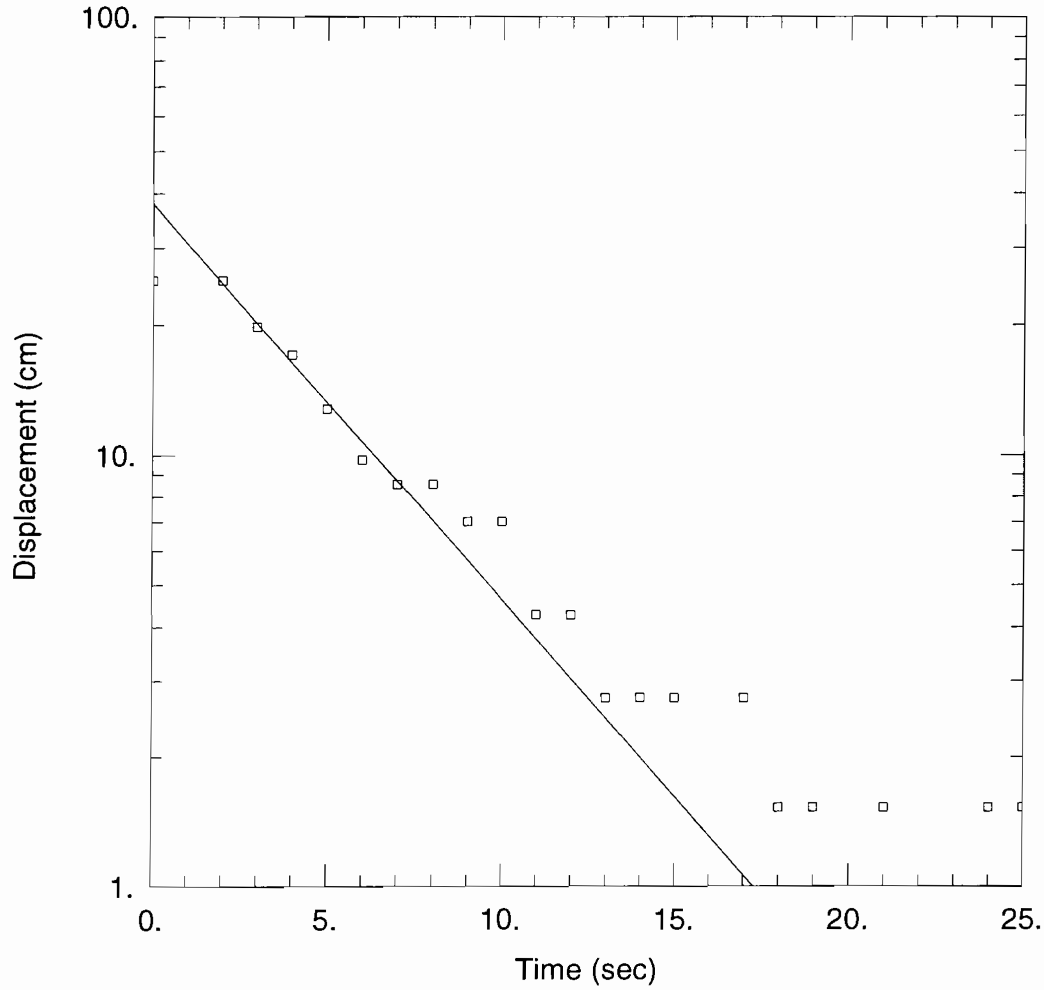
Saturated Thickness: 274. cm
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 31.1 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 274. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.007132 cm/sec
y0 = 40.38 cm



MW-2 RISING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW2r2.aqt
Date: 01/11/02 Time: 09:07:22

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

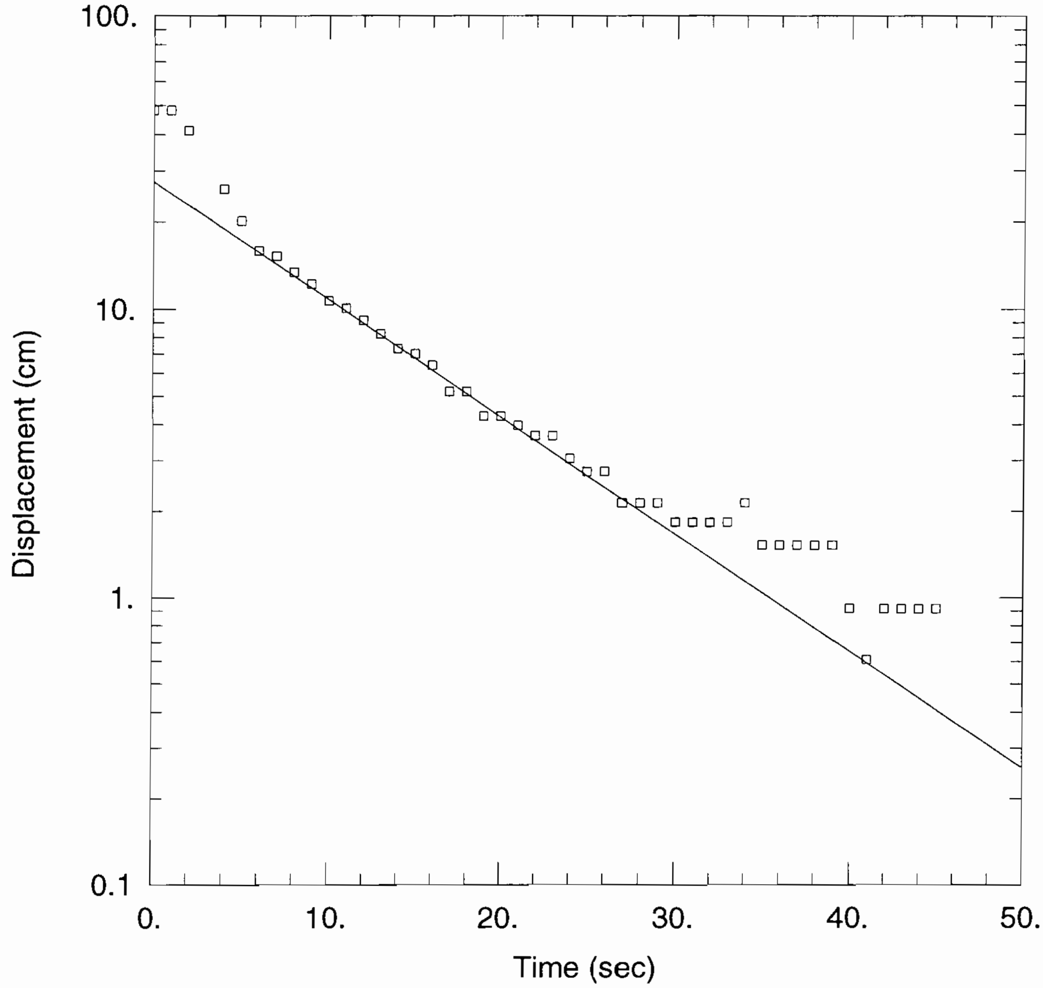
Saturated Thickness: 274. cm Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-2)

Initial Displacement: 25.3 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 274. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.01025 cm/sec y0 = 37.89 cm



MW-3 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW3f1.aqt
Date: 01/11/02 Time: 09:08:34

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

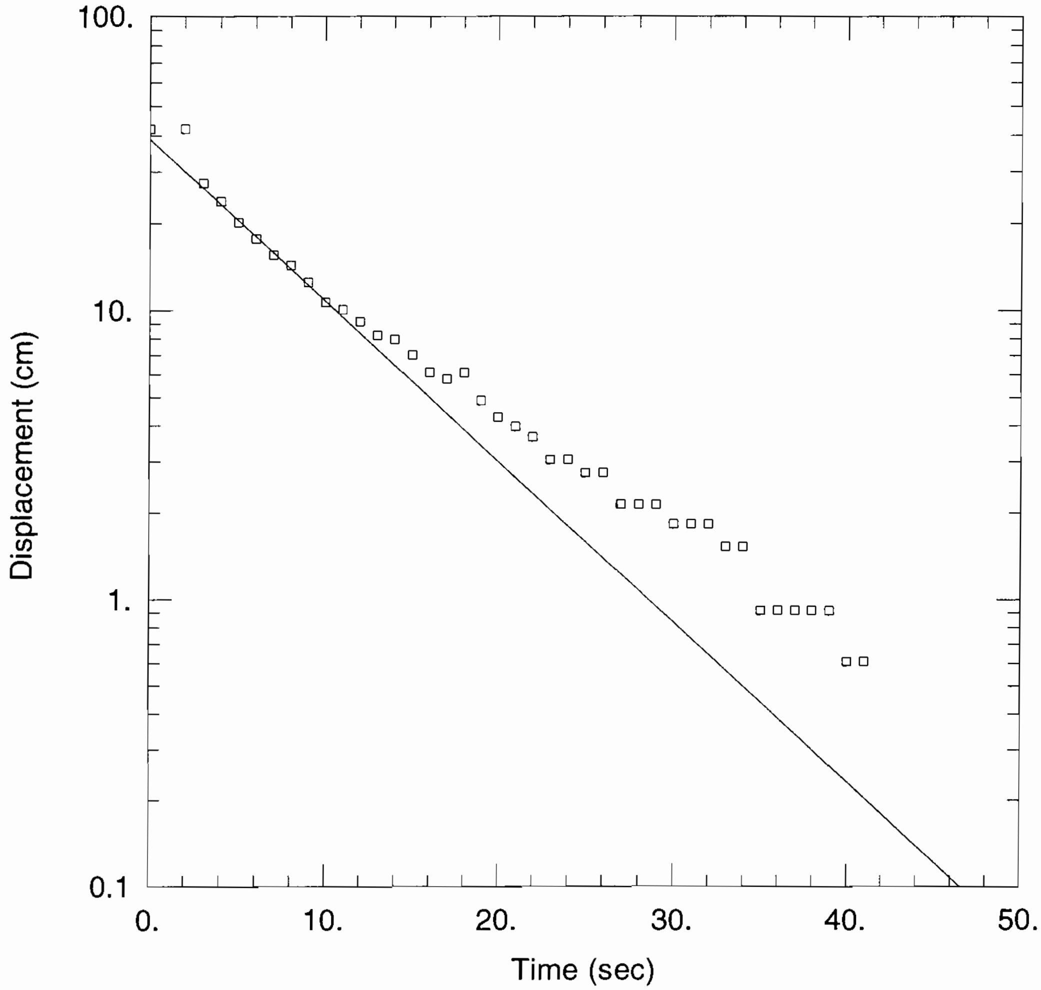
Saturated Thickness: 270. cm Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-3)

Initial Displacement: 48.2 cm Water Column Height: 270. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.004548 cm/sec y0 = 27.52 cm



MW-3 FALLING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW3f2.aqt
Date: 01/11/02 Time: 09:10:00

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

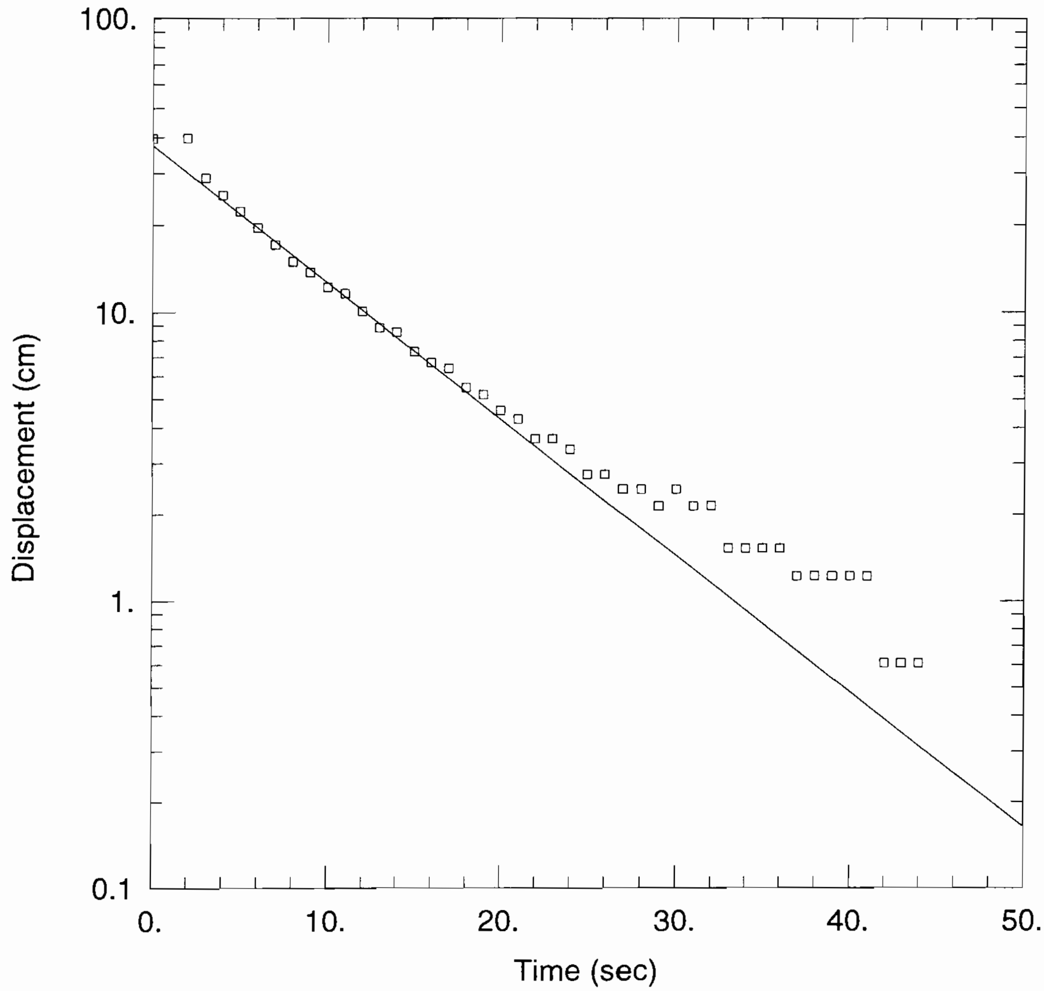
Saturated Thickness: 270. cm
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-3)

Initial Displacement: 42.1 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 270. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.006219 cm/sec
y0 = 38.78 cm



MW-3 RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW3r1.aqt
Date: 01/11/02 Time: 09:12:03

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 270. cm Anisotropy Ratio (Kz/Kr): 1.

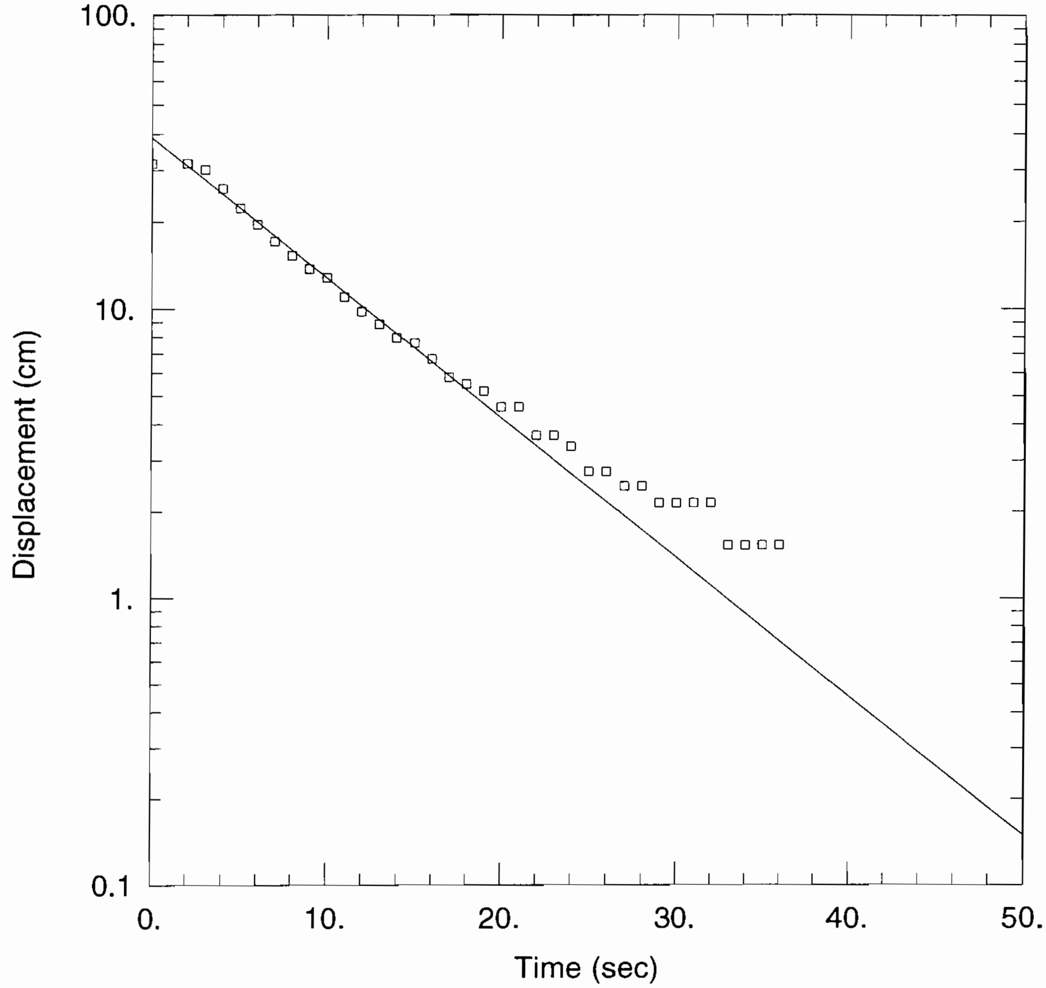
WELL DATA (MW-3)

Initial Displacement: 39.6 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 270. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.005283 cm/sec y0 = 37.48 cm



MW-3 RISING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW3r2.aqt
Date: 01/11/02
Time: 09:12:55

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 270. cm
Anisotropy Ratio (Kz/Kr): 1.

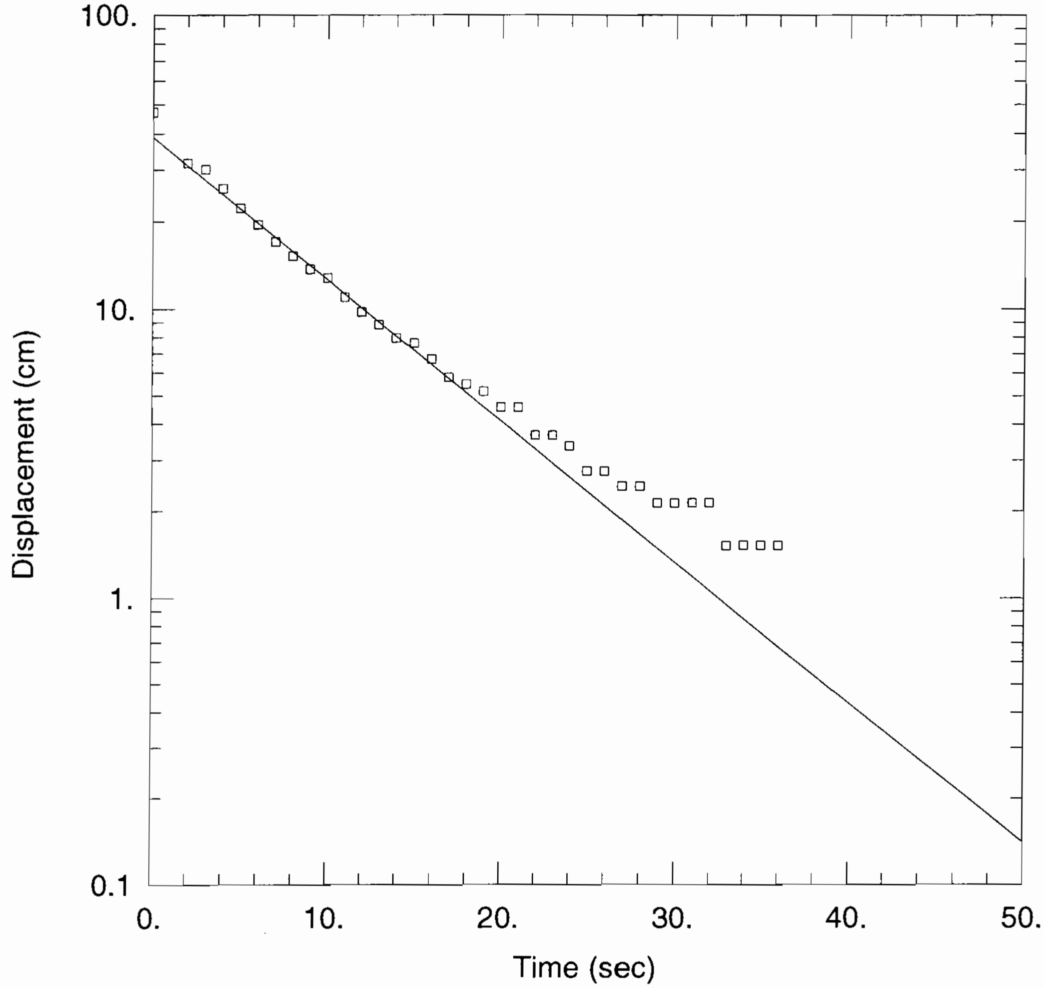
WELL DATA (MW-3)

Initial Displacement: 31.7 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 270. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.005406 cm/sec
y0 = 38.88 cm



MW-4 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW4f1.aqt
Date: 01/11/02 Time: 09:14:07

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 287. cm Anisotropy Ratio (Kz/Kr): 1.

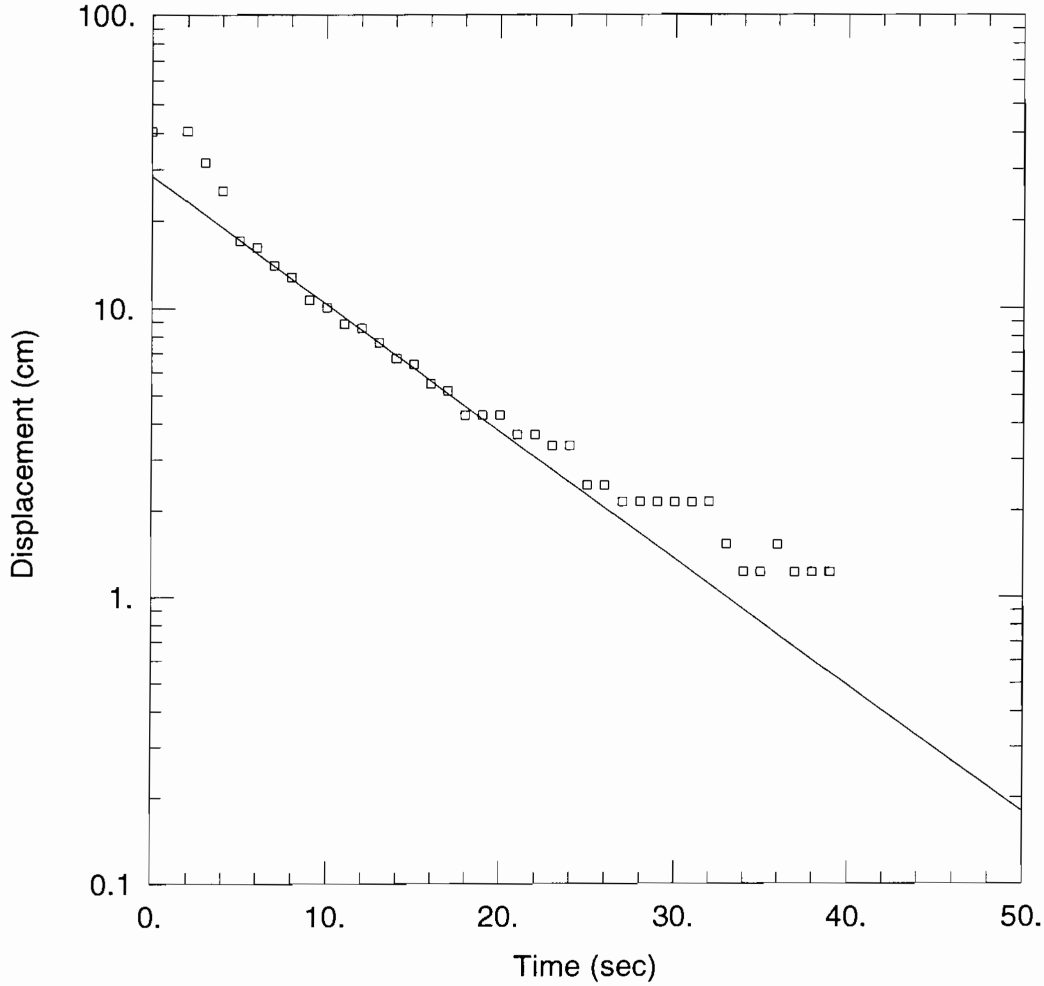
WELL DATA (MW-4)

Initial Displacement: 47.2 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 287. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.005541 cm/sec y0 = 38.83 cm



MW-4 FALLING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW4f2.aqt
Date: 01/11/02 Time: 09:14:50

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 287. cm Anisotropy Ratio (Kz/Kr): 1.

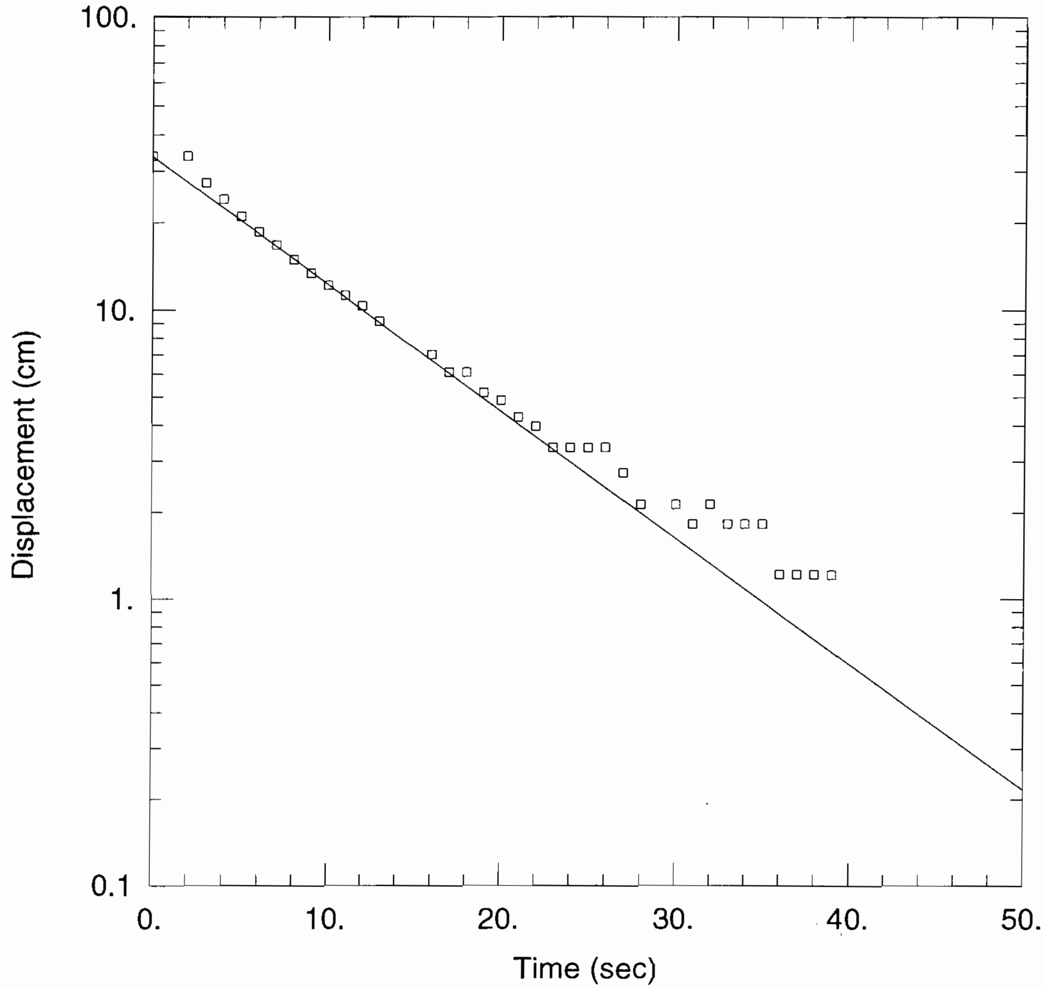
WELL DATA (MW-4)

Initial Displacement: 40.5 cm Water Column Height: 287. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.004998 cm/sec y0 = 28.44 cm



MW-4 RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW4r1.aqt
Date: 01/11/02 Time: 09:15:57

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 287. cm Anisotropy Ratio (Kz/Kr): 1.

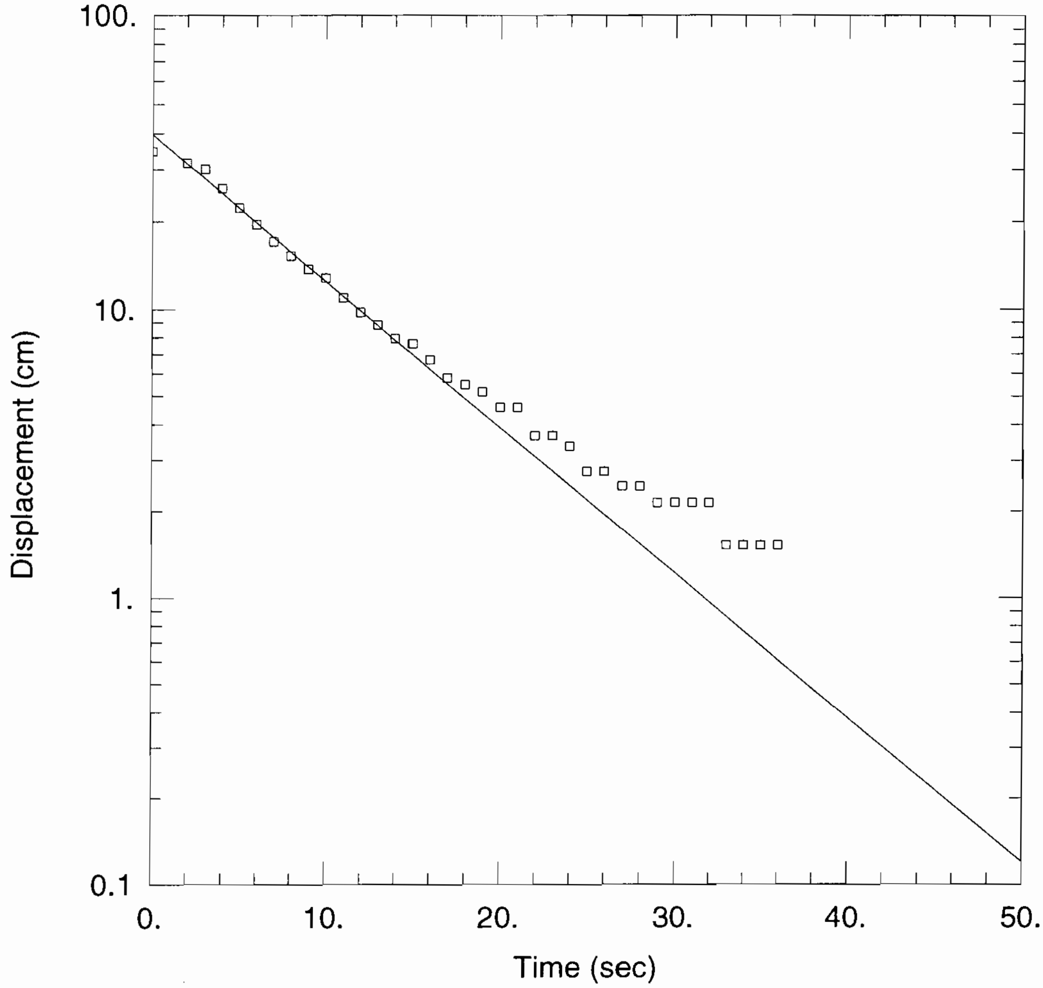
WELL DATA (MW-4)

Initial Displacement: 33.8 cm Water Column Height: 287. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.004981 cm/sec y0 = 33.66 cm



MW-4 RISING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW4r2.aqt
Date: 01/11/02 Time: 09:16:29

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

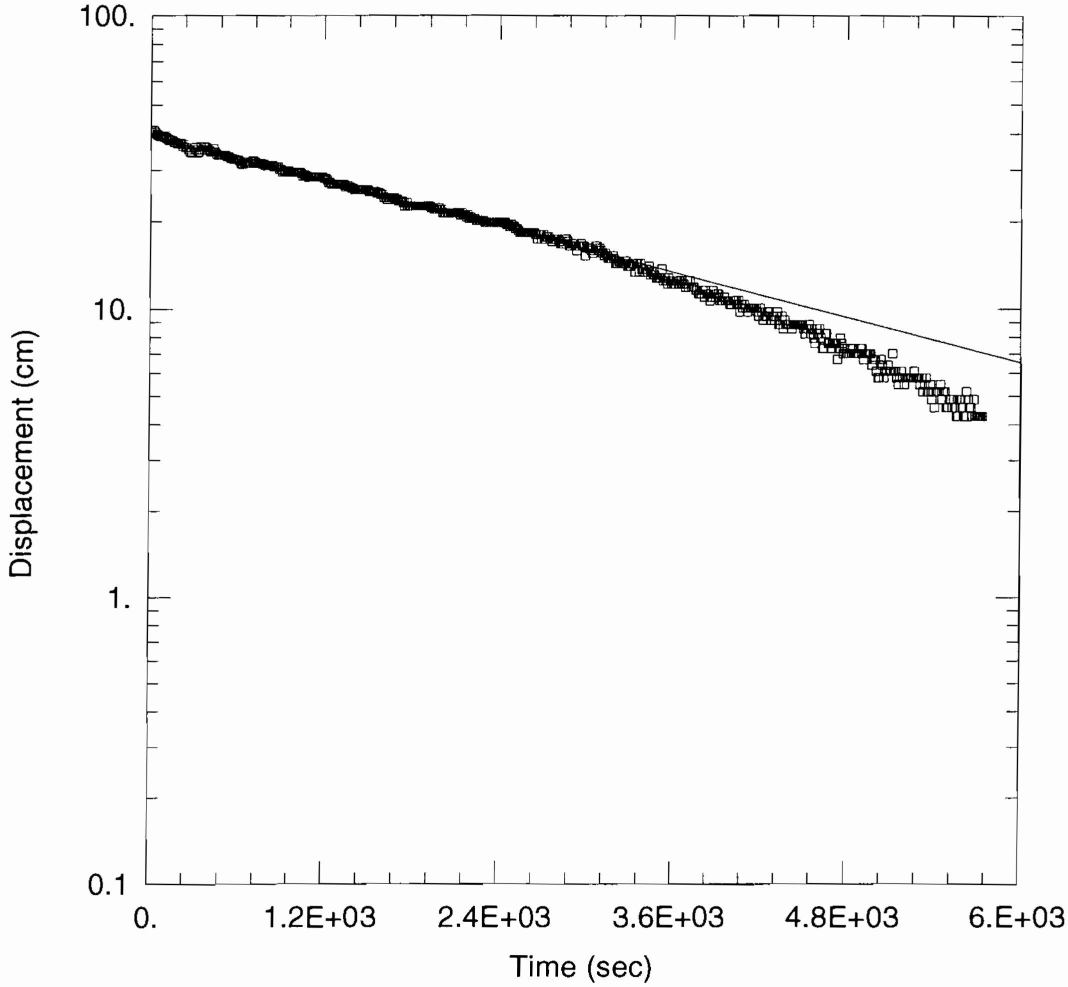
Saturated Thickness: 287. cm Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-4)

Initial Displacement: 34.7 cm Water Column Height: 287. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.005723 cm/sec y0 = 39.77 cm



MW-4A FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW4Af1.aqt
Date: 01/11/02 Time: 09:18:34

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 210. cm Anisotropy Ratio (Kz/Kr): 1.

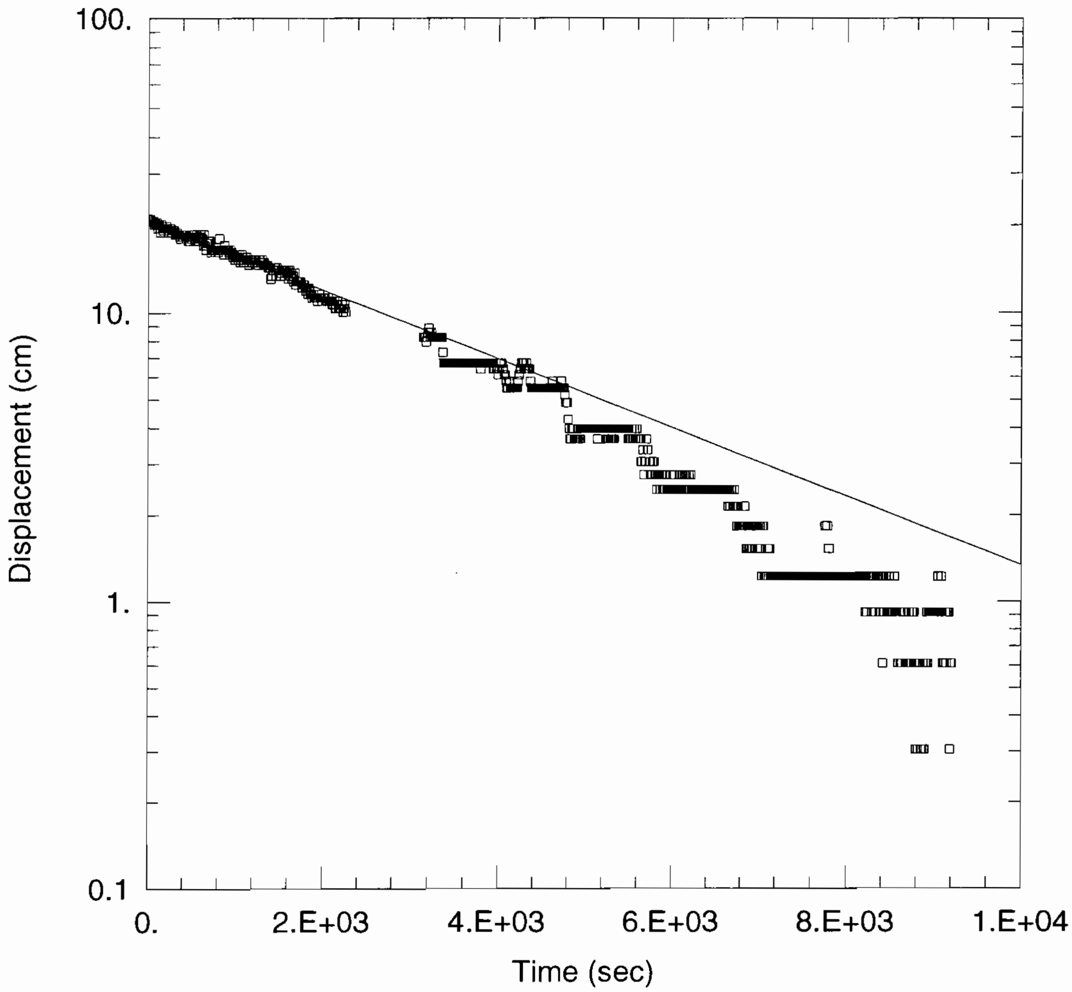
WELL DATA (MW-4A)

Initial Displacement: 41.1 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 568. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 1.693E-05 cm/sec
y0 = 39.28 cm



MW-4A RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW4Ar1.aqt
Date: 01/11/02
Time: 09:19:29

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 210. cm
Anisotropy Ratio (Kz/Kr): 1.

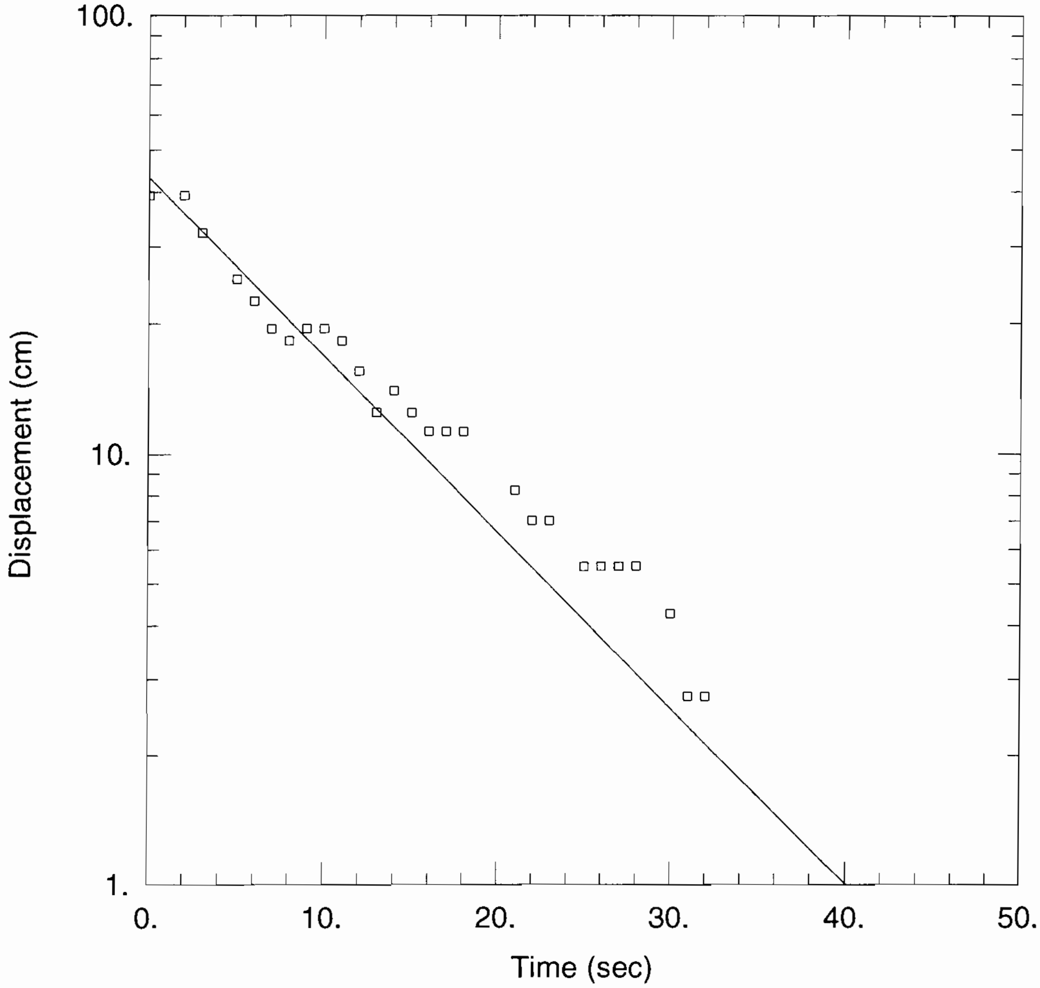
WELL DATA (MW-4A)

Initial Displacement: 21. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 568. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

K = 1.554E-05 cm/sec
y0 = 20.79 cm



MW-5 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW5f1.aqt
Date: 01/11/02
Time: 09:21:27

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 276. cm
Anisotropy Ratio (Kz/Kr): 1.

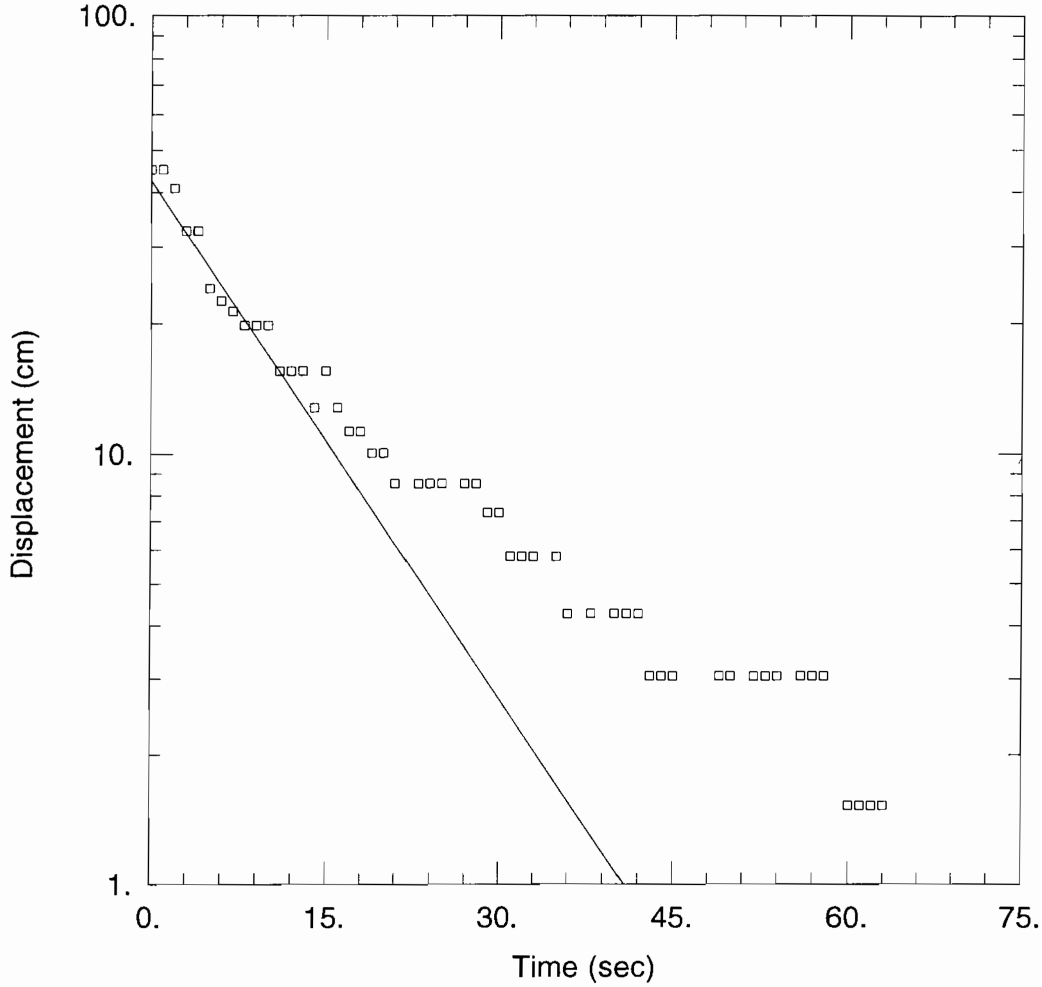
WELL DATA (MW-5)

Initial Displacement: 39.3 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 276. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.004594 cm/sec
y0 = 43.18 cm



MW-5 FALLING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW5f2.aqt
Date: 01/11/02 Time: 09:23:32

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 276. cm Anisotropy Ratio (Kz/Kr): 1.

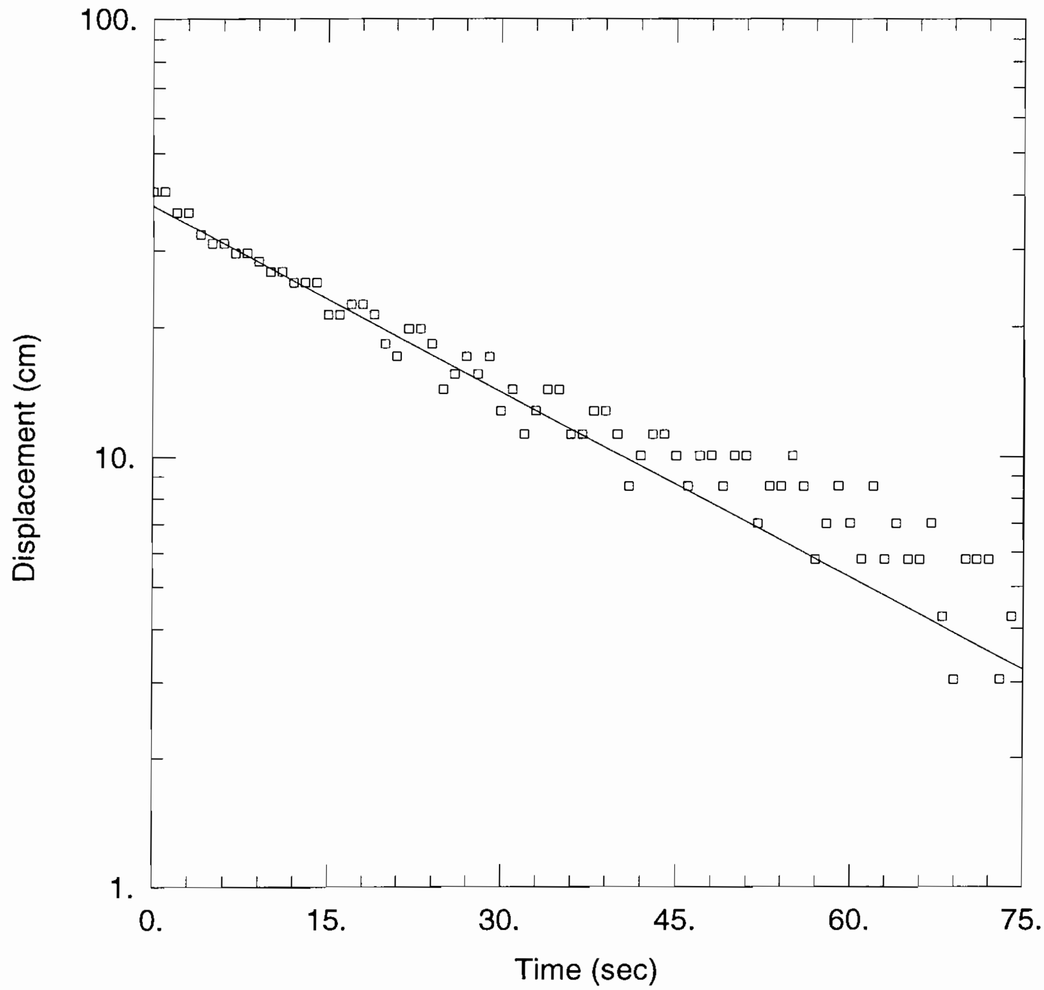
WELL DATA (MW-5)

Initial Displacement: 45.1 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 276. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.004484 cm/sec y0 = 42.48 cm



MW-5 RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2000Telog\MW5r1.aqt
Date: 01/11/02 Time: 09:24:15

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

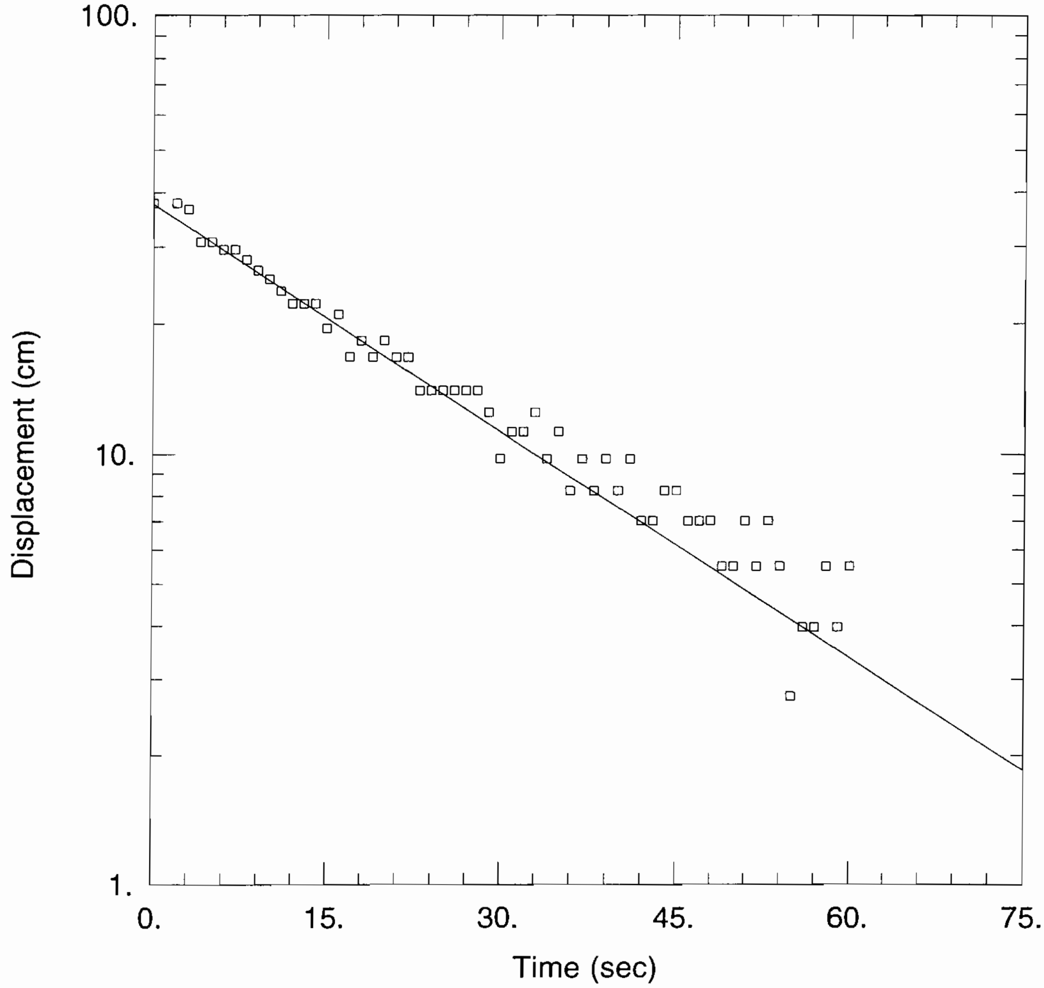
Saturated Thickness: 276. cm Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-5)

Initial Displacement: 40.9 cm Water Column Height: 276. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.001608 cm/sec y0 = 37.95 cm



MW-5 RISING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2000Telog\MW5r2.aqt
Date: 01/11/02 Time: 09:24:49

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

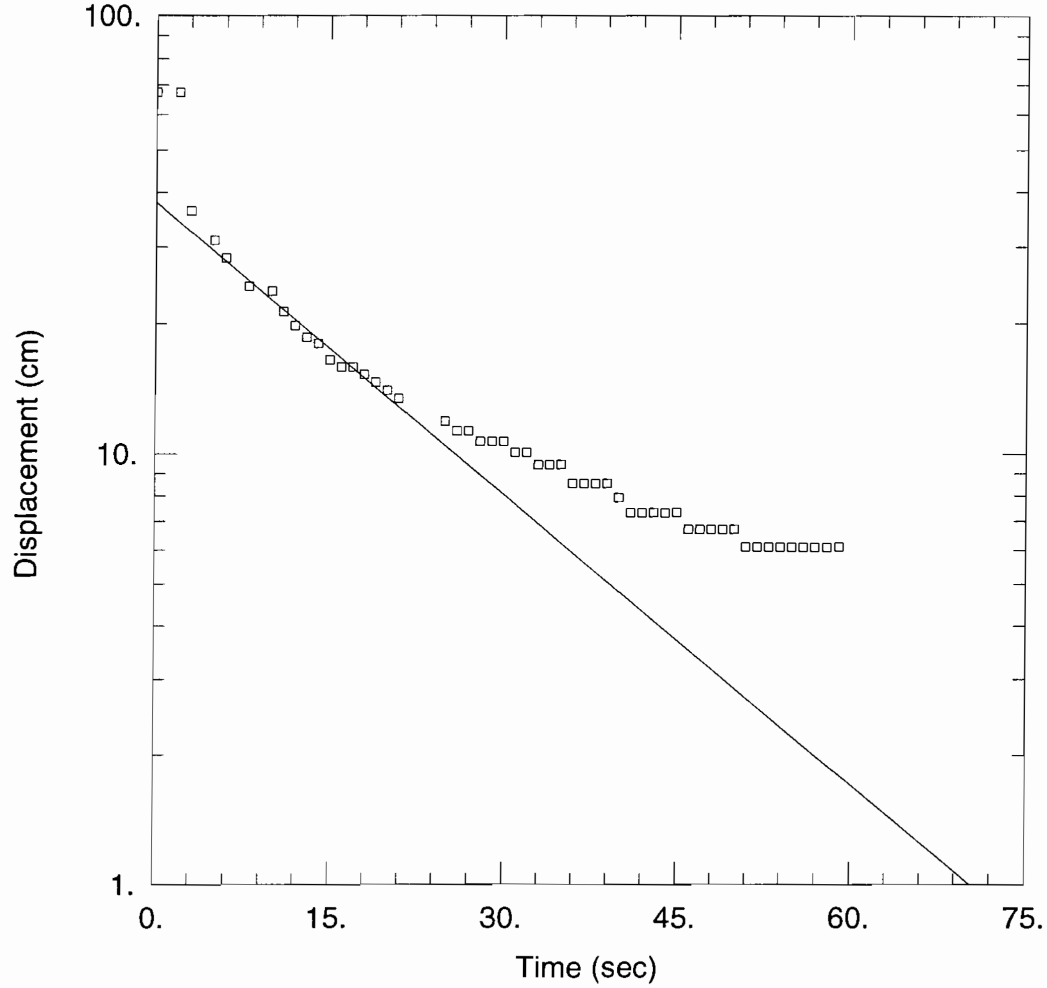
Saturated Thickness: 276. cm
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-5)

Initial Displacement: 37.8 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 276. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.001963 cm/sec
y0 = 37.59 cm



MW-6 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\jsv_slugtests\MW-6f1.aqt
Date: 01/11/02 Time: 13:56:10

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 306. cm Anisotropy Ratio (Kz/Kr): 1.

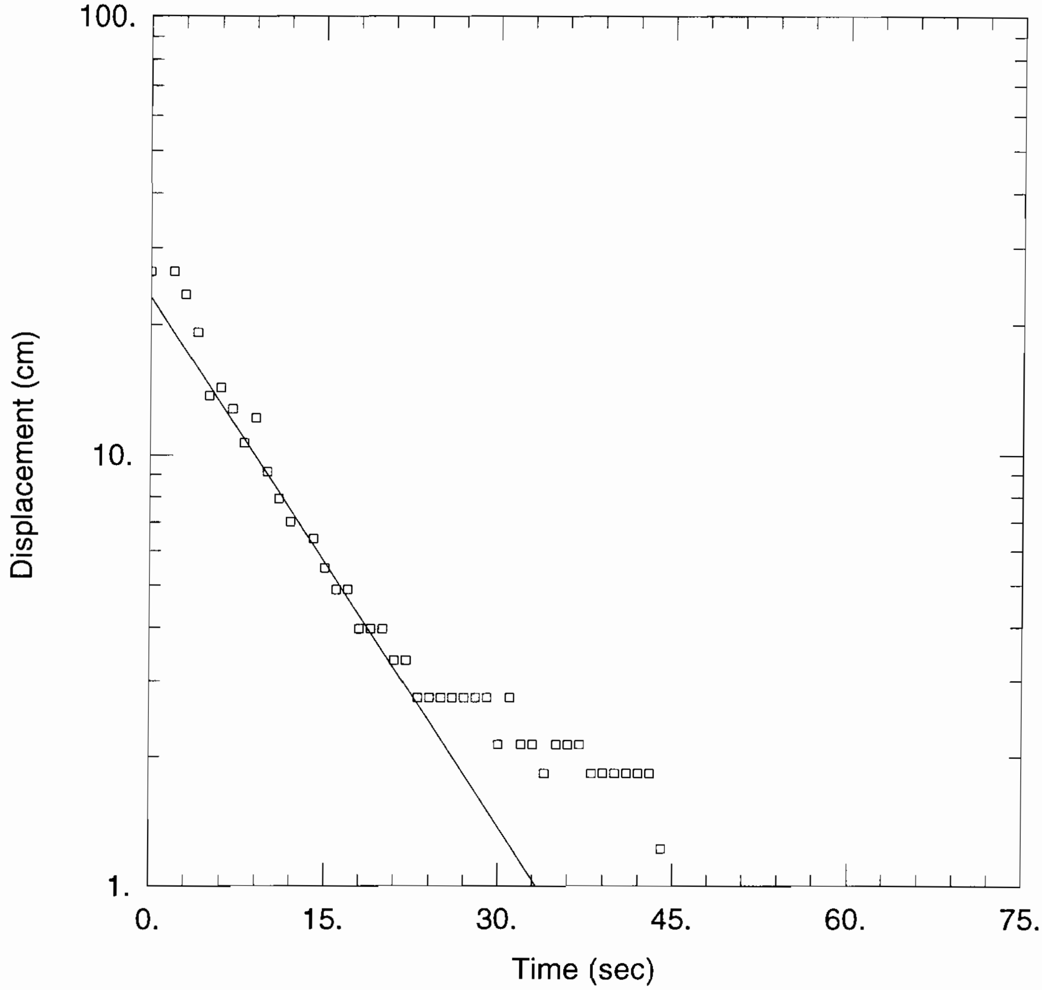
WELL DATA (MW-6)

Initial Displacement: 67.4 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 306. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.002586 cm/sec
y0 = 38.01 cm



MW-7 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\jsv_slugtests\MW-7f1.aqt
Date: 01/11/02 Time: 14:20:21

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

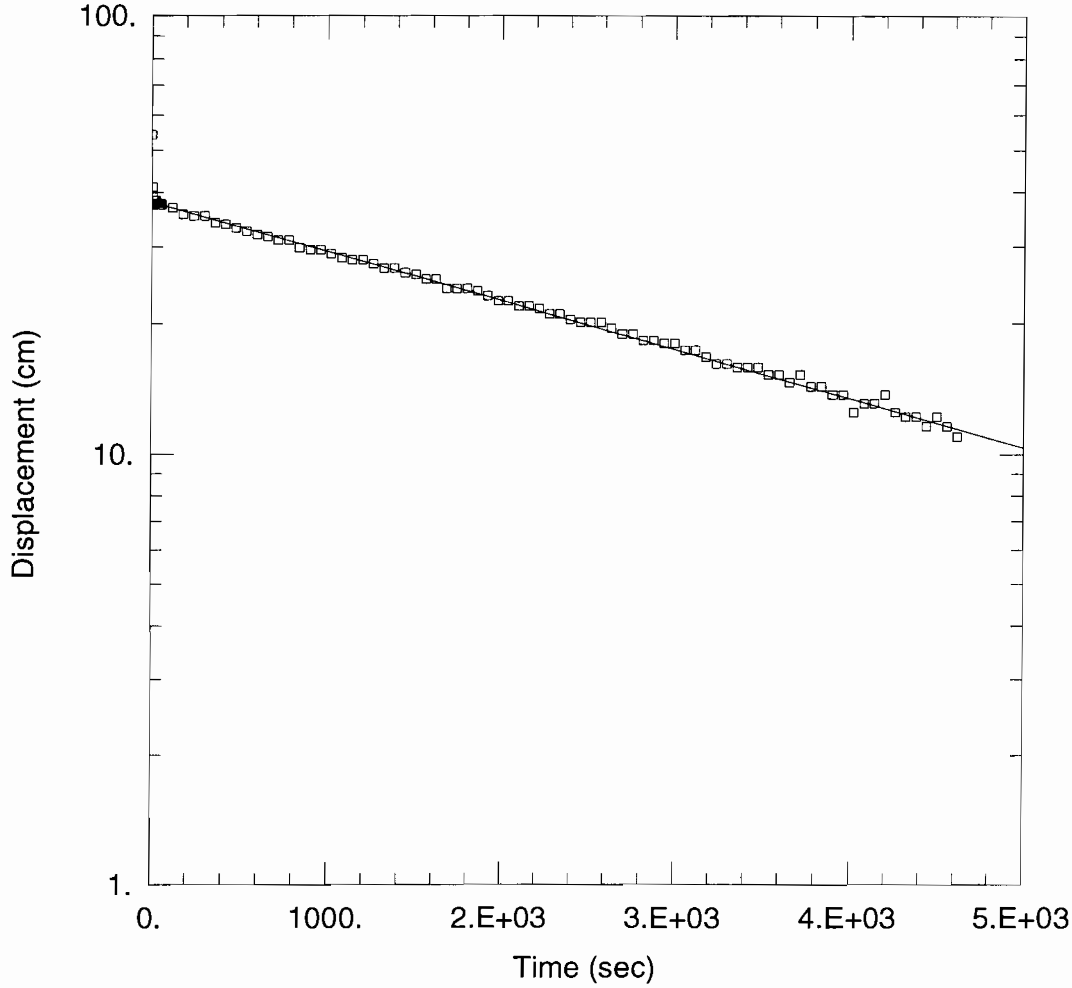
Saturated Thickness: 286. cm
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-7)

Initial Displacement: 26.5 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 286. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.004646 cm/sec
y0 = 23.2 cm



MW-7A FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\jsv_slugtests\MW-7Af1.aqt
Date: 01/11/02 Time: 14:07:23

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 521. cm
Anisotropy Ratio (Kz/Kr): 1.

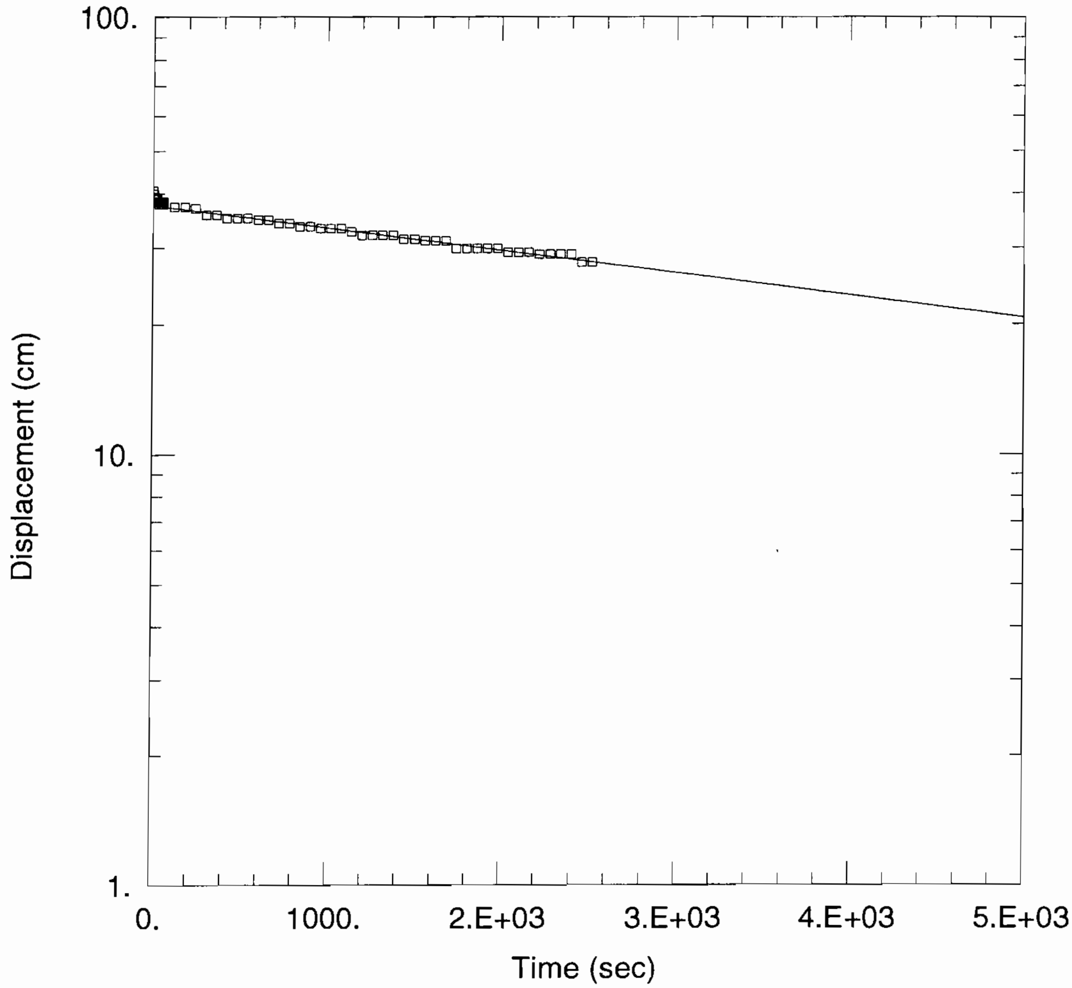
WELL DATA (MW-7A)

Initial Displacement: 54.3 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 521. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.452E-05 cm/sec
y0 = 38.02 cm



MW-7A RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\jsv_slugtests\MW-7AR1.aqt
Date: 01/11/02 Time: 14:09:09

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

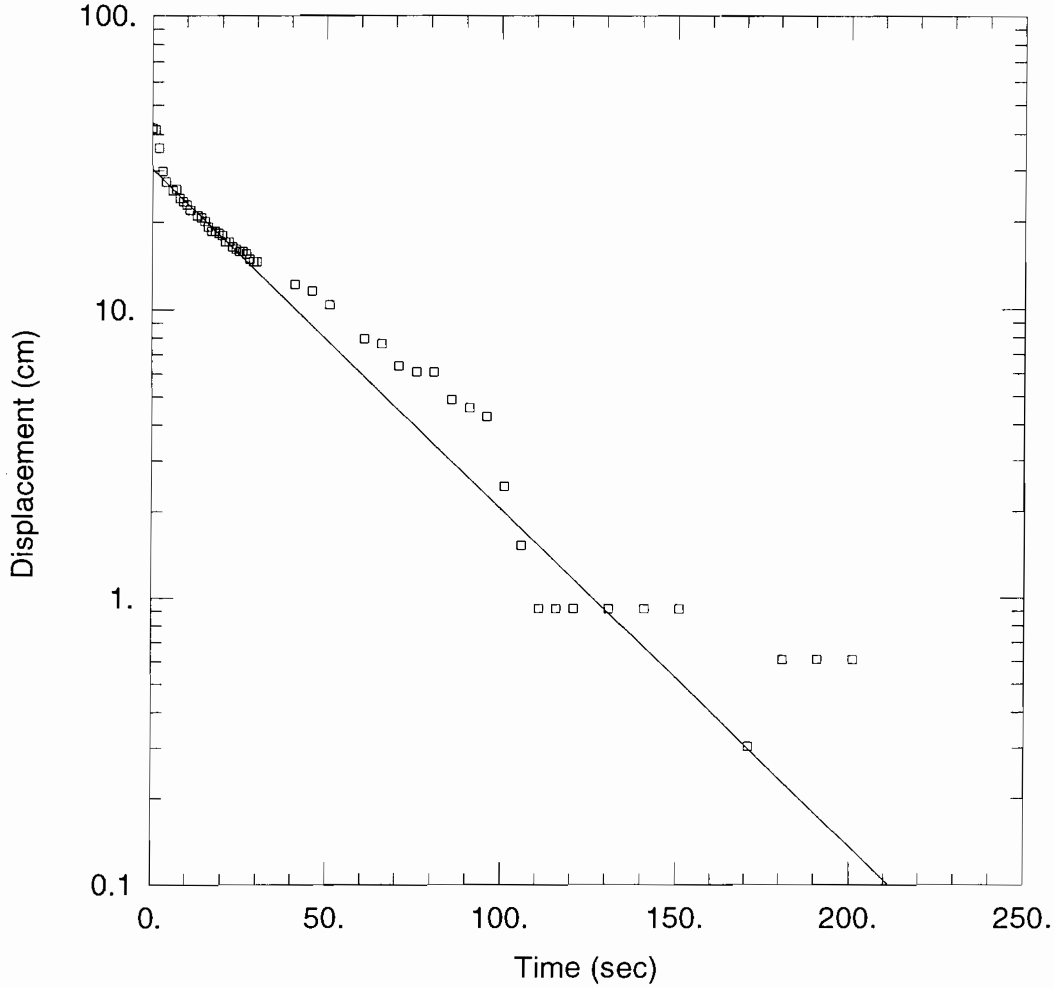
Saturated Thickness: 521. cm
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-7A)

Initial Displacement: 40.6 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 521. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 6.603E-06 cm/sec
y0 = 37.49 cm



MW-8 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-8f1.aqt
Date: 01/23/02 Time: 15:02:22

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

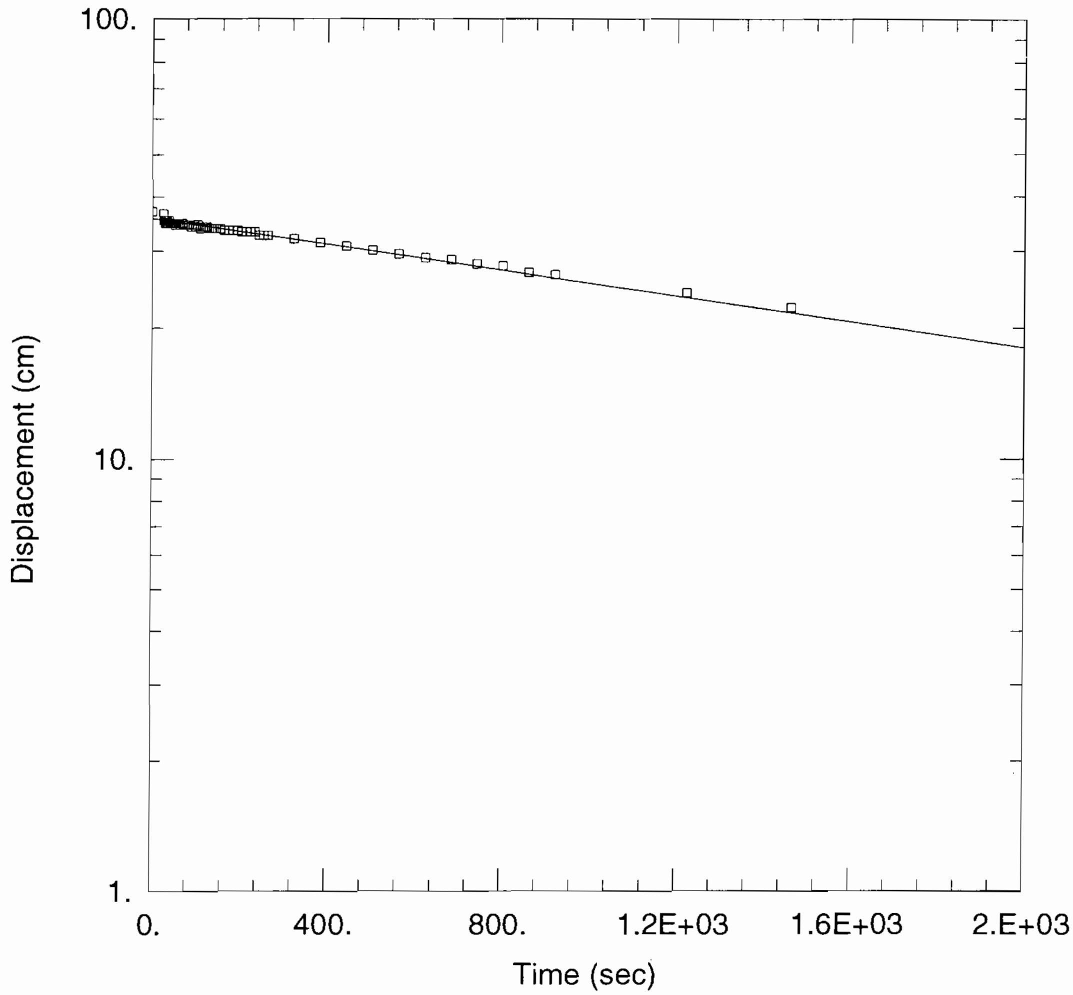
Saturated Thickness: 350. cm
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-8)

Initial Displacement: 42. cm
Water Column Height: 350. cm
Casing Radius: 2.54 cm
Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.001394 cm/sec
y0 = 30.5 cm



MW-8A FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-8af1.aqt
Date: 01/23/02 Time: 15:03:02

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 286. cm Anisotropy Ratio (Kz/Kr): 1.

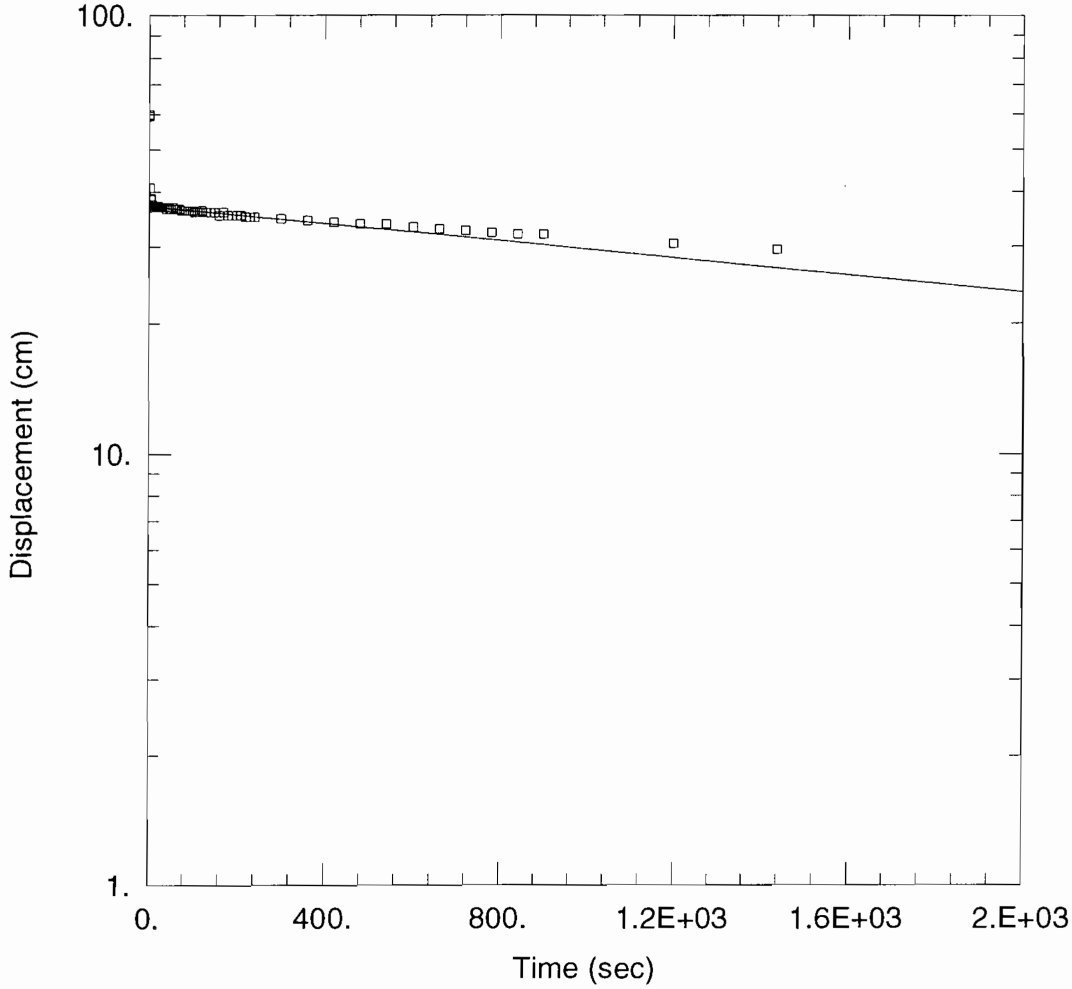
WELL DATA (MW-8A)

Initial Displacement: 37. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 559. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 1.932E-05 cm/sec y0 = 35.71 cm



MW-8A RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-8ar1.aqt
Date: 01/23/02 Time: 15:03:25

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 559. cm Anisotropy Ratio (Kz/Kr): 1.

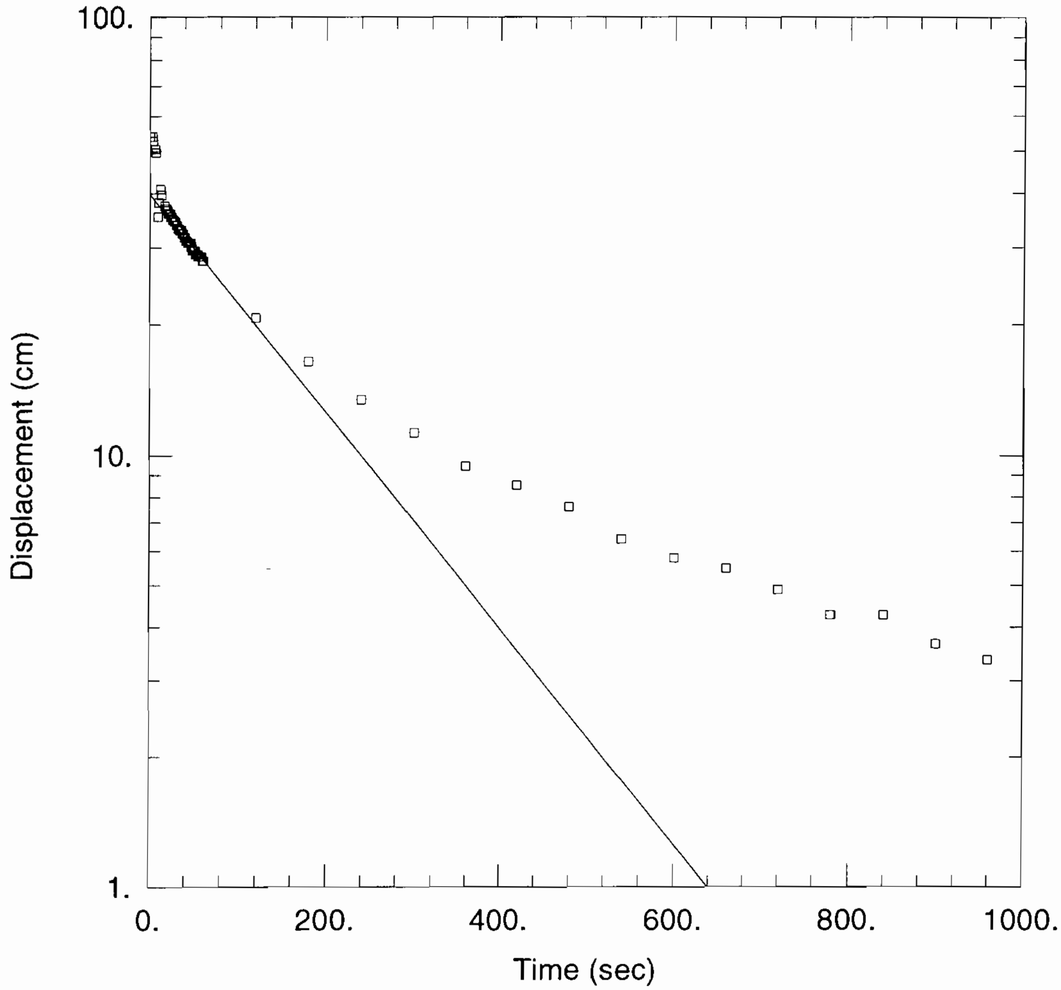
WELL DATA (MW-8A)

Initial Displacement: 60. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 559. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 1.274E-05 cm/sec y0 = 37.12 cm



MW-9 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\jsv_slugtests\MW-9Af1.aqt
Date: 01/11/02 Time: 14:13:12

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 587. cm Anisotropy Ratio (Kz/Kr): 1.

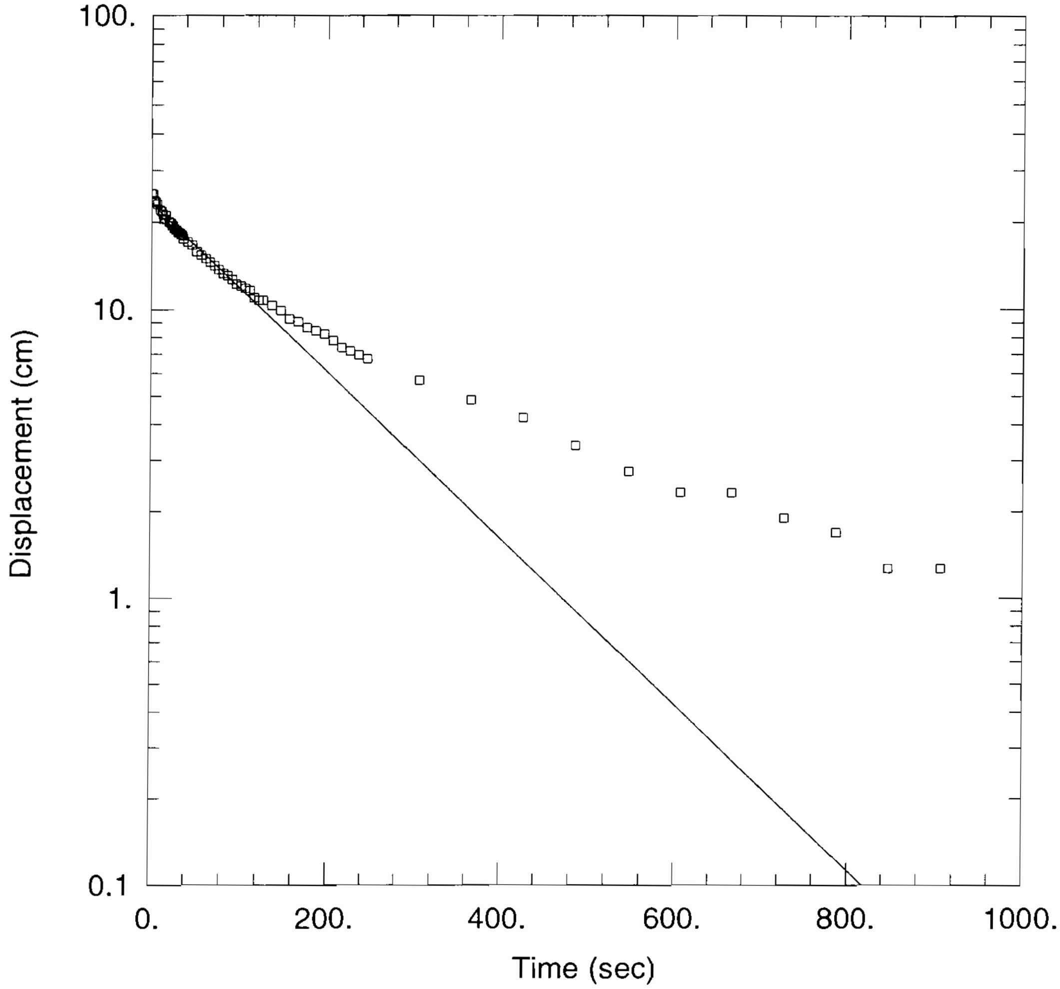
WELL DATA (MW-9A)

Initial Displacement: 54. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 587. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0003284 cm/sec y0 = 39.81 cm



MW-9A FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-9af1.aqt
Date: 01/23/02 Time: 14:47:23

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 565. cm Anisotropy Ratio (Kz/Kr): 1.

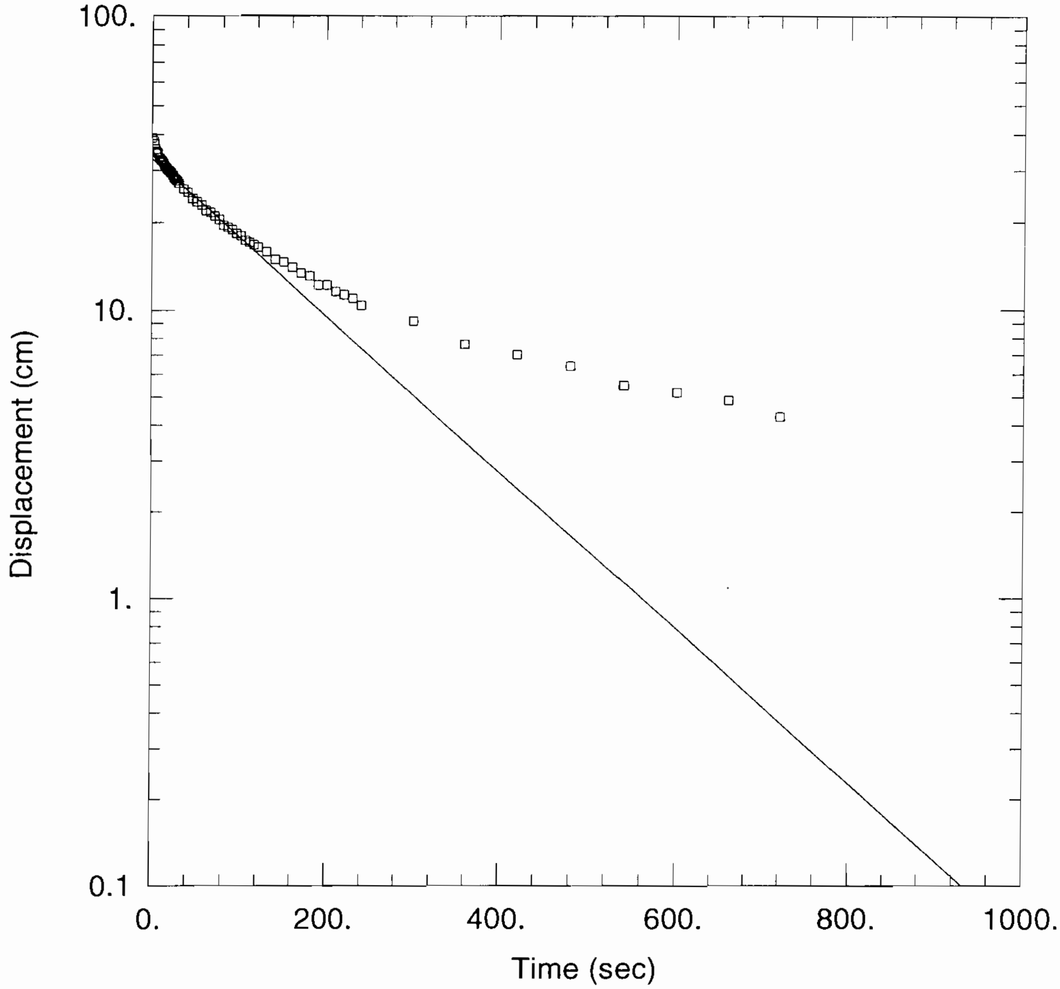
WELL DATA (MW-11)

Initial Displacement: 25. cm Water Column Height: 565. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0003769 cm/sec y0 = 23.15 cm



MW-9A RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-9ar1.aqt
Date: 01/23/02 Time: 14:49:10

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 565. cm Anisotropy Ratio (Kz/Kr): 1.

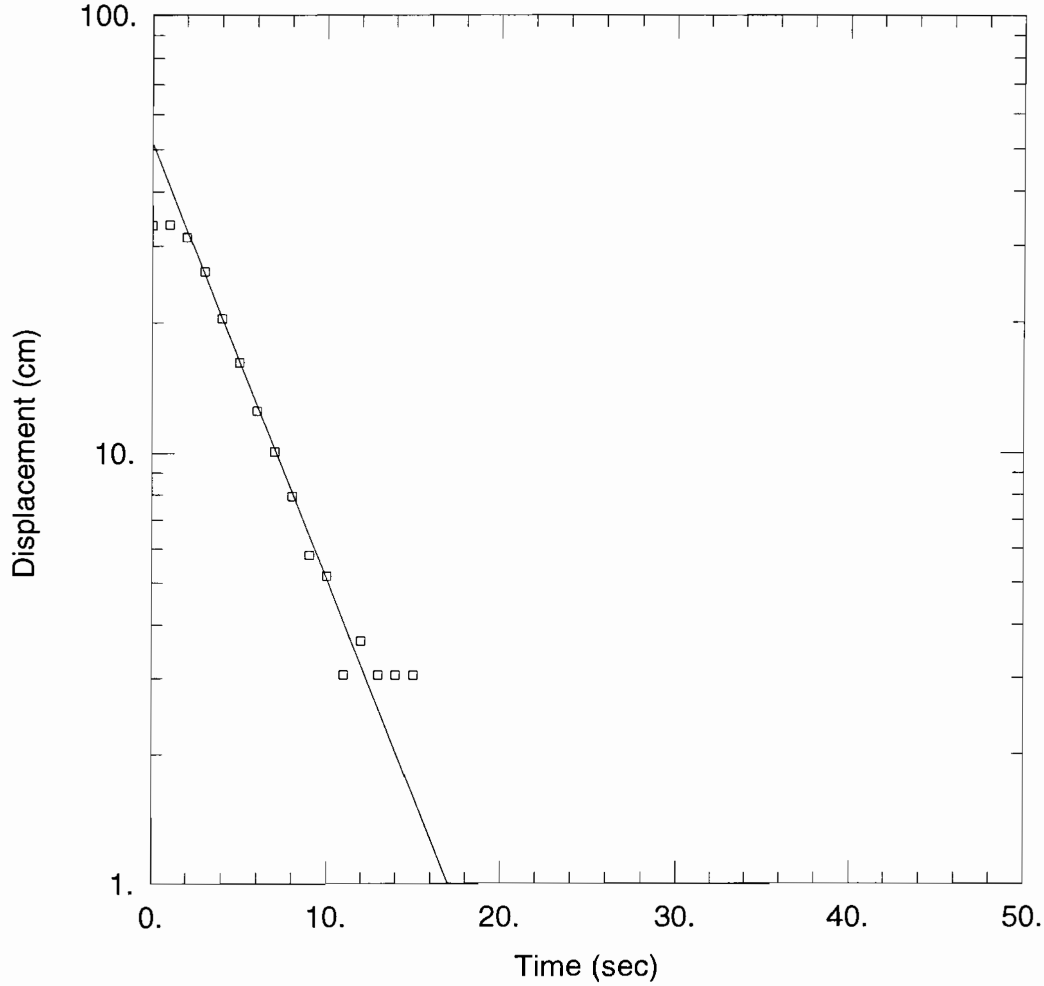
WELL DATA (MW-11)

Initial Displacement: 39. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 565. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0003523 cm/sec y0 = 33.01 cm



MW-11 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\jsv_slugtests\MW-11f1.aqt
Date: 01/11/02 Time: 14:18:30

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 288. cm Anisotropy Ratio (Kz/Kr): 1.

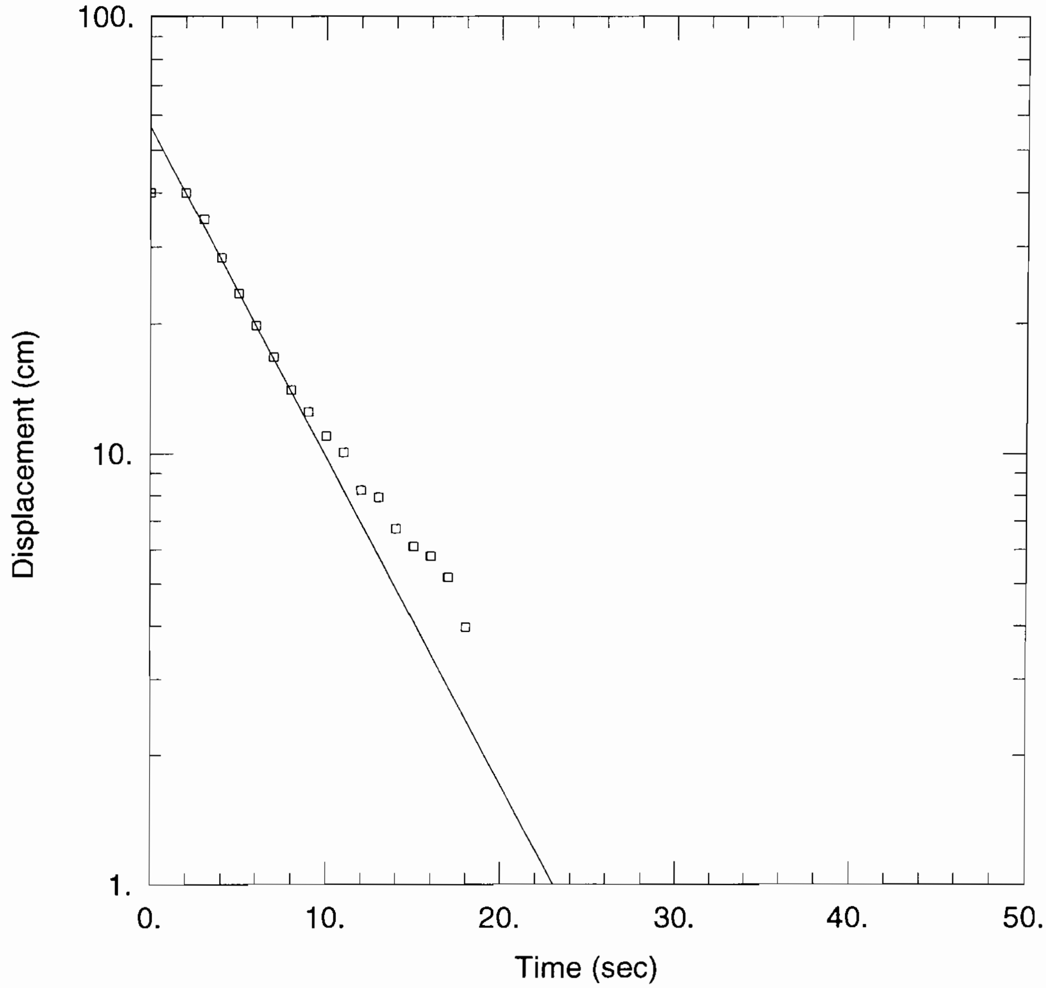
WELL DATA (MW-11)

Initial Displacement: 33.5 cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 288. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.01145 cm/sec y0 = 51.92 cm



MW-11 RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\jsv_slugtests\MW-11r1.aqt
Date: 01/11/02 Time: 14:19:47

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 288. cm Anisotropy Ratio (Kz/Kr): 1.

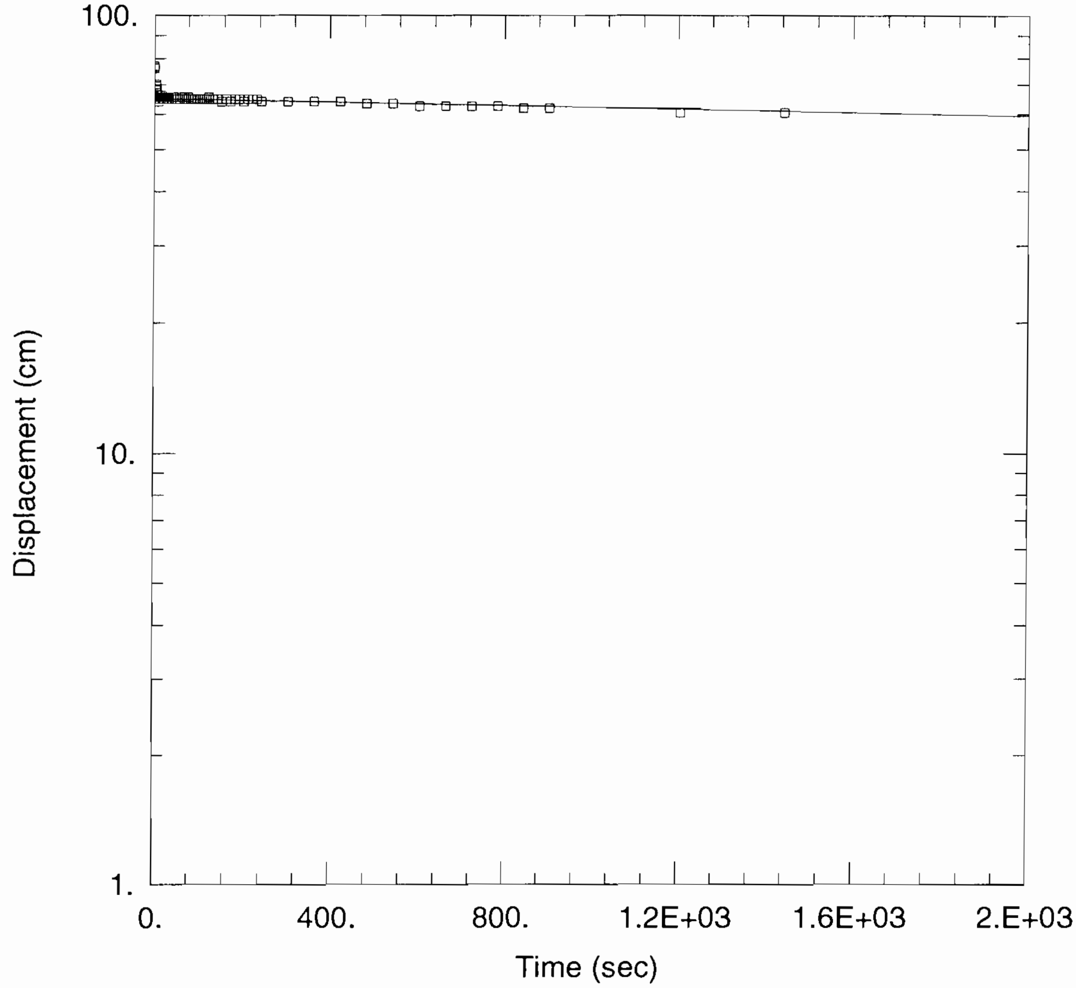
WELL DATA (MW-11)

Initial Displacement: 40. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 288. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.008647 cm/sec y0 = 56.59 cm



MW-11A FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-11aF1.aqt
Date: 01/23/02 Time: 15:03:57

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

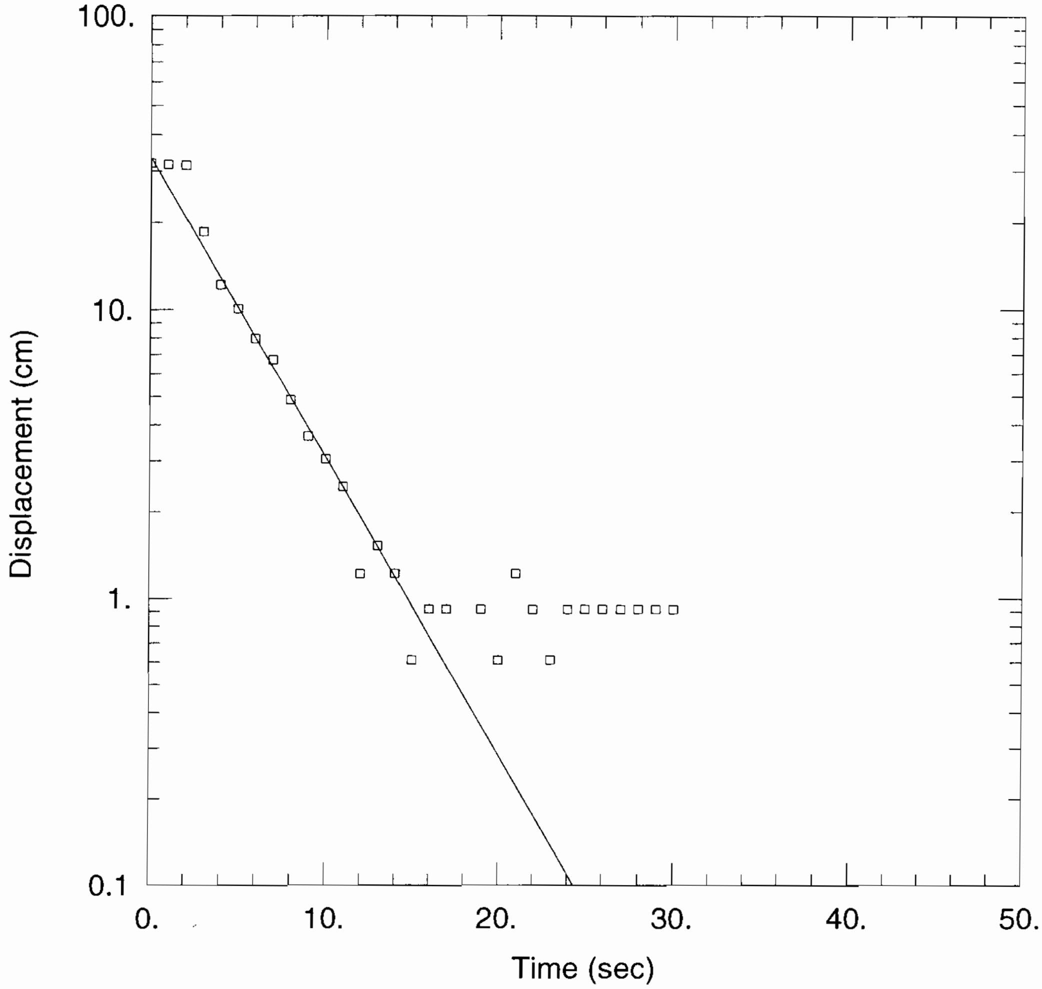
Saturated Thickness: 540. cm
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-11A)

Initial Displacement: 77. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 540. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 2.504E-06 cm/sec
y0 = 65.06 cm



MW-12 FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-12f1.aqt
Date: 01/23/02 Time: 14:32:19

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 302. cm Anisotropy Ratio (Kz/Kr): 1.

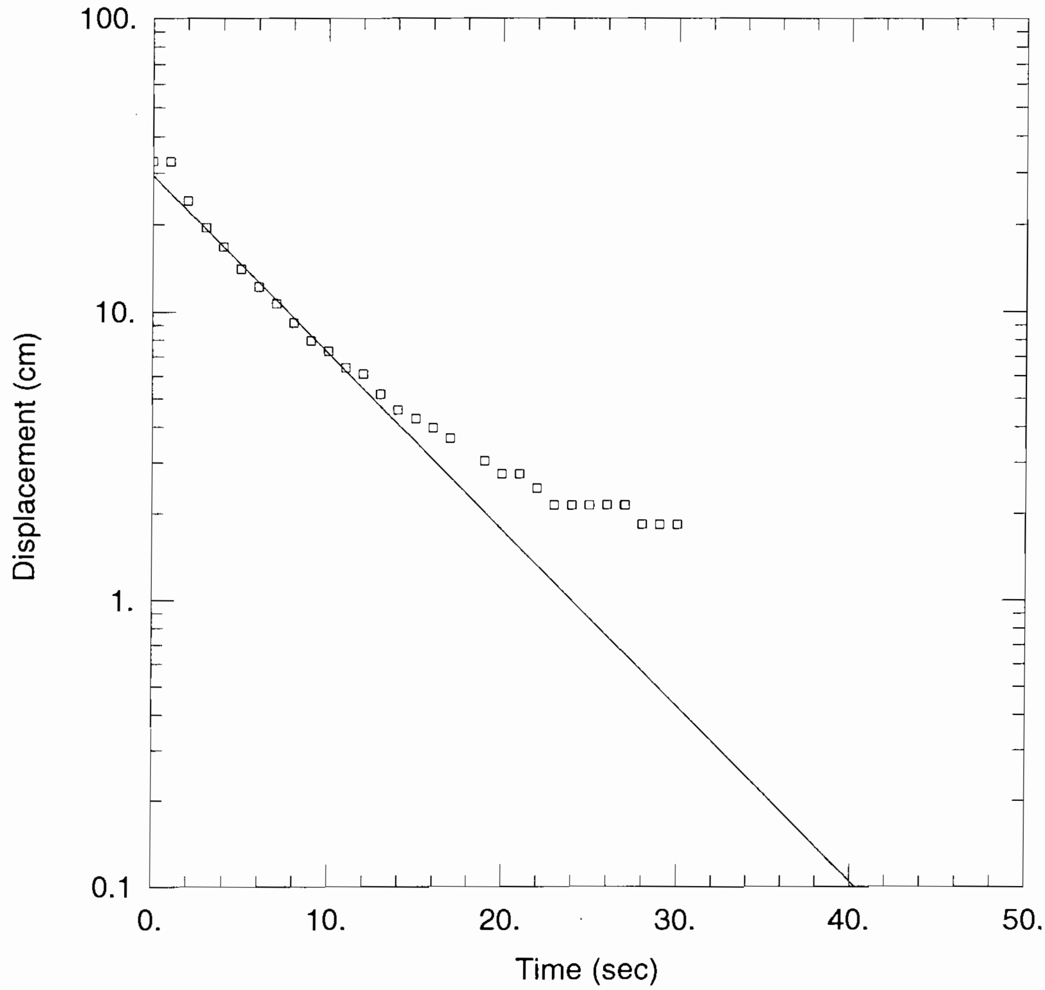
WELL DATA (MW-12)

Initial Displacement: 32. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 302. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.01189 cm/sec
y0 = 33.52 cm



MW-12 RISING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-12r1.aqt
Date: 01/23/02 Time: 14:34:27

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 302. cm Anisotropy Ratio (Kz/Kr): 1.

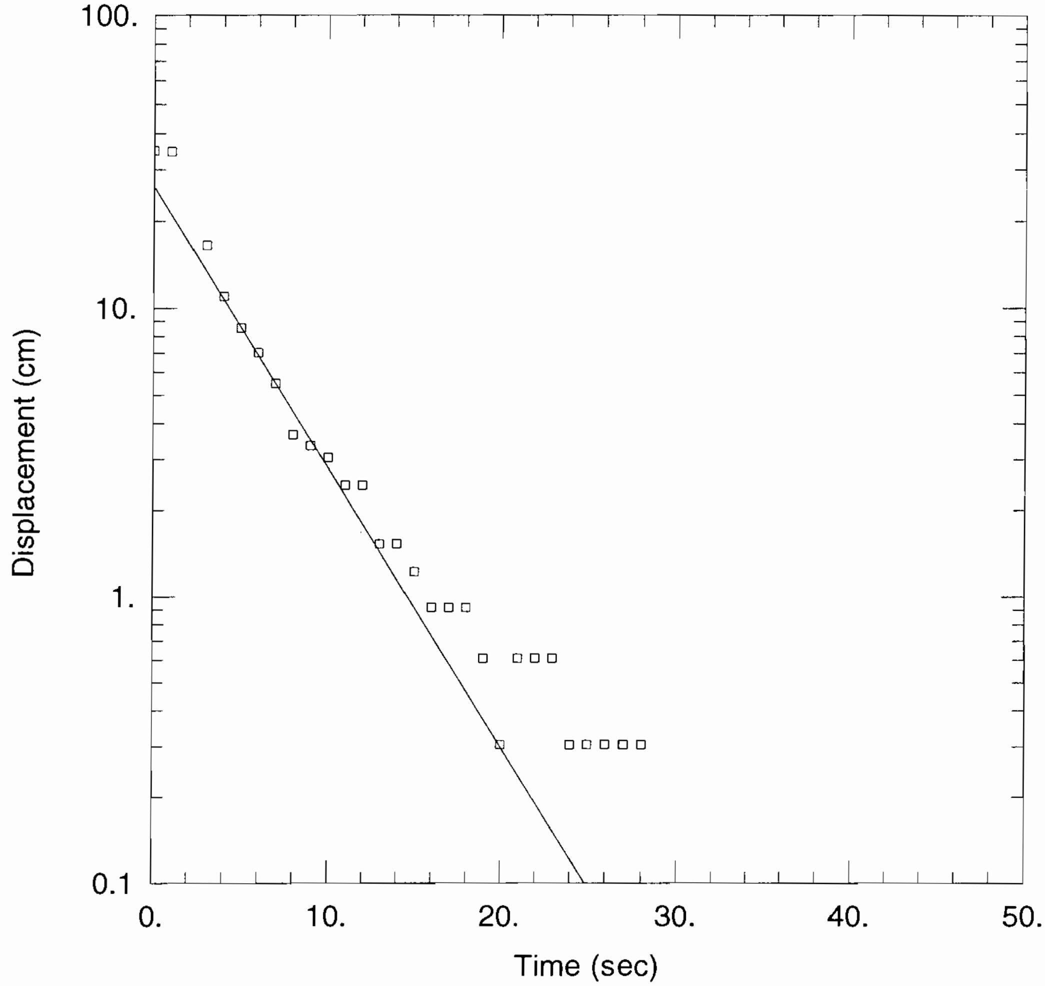
WELL DATA (MW-12)

Initial Displacement: 33. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 302. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.007039 cm/sec y0 = 29.5 cm



MW-12 FALLING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-12f2.aqt
Date: 01/23/02 Time: 14:37:41

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 302. cm Anisotropy Ratio (Kz/Kr): 1.

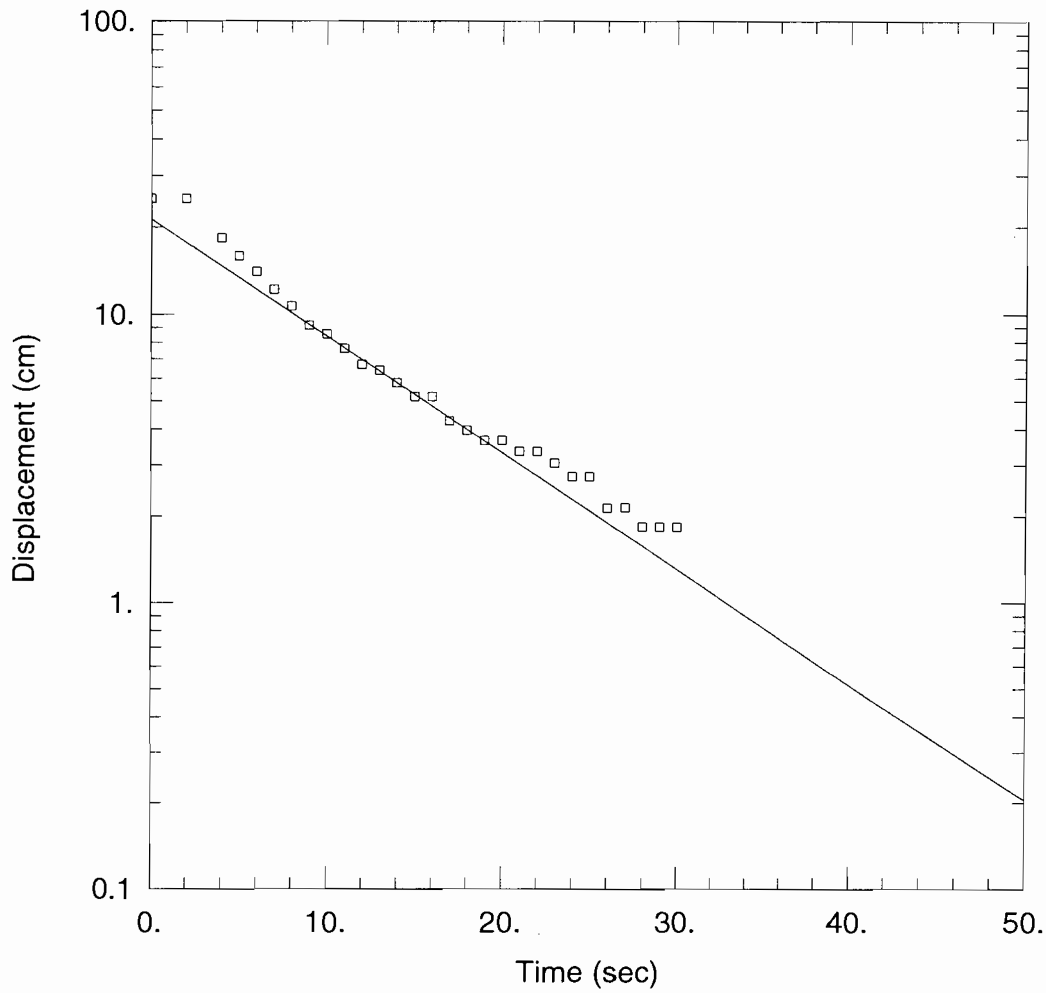
WELL DATA (MW-12)

Initial Displacement: 35. cm Water Column Height: 302. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.01117 cm/sec y0 = 26.3 cm



MW-12 RISING HEAD SLUG TEST NO. 2

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-12r2.aqt
Date: 01/23/02 Time: 14:40:10

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 302. cm
Anisotropy Ratio (Kz/Kr): 1.

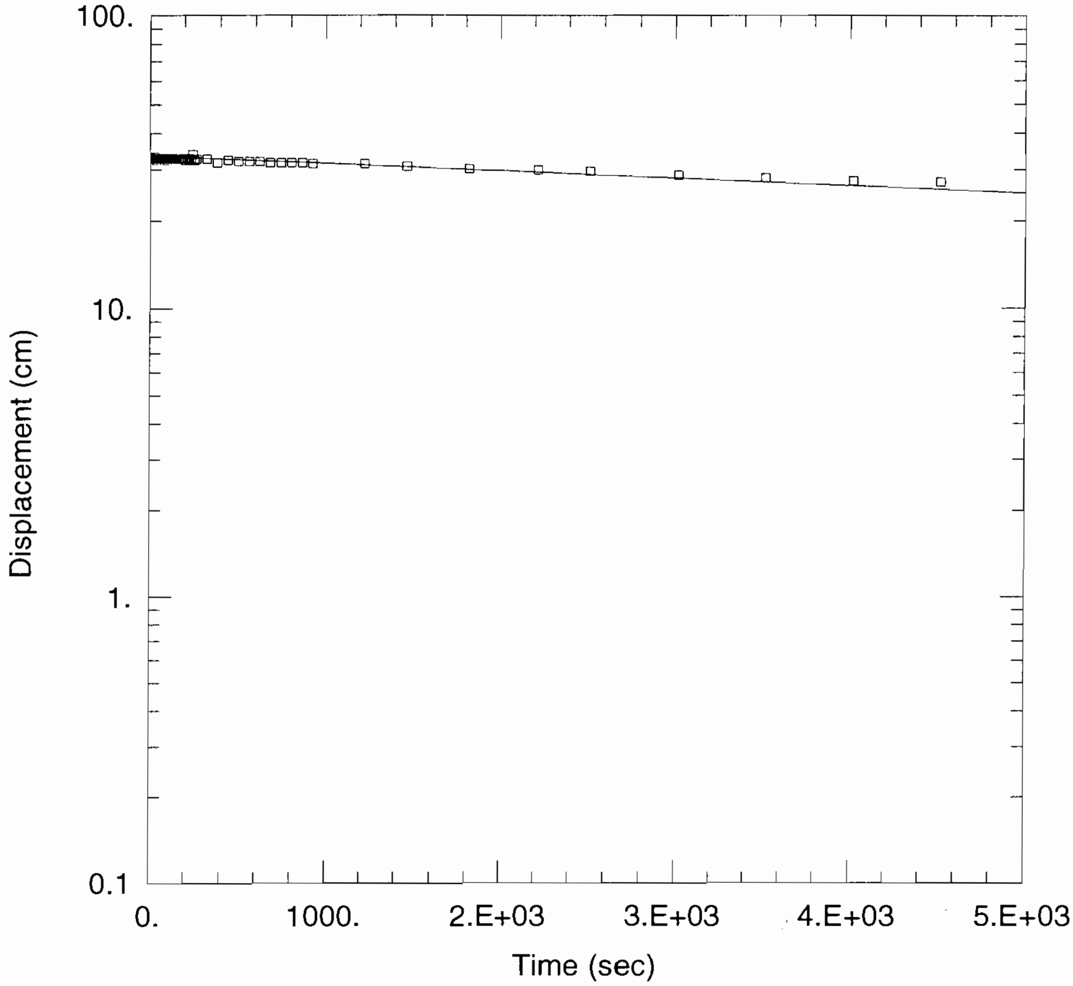
WELL DATA (MW-12)

Initial Displacement: 25. cm
Casing Radius: 2.54 cm
Screen Length: 152.4 cm
Water Column Height: 302. cm
Wellbore Radius: 10.16 cm

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.004638 cm/sec
y0 = 21.31 cm



MW-12A FALLING HEAD SLUG TEST NO. 1

Data Set: P:\10000\15867\Y2001Telog\Jan02files\MW-12af1.aqt
Date: 01/23/02 Time: 14:43:05

PROJECT INFORMATION

Company: CRA
Client: Seneca Street
Project: 15867
Test Location: Buffalo, NY
Test Date: 09/26/00

AQUIFER DATA

Saturated Thickness: 743. cm Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-11)

Initial Displacement: 33. cm Water Column Height: 743. cm
Casing Radius: 2.54 cm Wellbore Radius: 10.16 cm
Screen Length: 152.4 cm

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 3.509E-06 cm/sec y0 = 33.48 cm

APPENDIX I

ANALYTICAL DATA AND VALIDATION REPORTS

Table 1
Analytical Results for USEPA Target Compound List VOCs
Seneca Street at Kingston Place
Buffalo, New York
FRC Project number 1240

	Sample	SB-1B,3	SB-3,4	SB-4,4	Sample	SB1B-GW	SB6-GW
	Depth (ft.)	8 to 12	12 to 16	12 to 16	Depth (ft.)	10	12
	Medium	soil	soil	soil	Medium	water	water
Compound	Units	7/21/99	7/21/99	7/21/99	Units	7/21/99	7/21/99
Volatiles SW-846							
Chloromethane	ug/Kg	<10	<10	<10	ug/L	<10	<10
Bromomethane	ug/Kg	<10	<10	<10	ug/L	<10	<10
Vinyl chloride	ug/Kg	<10	<10	<10	ug/L	<10	<10
Chloroethane	ug/Kg	<10	<10	<10	ug/L	<10	<10
Methylene chloride	ug/Kg	**20**	**7**	**3**	ug/L	<5	<5
Acetone	ug/Kg	<100	<100	**25**	ug/L	<100	<100
Carbon disulfide	ug/Kg	<5	<5	<5	ug/L	<5	<5
1,1-Dichloroethene	ug/Kg	<5	<5	<5	ug/L	<5	<5
1,1-Dichloroethane	ug/Kg	<5	<5	<5	ug/L	<5	<5
Trans-1,2-dichloroethene	ug/Kg	<5	<5	<5	ug/L	**2**	<5
Chloroform	ug/Kg	<5	<5	<5	ug/L	<5	<5
2-butanone	ug/Kg	<100	<100	<100	ug/L	<100	<100
1,2-Dichloroethane	ug/Kg	<5	<5	<5	ug/L	<5	<5
1,1,1-Trichloroethane	ug/Kg	<5	<5	<5	ug/L	<5	<5
Carbon tetrachloride	ug/Kg	<5	<5	<5	ug/L	<5	<5
Vinyl acetate	ug/Kg	<50	<50	<50	ug/L	<50	<50
Bromodichloromethane	ug/Kg	<5	<5	<5	ug/L	<5	<5
1,2-dichloropropane	ug/Kg	<5	<5	<5	ug/L	<5	<5
cis-1,3-dichloropropene	ug/Kg	<5	<5	<5	ug/L	<5	<5
Tricholorethene	ug/Kg	**2**	**54**	**12**	ug/L	**537**	<5
Benzene	ug/Kg	<5	<5	<5	ug/L	<5	<5
Dibromochloromethane	ug/Kg	<5	<5	<5	ug/L	<5	<5
trans-1,3-dichloropropene	ug/Kg	<5	<5	<5	ug/L	<5	<5
~~1,1,2-trichloroethane~~	~~ug/Kg~~	~~<5~~	~~<5~~	~~<5~~	~~ug/L~~	~~<5~~	~~<5~~
2-chloroethylvinyl ether	ug/Kg	<10	<10	<10	ug/L	<10	<10
Bromoform	ug/Kg	<5	<5	<5	ug/L	<5	<5
4-methyl-2-pentanone	ug/Kg	<50	<50	<50	ug/L	<50	<50
2-hexanone	ug/Kg	<50	<50	<50	ug/L	<50	<50
Tetrachloroethene	ug/Kg	**15**	**12000**	**421**	ug/L	**12600**	<5
1,1,2,2-tetrachloroethane	ug/Kg	<5	<5	<5	ug/L	<5	<5
Toluene	ug/Kg	**3**	<5	<5	ug/L	<5	<5
Chlorobenzene	ug/Kg	<5	<5	<5	ug/L	<5	<5
Ethylbenzene	ug/Kg	<5	<5	<5	ug/L	<5	<5
Styrene	ug/Kg	<5	<5	<5	ug/L	<5	<5
m,p-xylene	ug/Kg	**2**	<5	<5	ug/L	<5	<5
o-xylene	ug/Kg	<5	<5	<5	ug/L	<5	<5

Values in bold indicate the presence of the compound above the method detection limit.

Table 2
Analytical Results for NYSDEC Petroleum-Contaminated Soil Guidance Policy VOCs, SVOCs and Lead
Seneca Street at Kingston Place
Buffalo, New York
FRC Project number 1240

	Sample	SB-5,4	SB-6,3	SB-7,3	SB-8,2	SB-9,1	SB-10, 3	Sample	SB1B-GW	SB6-GW
	Depth (ft.)	12 to 16	8 to 12	8 to 12	4 to 8	0 to 4	8 to 12	Depth (ft.)		
	Medium	soil	soil	soil	soil	soil	soil	Medium	water	water
Compound	Units	7/21/99	7/21/99	7/21/99	7/21/99	7/21/99	7/21/99	Units	7/21/99	7/21/99
Volatiles - TCLP 8021 - NYDEC										
Methyl-t-butylether	ug/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ug/L	<5.0	<5.0
Benzene	ug/Kg	<1.0	<1.0	<1.0	**5.1**	<1.0	**2.7**	ug/L	<0.7	<0.7
Toluene	ug/Kg	<1.0	**1.5**	**2.7**	**7**	**1.9**	**5.9**	ug/L	<1.0	<1.0
Ethylbenzene	ug/Kg	<1.3	<1.3	<1.3	**1.8**	<1.3	<1.3	ug/L	**7.1**	<1.3
m,p-xylene	ug/Kg	<2.8	<2.8	<2.8	**7.5**	<2.8	**7.6**	ug/L	**5.3**	<2.8
o-xylene	ug/Kg	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	ug/L	**2.3**	<1.7
Isopropylbenzene	ug/Kg	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ug/L	<1.6	<1.6
n-propylbenzene	ug/Kg	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	ug/L	<1.7	<1.7
1,3,5-trimethylbenzene	ug/Kg	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	ug/L	<1.7	<1.7
tert-butylbenzene	ug/Kg	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	ug/L	<3.6	<3.6
1,2,4-trimethylbenzene	ug/Kg	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	ug/L	<1.4	<1.4
sec-butylbenzene	ug/Kg	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	ug/L	<2.2	<2.2
p-isopropyltoluene	ug/Kg	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	ug/L	<1.8	<1.8
n-butylbenzene	ug/Kg	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8	ug/L	<2.8	<2.8
Naphthalene	ug/Kg	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ug/L	<1.6	<1.6
Metals										
Lead	mg/Kg	10.6	16	14.3	13.2	488	11.9	mg/l	2.28	1.82
TCLP 8270 - NYDEC BN List										
Anthracene	ug/Kg	<330	<330	<330	**164**	<330	<330	ug/L	<10	<10
Fluorene	ug/Kg	<330	<330	<330	**89**	<330	<330	ug/L	<10	<10
Phenanthrene	ug/Kg	<330	**160**	<330	**979**	**2330**	<330	ug/L	<10	<10
Pyrene	ug/Kg	<330	**242**	<330	**1340**	**12600**	<330	ug/L	<10	<10
Acenaphthene	ug/Kg	<330	<330	<330	<330	<330	<330	ug/L	<10	<10
Benzo(a)anthracene	ug/Kg	<330	**89**	<330	**450**	**6340**	<330	ug/L	<10	<10
Fluoranthene	ug/Kg	<330	**258**	<330	**1280**	**8330**	<330	ug/L	<10	<10
Benzo(b)fluoranthene	ug/Kg	<330	**157**	<330	**513**	**6280**	<330	ug/L	<10	<10
Benzo(k)fluoranthene	ug/Kg	<330	**87**	<330	**475**	**4080**	<330	ug/L	<10	<10
Benzo(a)pyrene	ug/Kg	<330	**87**	<330	**520**	**6080**	<330	ug/L	<10	<10
Dibenzo(a,h)anthracene	ug/Kg	<330	<330	<330	<330	**1690**	<330	ug/L	<10	<10
Benzo(g,h,i)perylene	ug/Kg	<330	<330	<330	**328**	**3420**	<330	ug/L	<10	<10
Indeno(1,2,3-cd)pyrene	ug/Kg	<330	<330	<330	**275**	**3180**	<330	ug/L	<10	<10
Napthalene	ug/Kg	<330	<330	<330	<330	<330	<330	ug/L	<10	<10
Chrysene	ug/Kg	<330	**129**	<330	**514**	**6670**	<330	ug/L	<10	<10

Values in bold indicate the presence of the compound above the method detection limit

CRA
CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite Three
Niagara Falls, NY 14304

TELEPHONE: (716) 297-6150
FAX: (716) 297-2265

MEMORANDUM

TO:	Carol Dunnigan	REF. NO.:	15867
FROM:	Susan Scrocchi/amd/1	DATE:	December 15, 2000
RE:	**Data Usability Summary Report Site Investigation Parcel #2 – Seneca Street Buffalo, New York**		

INTRODUCTION

The following details an evaluation of results reported by Severn Trent Laboratories (STL) located in Pittsburgh, Pennsylvania, for 7 groundwater samples and 14 soil samples collected in September 2000 at the Parcel #2 Site located in Buffalo, New York.

The samples were analyzed for the following:

Parameters	*Methodology*
Target Compound List (TCL), Volatile Organic Compounds (VOCs)	SW-846 8260[1]
STARS Semi-Volatile Organic Compounds (SVOCs)	SW-846 8270[1]
TAL Metals	SW-846 6010/7470/7471[1]
Cyanide	SW-846 9012A[1]

A summary of the analytical results is presented in Tables 1A and 1B.

The Quality Assurance/Quality Control (QA/QC) criteria by which these data have been evaluated is outlined in the analytical methods, the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (February 1994, EPA 540/R-94/012), and "USEPA Contract Laboratory Program National Function Guidelines for Inorganic Data Review" (February 1994, EPA-540/R-94-013).

QA/QC REVIEW

Deliverables

The data package was complete as defined under the requirements for Analytical Services Protocol (ASP) Category B deliverables.

Methods referenced from:
[1] "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," USEPA SW-846, 3rd Edition (w/rev.)

Holding Times

Based on the methods, all required holding times were met.

Gas Chromatograph/Mass Spectrometer (GC/MS) Tuning – VOCs and SVOCs

Bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP) were analyzed at the beginning of each 12-hour calibration period and all tuning criteria were met.

Initial Calibration – VOCs and SVOCs

Initial multi-point calibrations were established for all compounds of interest as required. Acceptable instrument sensitivity (relative response factors (RRF) ≥ 0.05) was demonstrated for all compounds of interest, with the exception of bromomethane (0.045) and chloroethane (0.040). All associated positive results were qualified as estimated, and all non-detect results were rejected. Acceptable instrument linearity (percent relative standard deviation (%RSD) ≤ 30 percent) was demonstrated for all compounds of interest except 2-butanone, acetone, and 4-methyl-2-pentanone. All associated positive results were qualified as estimated, and all non-detect results were judged to be acceptable based on acceptable sensitivity.

Continuing Calibration – VOCs and SVOCs

Continuing calibration standards were analyzed and compared to the initial calibration curve every twelve hours. All continuing calibration RRFs were ≥ 0.05 with the exception of some acetone and bromomethane standards. All associated positive data were qualified as estimated, and all non-detect data were rejected due to poor analyte sensitivity. All percent differences (%D) were ≤ 25 percent, with the exception of slight increases and decreases in various VOC responses. All associated data were qualified as estimated to reflect the implied variability.

Initial and Continuing Calibration – Inorganic Parameters

Initial and continuing calibration verification (CCV) standards were analyzed at the proper frequency for the analyses of TAL metals and cyanide. All recoveries were acceptable.

Blanks

Method blanks were analyzed on a daily basis and were non-detect for the compounds of interest with the exception of low level concentrations of acetone and various metals. All associated results similar in concentration to the blanks were qualified as non-detect.

Two trip blanks and one rinse blank were collected with the samples and submitted for analyses. All trip blank results were non-detect for the VOCs of interest. Acetone, 2-butanone, and various metals were present in the rinse blank at low levels. Acetone results were previously qualified as non-detect due to the method blanks. All samples were non-detect for 2-butanone. All metals (except mercury) results were significantly greater than the rinse blank concentrations and would not have been affected. Some low level mercury results were qualified as non-detect.

Surrogate Spike Recoveries – VOCs and SVOCs

All samples blanks and QC samples were spiked with the proper surrogate compounds prior to sample preparation and analysis. All surrogate recoveries met the method criteria indicating acceptable analytical efficiency, with the exception of low SVOC surrogate recoveries for sample SB-15. The associated results were qualified as estimated to reflect the implied low bias.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

MS/MSD analyses were performed at the proper frequency for all parameters. All results were acceptable indicating good analytical accuracy and precision, with the exception of some outlying metal results. All antimony, cadmium, and magnesium results for the soil samples were qualified as estimated.

Internal Standards (IS) Performance – VOCs and SVOCs

All results were calculated correctly using the IS responses. Retention times for all ISs were within the specified window of ±30 seconds of the continuing calibration IS retention time. All IS areas were within the specified acceptance limit of 0.5 to 2 times the area of the continuing calibration standard, with the exception of some high SVOC IS recoveries. The associated positive results for samples MW-1, MW-3, and MW-4 were qualified as estimated. The associated non-detect results would not have been impacted.

Blank Spike (BS) Analyses

BSs were analyzed at the required frequency for all parameters and all recoveries were acceptable indicating adequate analytical efficiency.

Field Duplicate Analyses

Samples were collected in duplicate and submitted "blind" to the laboratory for analysis. The analytical results were comparable, demonstrating acceptable sampling and analytical precision for this study.

Target Compound Identification and Quantitation

All compound identifications were reviewed and were acceptable. Ion relative abundances of mass spectra for the reported compounds were checked against library reference spectra and were found to be acceptable. Spectra were provided for all reported positive identifications. Quantitation calculations were verified by random recalculation from the raw data.

OVERALL ASSESSMENT

All deliverables required by the project were present and the data package was complete. Based on the preceding evaluation, the data were acceptable for use with the qualifications and exceptions noted.

TABLE 1A

SOILS ANALYTICAL RESULTS SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

	Sample Location:	*MW-1*	*MW-2*	*MW-2*	*MW-2*	*MW-3*	*MW-3*	*MW-4*
	Sample ID:	*S-091400-KL-007*	*S-091500-KL-012*	*S-091500-KL-013*	*S-091500-KL-014*	*S-091400-KL-009*	*S-091400-KL-010*	*S-091500-KL-015*
	Sample Date:	*9/14/2000*	*9/15/2000*	*9/15/2000*	*9/15/2000*	*9/14/2000*	*9/14/2000*	*9/15/2000*
					Duplicate			
Parameter	***Unit***							
Volatiles								
1,1,1-Trichloroethane	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
1,1,2,2-Tetrachloroethane	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
1,1,2-Trichloroethane	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
1,1-Dichloroethane	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
1,1-Dichloroethene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
1,2-Dichloroethane	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
1,2-Dichloropropane	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
2-Butanone	ug/Kg	24 UJ	24 UJ	24 UJ	25 UJ	25 UJ	25 UJ	21 UJ
2-Hexanone	ug/Kg	24 UJ	24 UJ	24 UJ	25 UJ	25 UJ	25 UJ	21 UJ
4-Methyl-2-pentanone	ug/Kg	24 U	24 U	24 U	25 U	25 U	25 U	21 U
Acetone	ug/Kg	27 J	29 J	24 U	25 U	25 UJ	28 J	21 U
Benzene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Bromodichloromethane	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Bromoform	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Bromomethane	ug/Kg	R	R	R	R	R	R	R
Carbon disulfide	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Carbon tetrachloride	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Chlorobenzene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Chloroethane	ug/Kg	12 U	12 U	12 U	12 U	12 U	13 U	11 U
Chloroform	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Chloromethane	ug/Kg	12 U	12 U	12 U	12 U	12 U	13 U	11 U
cis-1,2-Dichloroethene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
cis-1,3-Dichloropropene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Dibromochloromethane	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Ethylbenzene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Methylene chloride	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Styrene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Tetrachloroethene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Toluene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	13
trans-1,2-Dichloroethene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
trans-1,3-Dichloropropene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Trichloroethene	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Vinyl chloride	ug/Kg	12 U	12 U	12 U	12 U	12 U	13 U	11 U
Xylene (total)	ug/Kg	6.0 U	6.0 U	6.1 U	6.2 U	6.2 U	6.3 U	5.3 U
Semi-Volatiles								
Acenaphthene	ug/Kg	400 U	2000 U	400 U	410 U	410 U	410 U	970 J
Anthracene	ug/Kg	400 U	2000 U	400 U	410 U	31 J	410 U	2100 J
Benzo(a)anthracene	ug/Kg	400 U	150 J	400 U	410 U	160 J	410 U	5700 J
Benzo(a)pyrene	ug/Kg	22 J	2000 U	400 U	410 U	160 J	410 U	5600
Benzo(b)fluoranthene	ug/Kg	30 J	190 J	400 U	410 U	210 J	410 U	6400
Benzo(g,h,i)perylene	ug/Kg	400 U	2000 U	400 U	410 U	53 J	410 U	1500 J
Benzo(k)fluoranthene	ug/Kg	400 U	170 J	400 U	410 U	160 J	410 U	5400

TABLE 1A

SOILS ANALYTICAL RESULTS SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Parameter	Unit	MW-1	MW-2	MW-2	MW-2	MW-3	MW-3	MW-4
Sample ID:		S-091400-KL-007	S-091500-KL-012	S-091500-KL-013	S-091500-KL-014	S-091400-KL-009	S-091400-KL-010	S-091500-KL-015
Sample Date:		9/14/2000	9/15/2000	9/15/2000	9/15/2000 Duplicate	9/14/2000	9/14/2000	9/15/2000
Semi-Volatiles (Contd)								
Chrysene	ug/Kg	28 J	190 J	400 U	410 U	180 J	410 U	6200 J
Dibenz(a,h)anthracene	ug/Kg	400 U	2000 U	400 U	410 U	410 U	410 U	500 J
Fluoranthene	ug/Kg	55 J	540 J	400 U	410 U	490	410 U	22000
Fluorene	ug/Kg	400 U	2000 U	400 U	410 U	410 U	410 U	1100 J
Indeno(1,2,3-cd)pyrene	ug/Kg	400 U	2000 U	400 U	410 U	53 J	410 U	1700 J
Naphthalene	ug/Kg	400 U	2000 U	400 U	410 U	410 U	410 U	3500 U
Phenanthrene	ug/Kg	29 J	260 J	400 U	410 U	160 J	410 U	11000
Pyrene	ug/Kg	22 J	220 J	400 U	410 U	180 J	410 U	8200 J
Metals								
Aluminum	mg/Kg	11700	15300	9050	8990	9460	12900	9060
Antimony	mg/Kg	0.80 UJ	0.64 UJ	0.40 UJ	0.88 J	0.81 J	0.54 UJ	0.46 UJ
Arsenic	mg/Kg	8.5	4.8	7.5	7.0	8.1	10.7	4.6
Barium	mg/Kg	68.7	457	55.1	60.1	76.2	107	129
Beryllium	mg/Kg	0.47 UJ	1.8 UJ	0.45 UJ	0.43 UJ	0.51 UJ	0.61 UJ	1.3 UJ
Cadmium	mg/Kg	0.60 UJ	0.60 UJ	0.61 UJ	0.62 UJ	0.12 J	0.63 UJ	0.88 J
Calcium	mg/Kg	20000	171000	2760	2890	27400	1770	201000
Chromium	mg/Kg	16.0	12.6	11.9	12.0	14.9	16.9	6.1
Cobalt	mg/Kg	11.1	8.5	11.2	10.9	10.7	15.9	2.6
Copper	mg/Kg	16.8	20.6	27.4	26.1	30.2	31.0	11.2
Iron	mg/Kg	28500	11700	23600	23200	23100	32400	9310
Lead	mg/Kg	33.9	25.6	11.3	11.1	87.6	15.8	34.9
Magnesium	mg/Kg	4740 J	31200 J	3400 J	3470 J	9790 J	4830 J	9420 J
Manganese	mg/Kg	453	1700	384	365	627	603	413
Nickel	mg/Kg	23.6	11.3	25.4	26.0	22.2	35.4	7.6
Potassium	mg/Kg	915	1360	771	691	924	943	931
Selenium	mg/Kg	0.34	1.2 U	0.61 U	0.62 U	0.62 U	0.63 U	0.53 U
Silver	mg/Kg	1.2 U	0.19	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U
Sodium	mg/Kg	343 U	507	142 U	161 U	138 U	79.0 U	358 U
Thallium	mg/Kg	1.2	3.4	1.4	0.87	1.5	1.1	1.6
Vanadium	mg/Kg	17.8	13.2	15.7	14.8	18.8	19.6	9.3
Zinc	mg/Kg	84.3	141	83.2	82.0	121	108	311
Mercury	mg/Kg	0.043	0.068	0.031	0.023	0.11	0.035	0.042
General Chemistry								
Cyanide (total)	mg/Kg	0.60 U	3.8	0.61 U	0.62 U	17.1	0.63 U	0.53 U
Total Solids	%	82.8	83.2	82.2	80.5	80.9	80.0	94.0

TABLE 1A

SOILS ANALYTICAL RESULTS SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

	Sample Location:	*MW-5*	*SB-11*	*SB-12*	*SB-13*	*SB-14*	*SB-15*	*SB-16A*
	Sample ID:	*S-091400-KL-008*	*S-091300-KL-001*	*S-091300-KL-005*	*S-091300-KL-002*	*S-091300-KL-003*	*S-091300-KL-004*	*S-091800-KL-016*
	Sample Date:	*9/14/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/18/2000*
Parameter	***Unit***							
Volatiles								
1,1,1-Trichloroethane	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
1,1,2,2-Tetrachloroethane	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
1,1,2-Trichloroethane	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
1,1-Dichloroethane	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
1,1-Dichloroethene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
1,2-Dichloroethane	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
1,2-Dichloropropane	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
2-Butanone	ug/Kg	27 UJ	-	-	-	24 UJ	21 UJ	1300 U
2-Hexanone	ug/Kg	27 UJ	-	-	-	24 U	21 U	1300 U
4-Methyl-2-pentanone	ug/Kg	27 U	-	-	-	24 UJ	21 UJ	1300 U
Acetone	ug/Kg	27 U	-	-	-	24 U	21 U	420 J
Benzene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Bromodichloromethane	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Bromoform	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Bromomethane	ug/Kg	R	-	-	-	12 U	11 U	630 U
Carbon disulfide	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Carbon tetrachloride	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Chlorobenzene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Chloroethane	ug/Kg	13 U	-	-	-	12 UJ	11 UJ	630 U
Chloroform	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Chloromethane	ug/Kg	13 U	-	-	-	12 U	11 U	630 U
cis-1,2-Dichloroethene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
cis-1,3-Dichloropropene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Dibromochloromethane	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Ethylbenzene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Methylene chloride	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Styrene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Tetrachloroethene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Toluene	ug/Kg	6.7 U	-	-	-	8.3	28	7200
trans-1,2-Dichloroethene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
trans-1,3-Dichloropropene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Trichloroethene	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Vinyl chloride	ug/Kg	13 U	-	-	-	12 U	11 U	630 U
Xylene (total)	ug/Kg	6.7 U	-	-	-	6.0 U	5.3 U	310 U
Semi-Volatiles								
Acenaphthene	ug/Kg	440 U	400 U	410 U	390 U	400 U	1800 UJ	410 U
Anthracene	ug/Kg	30 J	400 U	410 U	390 U	400 U	170 J	410 U
Benzo(a)anthracene	ug/Kg	88 J	400 U	410 U	390 U	400 U	710 J	410 U
Benzo(a)pyrene	ug/Kg	90 J	400 U	410 U	390 U	400 U	720 J	410 U
Benzo(b)fluoranthene	ug/Kg	78 J	400 U	410 U	390 U	400 U	750 J	410 U
Benzo(g,h,i)perylene	ug/Kg	50 J	400 U	410 U	390 U	400 U	280 J	410 U
Benzo(k)fluoranthene	ug/Kg	70 J	400 U	410 U	390 U	400 U	730 J	410 U

TABLE 1A

SOILS ANALYTICAL RESULTS SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

	Sample Location:	*MW-5*	*SB-11*	*SB-12*	*SB-13*	*SB-14*	*SB-15*	*SB-16A*
	Sample ID:	*S-091400-KL-008*	*S-091300-KL-001*	*S-091300-KL-005*	*S-091300-KL-002*	*S-091300-KL-003*	*S-091300-KL-004*	*S-091800-KL-016*
	Sample Date:	*9/14/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/13/2000*	*9/18/2000*
Parameter	*Unit*							
Semi-Volatiles (Contd)								
Chrysene	ug/Kg	110 J	400 U	410 U	390 U	400 U	830 J	22 J
Dibenz(a,h)anthracene	ug/Kg	440 U	400 U	410 U	390 U	400 U	1800 UJ	410 U
Fluoranthene	ug/Kg	220 J	400 U	410 U	390 U	400 U	1800 J	46 J
Fluorene	ug/Kg	440 U	400 U	410 U	390 U	400 U	1800 UJ	410 U
Indeno(1,2,3-cd)pyrene	ug/Kg	45 J	400 U	410 U	390 U	400 U	290 J	410 U
Naphthalene	ug/Kg	440 U	400 U	410 U	390 U	400 U	1800 UJ	410 U
Phenanthrene	ug/Kg	140 J	400 U	410 U	390 U	400 U	950 J	46 J
Pyrene	ug/Kg	120 J	400 U	410 U	390 U	400 U	860 J	44 J
Metals								
Aluminum	mg/Kg	14100	14500	14100	10200	10500	4230	11100
Antimony	mg/Kg	0.58 UJ	0.70 UJ	0.93 J	0.62 UJ	0.32 UJ	0.46 UJ	0.78 UJ
Arsenic	mg/Kg	9.7	9.7	12.9	8.6	9.3	4.8	9.9
Barium	mg/Kg	85.9	80.2	103	50.8	56.4	71.4	67.9
Beryllium	mg/Kg	0.74 UJ	0.60 UJ	0.69 UJ	0.47 UJ	0.50 UJ	0.24 UJ	0.53 UJ
Cadmium	mg/Kg	1.5 J	0.61 UJ	0.62 UJ	0.60 UJ	0.60 UJ	0.48 J	0.63 UJ
Calcium	mg/Kg	42600	2020	1450	1840	2190	178000	2100
Chromium	mg/Kg	18.4	18.9	18.6	13.2	12.9	22.8	13.7
Cobalt	mg/Kg	15.7	13.2	16.6	11.9	14.8	3.0	16.8
Copper	mg/Kg	96.6	30.0	33.7	27.1	31.5	21.0	32.0
Iron	mg/Kg	30800	34000	36100	26300	26900	9270	28000
Lead	mg/Kg	44.8	12.6	17.3	11.7	13.7	354	13.9
Magnesium	mg/Kg	11100 J	5360 J	5230 J	3790 J	3730 J	26400 J	3940 J
Manganese	mg/Kg	515	459	673	422	668	315	708
Nickel	mg/Kg	31.8	37.8	37.5	28.4	31.2	8.7	31.3
Potassium	mg/Kg	1620	1090	1030	737	902	585	795
Selenium	mg/Kg	0.67 U	1.2 U	0.62 U	0.60 U	0.60 U	0.54 U	0.63 U
Silver	mg/Kg	1.4 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.3 U
Sodium	mg/Kg	151 U	112 U	255 U	156 U	114 U	421	220 U
Thallium	mg/Kg	1.5	1.8	1.2	1.4	2.2	0.86	1.4
Vanadium	mg/Kg	21.4	21.0	21.4	17.3	18.2	9.6	17.9
Zinc	mg/Kg	1310	102	103	81.0	84.6	186	87.5
Mercury	mg/Kg	0.091	0.032 U	0.026 U	0.017 U	0.033 U	0.13	0.034
General Chemistry								
Cyanide (total)	mg/Kg	0.67 U	0.61 U	0.62 U	0.60 U	0.60 U	0.53 U	0.63 U
Total Solids	%	75.2	82.0	80.4	83.9	83.1	93.5	79.6

Notes:

- \- Not applicable.
- J Estimated.
- R Rejected
- U Non-detect at associated value.

TABLE 1B

GROUNDWATER ANALYTICAL RESULTS SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Parameter	Sample Location: / Sample ID: / Sample Date: / Units	MW-1 W-100400-KL-001 10/4/2000	MW-2 W-100500-KL-005 10/5/2000	MW-3 W-100400-KL-004 10/4/2000	MW-4 W-100500-KL-006 10/5/2000	MW-4 W-100500-KL-007 10/5/2000 Duplicate	MW-4A W-100400-KL-003 10/4/2000	MW-5 W-100400-KL-002 10/4/2000
Volatiles								
1,1,1-Trichloroethane	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	2.8 J
1,1,2,2-Tetrachloroethane	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	1.5 J
1,1-Dichloroethene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
1,2-Dichloroethane	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
1,2-Dichloropropane	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
2-Butanone	ug/L	20 U	100 U	20 U	2000 U	2000 U	20 U	20 U
2-Hexanone	ug/L	20 U	100 U	20 U	2000 U	2000 U	20 U	20 U
4-Methyl-2-pentanone	ug/L	20 U	100 U	20 U	2000 U	2000 U	20 U	20 U
Acetone	ug/L	3.7 J	100 U	R	R	R	17 J	4.3 J
Benzene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Bromodichloromethane	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Bromoform	ug/L	5.0 U	25 UJ	5.0 U	500 UJ	500 UJ	5.0 U	5.0 UJ
Bromomethane	ug/L	R	R	R	R	R	R	R
Carbon disulfide	ug/L	5.0 UJ	25 UJ	5.0 UJ	500 UJ	500 UJ	5.0 UJ	5.0 UJ
Carbon tetrachloride	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Chlorobenzene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Chloroethane	ug/L	10 U	R	10 U	R	R	10 U	10 U
Chloroform	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Chloromethane	ug/L	10 U	50 U	10 U	1000 U	1000 U	10 U	10 U
cis-1,2-Dichloroethene	ug/L	5.0 U	400	5.0 U	250 J	220 J	7.6	5.0 U
cis-1,3-Dichloropropene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Dibromochloromethane	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Ethylbenzene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Methylene chloride	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Styrene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Tetrachloroethene	ug/L	5.0 U	690 J	5.0 U	17000 J	15000 J	730	5.0 U
Toluene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.0 U	350	5.0 U	940	840	30	5.0 U
Vinyl chloride	ug/L	10 U	50 U	10 U	1000 U	1000 U	10 U	10 U
Xylene (total)	ug/L	5.0 U	25 U	5.0 U	500 U	500 U	5.0 U	5.0 U
Semi-Volatiles								
Acenaphthene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U

TABLE 1B

GROUNDWATER ANALYTICAL RESULTS SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Parameter	Units	MW-1	MW-2	MW-3	MW-4	MW-4	MW-4A	MW-5
Sample Location:		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-4*	*MW-4A*	*MW-5*
Sample ID:		*W-100400-KL-001*	*W-100500-KL-005*	*W-100400-KL-004*	*W-100500-KL-006*	*W-100500-KL-007*	*W-100400-KL-003*	*W-100400-KL-002*
Sample Date:		*10/4/2000*	*10/5/2000*	*10/4/2000*	*10/5/2000*	*10/5/2000*	*10/4/2000*	*10/4/2000*
						Duplicate		
Semi-Volatiles (Contd)								
Dibenz(a,h)anthracene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Metals								
Aluminum (Dissolved)	ug/L	-	-	-	-	-	200 U	-
Aluminum	ug/L	153	86.0	105	394	440	1290	53.1
Antimony (Dissolved)	ug/L	-	-	-	-	-	3.5 U	-
Antimony	ug/L	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	1.9 U
Arsenic (Dissolved)	ug/L	-	-	-	-	-	10.0 U	-
Arsenic	ug/L	10.0 U	4.1	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Barium (Dissolved)	ug/L	-	-	-	-	-	154	-
Barium	ug/L	181	137	61.4	111	112	164	88.1
Beryllium (Dissolved)	ug/L	-	-	-	-	-	5.0 U	-
Beryllium	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cadmium (Dissolved)	ug/L	-	-	-	-	-	5.0 U	-
Cadmium	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	0.50	5.0 U	5.0 U
Calcium (Dissolved)	ug/L	-	-	-	-	-	62700	-
Calcium	ug/L	153000	143000	112000	129000	130000	74700	104000
Chromium (Dissolved)	ug/L	-	-	-	-	-	10.0 U	-
Chromium	ug/L	2.2 U	1.6	1.9 U	1.7	1.2	3.8 U	1.8 U
Cobalt (Dissolved)	ug/L	-	-	-	-	-	50.0 U	-
Cobalt	ug/L	50.0 U	50.0 U	50.0 U	50.0 U	3.5	50.0 U	50.0 U
Copper (Dissolved)	ug/L	-	-	-	-	-	25.0 U	-
Copper	ug/L	25.0 U	6.9 U	25.0 U	5.3 U	5.8 U	8.2 U	25.0 U
Iron (Dissolved)	ug/L	-	-	-	-	-	164	-
Iron	ug/L	6820	1010	587	1060	1110	8130	1750
Lead (Dissolved)	ug/L	-	-	-	-	-	3.0 U	-
Lead	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.5	3.0 U
Magnesium (Dissolved)	ug/L	-	-	-	-	-	18800	-
Magnesium	ug/L	42500	24100	21000	25900	26100	21600	12300
Manganese (Dissolved)	ug/L	-	-	-	-	-	62.0	-
Manganese	ug/L	2270	1940	289	823	822	135	1380
Nickel (Dissolved)	ug/L	-	-	-	-	-	9.9	-
Nickel	ug/L	7.5	6.4	11.9	9.3	14.8	18.7	11.6
Potassium (Dissolved)	ug/L	-	-	-	-	-	1310	-
Potassium	ug/L	1760	7640	8720	5010	5270	2150	3670
Selenium (Dissolved)	ug/L	-	-	-	-	-	5.0 U	-
Selenium	ug/L	2.4	5.0 U	2.3	5.0 U	5.0 U	5.0 U	2.2

TABLE 1B

GROUNDWATER ANALYTICAL RESULTS SUMMARY
SITE INVESTIGATION/FEASIBILITY STUDY
PARCEL 2 - SENECA STREET
BUFFALO, NEW YORK

Parameter	Units	MW-1	MW-2	MW-3	MW-4	MW-4	MW-4A	MW-5
Sample ID:		W-100400-KL-001	W-100500-KL-005	W-100400-KL-004	W-100500-KL-006	W-100500-KL-007	W-100400-KL-003	W-100400-KL-002
Sample Date:		10/4/2000	10/5/2000	10/4/2000	10/5/2000	10/5/2000 Duplicate	10/4/2000	10/4/2000
Metals (Contd)								
Silver (Dissolved)	ug/L	-	-	-	-	-	10.0 U	-
Silver	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium (Dissolved)	ug/L	-	-	-	-	-	30400	-
Sodium	ug/L	168000	204000	82500	161000	162000	33400	55200
Thallium (Dissolved)	ug/L	-	-	-	-	-	10.0 U	-
Thallium	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Vanadium (Dissolved)	ug/L	-	-	-	-	-	50.0 U	-
Vanadium	ug/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Zinc (Dissolved)	ug/L	-	-	-	-	-	20.0 U	-
Zinc	ug/L	20.0 U	11.0	20.0 U	9.4	9.5	17.6	5.3
Mercury (Dissolved)	ug/L	-	-	-	-	-	0.081 U	-
Mercury	ug/L	0.059 U	0.089 U	0.075 U	0.13 U	0.077 U	0.073 U	0.071 U
General Chemistry								
Cyanide (total)	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

Notes:

- \- Not applicable.
- J Estimated.
- R Rejected.
- U Non-detect at associated value.

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name): Severn-Trent Labs Pittsburgh, PA

REFERENCE NUMBER: 15867 Seneca St. Parcel 2

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Kevin Lynch

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	TCL VOC (Cl)	Stars SVOCs	TAL Metals (filtered)	CN (NaOH)	REMARKS
	10/5/00	1015	W-100500-KL-005	Water	6	2	2	1	1	
	↓	1100	W-100500-KL-006	↓	6	2	2	1	1	
	↓	1300	W-100500-KL-007	↓	6	2	2	1	1	Dup of 006
	↓	—	TRIP BLANK	↓	2	2	—	—	—	

TOTAL NUMBER OF CONTAINERS: 20

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY:	DATE / TIME	RECEIVED BY:	DATE / TIME
① [signature]	DATE: 10/5/00 TIME: 1600	①	DATE: TIME:
②	DATE: TIME:	②	DATE: TIME:
③	DATE: TIME:	③	DATE: TIME:

METHOD OF SHIPMENT: FED EX

WAY BILL No.

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM: K. Lynch

RECEIVED FOR LABORATORY BY:

DATE: TIME:

No N 0473

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name): Severn-Trent Labs Pittsburgh, PA

REFERENCE NUMBER: 15867 Parcel 2 – Seneca St.

SAMPLER'S SIGNATURE: [signature] **PRINTED NAME:** KEVIN LYNCH

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	PARAMETERS	TCL VOCs (HCl)	STARS SVOCs	TAL Metals (HNO3)	CN (NaOH)	Dissolved TAL Metals					REMARKS
	10/4/00	1315	W-100400-KL-001	Water	6	X	2	2	1	1	X					* Dissolved Metals
	↓	1415	W-100400-KL-002	↓	6	X	2	2	1	1	X					Sample Field Filtered
		1440	W-100400-KL-003		7	X	2	2	1	1	1					w/ HNO3 Added.
		1530	W-100400-KL-004 + MS + MSD		18	X	6	6	3	3	X					
		–	Trip Blank		2	X	2	X	X	X	X					

TOTAL NUMBER OF CONTAINERS: 39 **HEALTH/CHEMICAL HAZARDS**

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
① [signature]	DATE: 10/4/00 TIME: 1700 ±	①	DATE: TIME:
②	DATE: TIME:	②	DATE: TIME:
③	DATE: TIME:	③	DATE: TIME:

METHOD OF SHIPMENT: FED EX **WAY BILL No.**

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM: K. Lynch

RECEIVED FOR LABORATORY BY:

DATE: TIME:

No N 0472

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name): STL Pittsburgh

REFERENCE NUMBER: 15867
Parcel 4 - Seneca St.

SAMPLER'S SIGNATURE: [signature] **PRINTED NAME:** Kevin Lynch

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	TCL VOCs	STARS SVOCs	TAL Metals	CN	REMARKS
	9/13/00	1130	S-091300-KL-001	SOIL	2	–	X	X		
		1215	S-091300-KL-002	SOIL	2	–	X	X		
		1315	W-091300-KL-001	WATER	6	X	X	X	X	
		1400	S-091300-KL-003	SOIL	3	X	X	X	–	
		1445	S-091300-KL-004	SOIL	2	X	X	X		← Volume for SVOCs + Metals on same jar
		1545	S-091300-KL-005	SOIL	2	–	X	X		
		1500	S-091300-KL-006	SOIL	3	X	X	X		

Sample S-091300-KL-006 Store only - Do not Analyze ~~Sample~~ until directed. KPL

Per C. Donnigan - Do not Analyze 006 Sample K. Lynch

No Trip Blanks Provided

TOTAL NUMBER OF CONTAINERS: 20

HEALTH/CHEMICAL HAZARDS:

RELINQUISHED BY: ① [signature]	DATE: 9/13/00 TIME: 1630	RECEIVED BY: ①	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:

METHOD OF SHIPMENT: FedEx **WAY BILL No.** 515269 4643

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM: K. Lynch

RECEIVED FOR LABORATORY BY:

DATE: ______ TIME: ______

No N 0469

1001 (D) APR 28/97(NF) REV. 0 (F-15)

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name): Severn - Trent Labs Pittsburgh, PA

REFERENCE NUMBER: 15867 Parcel 4 - Seneca St.

SAMPLER'S SIGNATURE: K. P. Lynch **PRINTED NAME:** KEVIN LYNCH

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	TCL VOCs	STARS SVOCs	TAL Metals							REMARKS
	9/14/00	1215	S-091400-KL-008	SOIL	3	X	X	X							
	↓	0945	S-091400-KL-007	↓	3	X	X	X							
	↓	1515	S-091400-KL-009	↓	2	X	X								1 Jar for SVOCs + Metals
	↓	1620	S-091400-KL-010	↓	3	X	X	X							
			Above Samples Held until 9/15 shipment												
			in possession of sampler K. Lynch												
	9/15/00	0700	S-091500-KL-014 BLIND DUP OF 012	SOIL	2	X	X								1 Jar for SVOCs & Metals
	↓	0945	S-091500-KL-012	↓	2	X	X								↓
	↓	1015	S-091500-KL-013	↓	2	X	X								↓
	↓	1500	S-091500-KL-015	↓	2	X	X								↓

TOTAL NUMBER OF CONTAINERS: 19

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY: ① K. P. Lynch	DATE: 9/15/00 TIME: 1530	RECEIVED BY: ①	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:

METHOD OF SHIPMENT: FED EX 9/15 WAY BILL No. 515269584

White	–Fully Executed Copy
Yellow	–Receiving Laboratory Copy
Pink	–Shipper Copy
Goldenrod	–Sampler Copy

SAMPLE TEAM: K. Lynch

RECEIVED FOR LABORATORY BY:

DATE: TIME:

No N 0470

1001 (D) APR 28/97(NF) REV. 0 (F-15)

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name): Severn-Trent Lab Pittsburgh, PA

REFERENCE NUMBER: 15867 Parcel 2 - Seneca St

SAMPLER'S SIGNATURE: [signature]   PRINTED NAME: Kevin Lynch

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	TCL VOCs	STARS SVOCs	TAL metals	REMARKS
	9/18/00	1400	S-091800-KL-016	SOIL	3	X	X	X	

TOTAL NUMBER OF CONTAINERS: 3   HEALTH/CHEMICAL HAZARDS:

RELINQUISHED BY: ① [signature]	DATE: 9/18/00 TIME: 1530	RECEIVED BY: ①	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex   WAY BILL No. 515269 4595

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM: K. Lynch

RECEIVED FOR LABORATORY BY:

DATE: TIME:

No N 0471

1001 (D) APR 28/97(NF) REV. 0 (F-15)

CONESTOGA-ROVERS & ASSOCIATES

2055 Niagara Falls Blvd., Suite #3
Niagara Falls, New York 14304
Telephone: (716) 297-6150 Fax: (716) 297-2265
www.CRAworld.com

MEMORANDUM

TO:	Carol Dunnigan	REF. NO.:	15867
FROM:	Susan Scrocchi/js/2 SCS	DATE:	November 7, 2001
RE:	**Data Usability Summary Report Site Investigation Parcel #2 - Seneca Street Buffalo, New York**		

INTRODUCTION

The following details an evaluation of results reported by Severn Trent Laboratories (STL) located in Pittsburgh, Pennsylvania, for 18 groundwater samples and 17 soil samples collected from August through September 2001 at the Parcel #2 Site located in Buffalo, New York.

The samples were analyzed for the following:

Parameters	*Methodology*
Target Compound List (TCL) Volatile Organic Compounds (VOCs)	SW-846 8260[1]
TCL Semi-Volatile Organic Compounds (SVOCs)	SW-846 8270[1]

A sample collection and analysis summary is presented in Table 1. A summary of the analytical results is presented in Tables 2A and 2B.

The Quality Assurance/Quality Control (QA/QC) criteria by which these data have been evaluated is outlined in the analytical methods and the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (February 1994, EPA 540/R-94/012).

QA/QC REVIEW

Deliverables

The data package was complete as defined under the requirements for Analytical Services Protocol (ASP) Category A deliverables.

1 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

Holding Times

Based on the methods, all required holding times were met.

Blanks

Method blanks were analyzed on a daily basis and were non-detect for the compounds of interest with the exception of low level concentrations of acetone and di-n-butylphthalate. All associated results similar in concentration to the blanks were qualified as non-detect.

Three trip blanks were collected with the samples and submitted for VOC analyses. All trip blank results were non-detect for the VOCs of interest.

Surrogate Spike Recoveries

All sample blanks and QC samples were spiked with the proper surrogate compounds prior to sample preparation and analysis. All surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

MS/MSD analyses were performed at the proper frequency for all parameters. All results were acceptable indicating good analytical accuracy and precision.

Blank Spike (BS) Analyses

BSs were analyzed at the required frequency for all parameters and all recoveries were acceptable indicating adequate analytical efficiency.

Field Duplicate Analyses

Samples were collected in duplicate and submitted "blind" to the laboratory for analysis. The analytical results were comparable, demonstrating acceptable sampling and analytical precision for this study.

Sample Quantitation

Due to high concentrations of caprolactam, some SVOC analyses required dilutions. The associated reporting limits were elevated to reflect the dilution factors.

OVERALL ASSESSMENT

All deliverables required by the project were present and the data package was complete. Based on the preceding evaluation, the data were acceptable for use with the qualifications noted.

TABLE 1

SAMPLING AND ANALYSIS SUMMARY
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

SB

Sample I.D.	Location I.D.	Matrix	Collection Date (mm/dd/yy)	Collection Time (hr:min)	Analysis/Parameters Volatiles	Semi-Volatiles	Comments
082001-SB27-10-12	B27-10-12	Soil	08/20/01	11:30		X	
082001-SB26-10-12	B26-10-12	Soil	08/20/01	11:40		X	
082001-SB21-6-8	B21-6-8	Soil	08/20/01	14:00	X		
082001-SB19-6-8	B19-6-8	Soil	08/20/01	16:15	X	X	
082001-SB28-6-8	B28-6-8	Soil	08/20/01	15:00	X		
082001-SB29-8-10	B29-8-10	Soil	08/20/01	16:00	X		
082001-SB24-8-10	B24-8-10	Soil	08/20/01	17:00	X	X	
082001-SB35-8-10	B24-8-10	Soil	08/20/01	17:30	X	X	Field duplicate of 082001-SB24-8-10
082001-SB17-2-4	B17-2-4	Soil	08/20/01	14:10	X		
082001-SB17-6-8	B17-6-8	Soil	08/20/01	14:20	X		
082001-SB25-8-10	B25-8-10	Soil	08/20/01	18:00	X		
082201-SB18-6-8	B18-6-8	Soil	08/22/01	08:35	X	X	
082201-SB17-0-2	B17-0-2	Soil	08/22/01	09:20	X		
082201-SB17-4-6	B17-4-6	Soil	08/22/01	09:30	X		
082201-SB17-8-10	B17-8-10	Soil	08/22/01	09:45	X		
082201-SB22-11-12	B22-11-12	Soil	08/22/01	10:30	X		
082201-SB23-11-12	B23-11-12	Soil	08/22/01	11:00	X		
W-091901-FG-MW1	MW1	Water	09/19/01	10:30	X		
W-091901-FG-MW5	MW5	Water	09/19/01	10:55	X		
W-092001-FG-MW3	MW3	Water	09/20/01	11:20	X		
W-092001-FG-MW10A	MW10A	Water	09/20/01	12:20	X		
W-092001-FG-MW8A	MW8A	Water	09/20/01	13:20	X		
W-092001-FG-MW10	MW10	Water	09/20/01	14:05	X	X	
W-092001-FG-MW7A	MW7A	Water	09/20/01	14:15	X		
W-092001-FG-MW2	MW2	Water	09/20/01	15:40	X		

TABLE 1

SAMPLING AND ANALYSIS SUMMARY
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Volatiles*	*Semi-Volatiles*	*Comments*
W-092001-FG-MW11A	MW11A	Water	09/20/01	16:15	X		
W-092101-FG-MW11	MW11	Water	09/21/01	13:30	X	X	
W-092101-FG-MW9	MW9	Water	09/21/01	14:50	X		
W-092101-FG-MW9A	MW9A	Water	09/21/01	16:10	X		
W-092401-FG-MW4	MW4	Water	09/24/01	11:10	X		
W-092401-FG-MW4A	MW4A	Water	09/24/01	12:30	X		
W-092401-FG-MW8	MW8	Water	09/24/01	13:00	X		
W-092401-FG-MW6	MW6	Water	09/24/01	15:10	X	X	
W-092401-FG-MW15	MW6	Water	09/24/01	14:30	X	X	Field duplicate of W-092401-FG-MW6
W-092401-FG-MW7	MW7	Water	09/24/01	16:30	X	X	

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-17*	*SB-17*	*SB-17*	*SB-17*	*SB-17*	*SB-18*
	Sample ID:	*082001-SB17-2-4*	*082001-SB17-6-8*	*082201-SB17-0-2*	*082201-SB17-4-6*	*082201-SB17-8-10*	*082201-SB18-6-8*
		2-4 ft	*6-8 ft*	*0-2 ft*	*4-6 ft*	*8-10 ft*	*6-8 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/22/2001*	*8/22/2001*	*8/22/2001*	*8/22/2001*
Parameter	***Unit***						
Volatiles							
1,1,1-Trichloroethane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,1,2,2-Tetrachloroethane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,1,2-Trichloroethane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,1-Dichloroethane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,1-Dichloroethene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,2,4-Trichlorobenzene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,2-Dibromo-3-chloropropane DBCP	µg/kg	ND 10	ND 12	ND 10	ND 12	ND 12	ND 11
1,2-Dibromoethane Ethylene Dibromide	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,2-Dichlorobenzene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,2-Dichloroethane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,2-Dichloropropane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,3-Dichlorobenzene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
1,4-Dichlorobenzene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
2-Butanone	µg/kg	ND 21	ND 25	ND 21	ND 25	ND 24	8.3 J
2-Hexanone	µg/kg	ND 21	ND 25	ND 21	ND 25	ND 24	ND 23
4-Methyl-2-pentanone	µg/kg	ND 21	ND 25	ND 21	ND 25	ND 24	ND 23
Acetone	µg/kg	ND 21	ND 25	ND 21	ND 25	ND 24	ND 46
Benzene, isopropyl	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Benzene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Bromodichloromethane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Bromoform	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Bromomethane	µg/kg	ND 10	ND 12	ND 10	ND 12	ND 12	ND 11
Carbon disulfide	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Carbon tetrachloride	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Chlorobenzene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Chloroethane	µg/kg	ND 10	ND 12	ND 10	ND 12	ND 12	ND 11
Chloroform Trichloromethane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Chloromethane	µg/kg	ND 10	ND 12	ND 10	ND 12	ND 12	ND 11
cis-1,2-Dichloroethene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	1.5 J	6.1
cis-1,3-Dichloropropene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Cyclohexane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-17*	*SB-17*	*SB-17*	*SB-17*	*SB-17*	*SB-18*
	Sample ID:	*082001-SB17-2-4*	*082001-SB17-6-8*	*082201-SB17-0-2*	*082201-SB17-4-6*	*082201-SB17-8-10*	*082201-SB18-6-8*
		2-4 ft	*6-8 ft*	*0-2 ft*	*4-6 ft*	*8-10 ft*	*6-8 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/22/2001*	*8/22/2001*	*8/22/2001*	*8/22/2001*
Parameter	***Unit***						
Volatiles (Cont'd.)							
Dibromochloromethane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Dichlorodifluoromethane CFC-12	µg/kg	ND 10	ND 12	ND 10	ND 12	ND 12	ND 11
Ethylbenzene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Methyl acetate	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Methyl cyclohexane	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Methyl Tert Butyl Ether	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Methylene chloride	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Styrene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Tetrachloroethene	µg/kg	33	140	13	16	9700	2.9 J
Toluene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
trans-1,2-Dichloroethene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
trans-1,3-Dichloropropene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Trichloroethene	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	13	6.1
Trichlorofluoromethane CFC-11	µg/kg	ND 10	ND 12	ND 10	ND 12	ND 12	ND 11
Trifluorotrichloroethane Freon 113	µg/kg	ND 5.2	ND 6.2	ND 5.2	ND 6.2	ND 6.1	ND 5.7
Vinyl chloride	µg/kg	ND 10	ND 12	ND 10	ND 12	ND 12	ND 11
Xylene total	µg/kg	ND 16	ND 19	ND 16	ND 19	ND 18	ND 17
Semi-Volatiles							
2,2'-oxybis 1-Chloropropane	µg/kg	-	-	-	-	-	ND 3800
2,4,5-Trichlorophenol	µg/kg	-	-	-	-	-	ND 3800
2,4,6-Trichlorophenol	µg/kg	-	-	-	-	-	ND 3800
2,4-Dichlorophenol	µg/kg	-	-	-	-	-	ND 3800
2,4-Dimethylphenol	µg/kg	-	-	-	-	-	ND 3800
2,4-Dinitrophenol	µg/kg	-	-	-	-	-	ND 18000
2,4-Dinitrotoluene	µg/kg	-	-	-	-	-	ND 3800
2,6-Dinitrotoluene	µg/kg	-	-	-	-	-	ND 3800
2-Chloronaphthalene	µg/kg	-	-	-	-	-	ND 3800
2-Chlorophenol	µg/kg	-	-	-	-	-	ND 3800
2-Methyl naphthalene	µg/kg	-	-	-	-	-	460 J
2-Methylphenol	µg/kg	-	-	-	-	-	ND 3800

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-17*	*SB-17*	*SB-17*	*SB-17*	*SB-17*	*SB-18*
	Sample ID:	*082001-SB17-2-4*	*082001-SB17-6-8*	*082201-SB17-0-2*	*082201-SB17-4-6*	*082201-SB17-8-10*	*082201-SB18-6-8*
		2-4 ft	*6-8 ft*	*0-2 ft*	*4-6 ft*	*8-10 ft*	*6-8 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/22/2001*	*8/22/2001*	*8/22/2001*	*8/22/2001*
Parameter	*Unit*						
Semi-Volatiles (Cont'd.)							
2-Nitroaniline	µg/kg	-	-	-	-	-	ND 18000
2-Nitrophenol	µg/kg	-	-	-	-	-	ND 3800
3,3'-Dichlorobenzidine	µg/kg	-	-	-	-	-	ND 18000
3-Nitroaniline	µg/kg	-	-	-	-	-	ND 18000
4,6-Dinitro-2-methylphenol	µg/kg	-	-	-	-	-	ND 18000
4-Bromophenyl phenyl ether	µg/kg	-	-	-	-	-	ND 3800
4-Chloro-3-methylphenol	µg/kg	-	-	-	-	-	ND 3800
4-Chloroaniline	µg/kg	-	-	-	-	-	ND 3800
4-Chlorophenyl phenyl ether	µg/kg	-	-	-	-	-	ND 3800
4-Methylphenol	µg/kg	-	-	-	-	-	ND 3800
4-Nitroaniline	µg/kg	-	-	-	-	-	ND 18000
4-Nitrophenol	µg/kg	-	-	-	-	-	ND 18000
Acenaphthene	µg/kg	-	-	-	-	-	1200 J
Acenaphthylene	µg/kg	-	-	-	-	-	ND 3800
Acetophenone	µg/kg	-	-	-	-	-	ND 3800
Anthracene	µg/kg	-	-	-	-	-	1800 J
Atrazine	µg/kg	-	-	-	-	-	ND 3800
Benzaldehyde	µg/kg	-	-	-	-	-	ND 3800
Benzo a anthracene	µg/kg	-	-	-	-	-	3200 J
Benzo a pyrene	µg/kg	-	-	-	-	-	2200 J
Benzo b fluoranthene	µg/kg	-	-	-	-	-	2000 J
Benzo g,h,i perylene	µg/kg	-	-	-	-	-	1100 J
Benzo k fluoranthene	µg/kg	-	-	-	-	-	1400 J
Biphenyl	µg/kg	-	-	-	-	-	ND 3800
bis 2-Chloroethoxy methane	µg/kg	-	-	-	-	-	ND 3800
bis 2-Chloroethyl ether	µg/kg	-	-	-	-	-	ND 3800
bis 2-Ethylhexyl phthalate	µg/kg	-	-	-	-	-	ND 3800
Butyl benzylphthalate	µg/kg	-	-	-	-	-	ND 3800
Caprolactam	µg/kg	-	-	-	-	-	ND 3800
Carbazole	µg/kg	-	-	-	-	-	880 J
Chrysene	µg/kg	-	-	-	-	-	2900 J

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-17*	*SB-17*	*SB-17*	*SB-17*	*SB-17*	*SB-18*
	Sample ID:	*082001-SB17-2-4*	*082001-SB17-6-8*	*082201-SB17-0-2*	*082201-SB17-4-6*	*082201-SB17-8-10*	*082201-SB18-6-8*
		2-4 ft	*6-8 ft*	*0-2 ft*	*4-6 ft*	*8-10 ft*	*6-8 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/22/2001*	*8/22/2001*	*8/22/2001*	*8/22/2001*
Parameter	***Unit***						
Semi-Volatiles (Cont'd.)							
Dibenz a,h anthracene	µg/kg	-	-	-	-	-	ND 3800
Dibenzofuran	µg/kg	-	-	-	-	-	730 J
Diethyl phthalate	µg/kg	-	-	-	-	-	ND 3800
Dimethyl phthalate	µg/kg	-	-	-	-	-	ND 3800
Di-n-butylphthalate	µg/kg	-	-	-	-	-	ND 3800
Di-n-octyl phthalate	µg/kg	-	-	-	-	-	ND 3800
Fluoranthene	µg/kg	-	-	-	-	-	5900
Fluorene	µg/kg	-	-	-	-	-	1100 J
Hexachlorobenzene	µg/kg	-	-	-	-	-	ND 3800
Hexachlorobutadiene	µg/kg	-	-	-	-	-	ND 3800
Hexachlorocyclopentadiene	µg/kg	-	-	-	-	-	ND 18000
Hexachloroethane	µg/kg	-	-	-	-	-	ND 3800
Indeno 1,2,3-cd pyrene	µg/kg	-	-	-	-	-	1100 J
Isophorone	µg/kg	-	-	-	-	-	ND 3800
Naphthalene	µg/kg	-	-	-	-	-	1700 J
Nitrobenzene	µg/kg	-	-	-	-	-	ND 3800
N-Nitrosodi-n-propylamine	µg/kg	-	-	-	-	-	ND 3800
N-Nitrosodiphenylamine	µg/kg	-	-	-	-	-	ND 3800
Pentachlorophenol	µg/kg	-	-	-	-	-	ND 18000
Phenanthrene	µg/kg	-	-	-	-	-	6900
Phenol	µg/kg	-	-	-	-	-	ND 3800
Pyrene	µg/kg	-	-	-	-	-	5800
General Chemistry							
Total Solids	%	95.9	80.6	96.3	80.3	82.0	87.0

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-19*	*SB-21*	*SB-22*	*SB-23*	*SB-24*	*SB-24*
	Sample ID:	*082001-SB19-6-8*	*082001-SB21-6-8*	*082201-SB22-11-12*	*082201-SB23-11-12*	*082001-SB24-8-10*	*082001-SB35-8-10*
		6-8 ft	*6-8 ft*	*11-12 ft*	*11-12 ft*	*8-10 ft*	*8-10 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/22/2001*	*8/22/2001*	*8/20/2001*	*8/20/2001*
							Duplicate
Parameter	*Unit*						
Volatiles							
1,1,1-Trichloroethane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,1,2,2-Tetrachloroethane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,1,2-Trichloroethane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,1-Dichloroethane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,1-Dichloroethene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,2,4-Trichlorobenzene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,2-Dibromo-3-chloropropane DBCP	µg/kg	ND 13	ND 12	ND 12	ND 12	ND 12	ND 12
1,2-Dibromoethane Ethylene Dibromide	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,2-Dichlorobenzene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,2-Dichloroethane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,2-Dichloropropane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,3-Dichlorobenzene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
1,4-Dichlorobenzene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
2-Butanone	µg/kg	ND 25	ND 24	ND 24	ND 24	ND 24	ND 24
2-Hexanone	µg/kg	ND 25	ND 24	ND 24	ND 24	ND 24	ND 24
4-Methyl-2-pentanone	µg/kg	ND 25	ND 24	ND 24	ND 24	ND 24	ND 24
Acetone	µg/kg	ND 25	ND 24	ND 24	ND 24	ND 24	ND 24
Benzene, isopropyl	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Benzene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Bromodichloromethane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Bromoform	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Bromomethane	µg/kg	ND 13	ND 12	ND 12	ND 12	ND 12	ND 12
Carbon disulfide	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Carbon tetrachloride	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Chlorobenzene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Chloroethane	µg/kg	ND 13	ND 12	ND 12	ND 12	ND 12	ND 12
Chloroform Trichloromethane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Chloromethane	µg/kg	ND 13	ND 12	ND 12	ND 12	ND 12	ND 12
cis-1,2-Dichloroethene	µg/kg	70	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
cis-1,3-Dichloropropene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Cyclohexane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	SB-19	SB-21	SB-22	SB-23	SB-24	SB-24
	Sample ID:	082001-SB19-6-8	082001-SB21-6-8	082201-SB22-11-12	082201-SB23-11-12	082001-SB24-8-10	082001-SB35-8-10
		6-8 ft	6-8 ft	11-12 ft	11-12 ft	8-10 ft	8-10 ft
	Sample Date:	8/20/2001	8/20/2001	8/22/2001	8/22/2001	8/20/2001	8/20/2001
							Duplicate
Parameter	*Unit*						
Volatiles (Cont'd.)							
Dibromochloromethane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Dichlorodifluoromethane CFC-12	µg/kg	ND 13	ND 12	ND 12	ND 12	ND 12	ND 12
Ethylbenzene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Methyl acetate	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Methyl cyclohexane	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Methyl Tert Butyl Ether	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Methylene chloride	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Styrene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Tetrachloroethene	µg/kg	29000	2.9 J	19	1.6 J	53 J	9.8 J
Toluene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
trans-1,2-Dichloroethene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
trans-1,3-Dichloropropene	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Trichloroethene	µg/kg	25	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Trichlorofluoromethane CFC-11	µg/kg	ND 13	ND 12	ND 12	ND 12	ND 12	ND 12
Trifluorotrichloroethane Freon 113	µg/kg	ND 6.3	ND 6.0	ND 5.9	ND 5.9	ND 6.0	ND 6.0
Vinyl chloride	µg/kg	ND 13	ND 12	ND 12	ND 12	ND 12	ND 12
Xylene total	µg/kg	ND 19	ND 18	ND 18	ND 18	ND 18	ND 18
Semi-Volatiles							
2,2'-oxybis 1-Chloropropane	µg/kg	ND 410	-	-	-	ND 400	ND 400
2,4,5-Trichlorophenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
2,4,6-Trichlorophenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
2,4-Dichlorophenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
2,4-Dimethylphenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
2,4-Dinitrophenol	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
2,4-Dinitrotoluene	µg/kg	ND 410	-	-	-	ND 400	ND 400
2,6-Dinitrotoluene	µg/kg	ND 410	-	-	-	ND 400	ND 400
2-Chloronaphthalene	µg/kg	ND 410	-	-	-	ND 400	ND 400
2-Chlorophenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
2-Methyl naphthalene	µg/kg	ND 410	-	-	-	ND 400	ND 400
2-Methylphenol	µg/kg	ND 410	-	-	-	ND 400	ND 400

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

Parameter	Unit	SB-19	SB-21	SB-22	SB-23	SB-24	SB-24
Sample Location:		SB-19	SB-21	SB-22	SB-23	SB-24	SB-24
Sample ID:		082001-SB19-6-8	082001-SB21-6-8	082201-SB22-11-12	082201-SB23-11-12	082001-SB24-8-10	082001-SB35-8-10
		6-8 ft	6-8 ft	11-12 ft	11-12 ft	8-10 ft	8-10 ft
Sample Date:		8/20/2001	8/20/2001	8/22/2001	8/22/2001	8/20/2001	8/20/2001
							Duplicate
Semi-Volatiles (Cont'd.)							
2-Nitroaniline	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
2-Nitrophenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
3,3'-Dichlorobenzidine	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
3-Nitroaniline	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
4,6-Dinitro-2-methylphenol	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
4-Bromophenyl phenyl ether	µg/kg	ND 410	-	-	-	ND 400	ND 400
4-Chloro-3-methylphenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
4-Chloroaniline	µg/kg	ND 410	-	-	-	ND 400	ND 400
4-Chlorophenyl phenyl ether	µg/kg	ND 410	-	-	-	ND 400	ND 400
4-Methylphenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
4-Nitroaniline	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
4-Nitrophenol	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
Acenaphthene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Acenaphthylene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Acetophenone	µg/kg	ND 410	-	-	-	ND 400	ND 400
Anthracene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Atrazine	µg/kg	ND 410	-	-	-	ND 400	ND 400
Benzaldehyde	µg/kg	ND 410	-	-	-	ND 400	ND 400
Benzo a anthracene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Benzo a pyrene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Benzo b fluoranthene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Benzo g,h,i perylene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Benzo k fluoranthene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Biphenyl	µg/kg	ND 410	-	-	-	ND 400	ND 400
bis 2-Chloroethoxy methane	µg/kg	ND 410	-	-	-	ND 400	ND 400
bis 2-Chloroethyl ether	µg/kg	ND 410	-	-	-	ND 400	ND 400
bis 2-Ethylhexyl phthalate	µg/kg	120 J	-	-	-	ND 400	ND 400
Butyl benzylphthalate	µg/kg	ND 410	-	-	-	ND 400	ND 400
Caprolactam	µg/kg	ND 410	-	-	-	ND 400	ND 400
Carbazole	µg/kg	ND 410	-	-	-	ND 400	ND 400
Chrysene	µg/kg	ND 410	-	-	-	ND 400	ND 400

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-6*	*MW-6*	*MW-7*	*MW-7A*	*MW-8*	*MW-8A*
	Sample ID:	*W-092401-F6-MW6*	*W-092401-F6-MW15*	*W-092401-F6-MW7*	*W-092001-FG-MW7A*	*W-092401-F6-MW8*	*W-092001-FG-MW8A*
	Sample Date:	*9/24/2001*	*9/24/2001*	*9/24/2001*	*9/20/2001*	*9/24/2001*	*9/20/2001*
			Duplicate				
Parameter	*Unit*						
Semi-Volatiles (Cont'd.)							
4,6-Dinitro-2-methylphenol	µg/L	ND 5000	ND 5000	ND 50	-	-	-
4-Bromophenyl phenyl ether	µg/L	ND 1000	ND 1000	ND 10	-	-	-
4-Chloro-3-methylphenol	µg/L	ND 1000	ND 1000	ND 10	-	-	-
4-Chloroaniline	µg/L	ND 1000	ND 1000	ND 10	-	-	-
4-Chlorophenyl phenyl ether	µg/L	ND 1000	ND 1000	ND 10	-	-	-
4-Methylphenol	µg/L	ND 1000	ND 1000	ND 10	-	-	-
4-Nitroaniline	µg/L	ND 5000	ND 5000	ND 50	-	-	-
4-Nitrophenol	µg/L	ND 5000	ND 5000	ND 50	-	-	-
Acenaphthene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Acenaphthylene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Acetophenone	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Anthracene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Atrazine	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Benzaldehyde	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Benzo a anthracene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Benzo a pyrene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Benzo b fluoranthene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Benzo g,h,i perylene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Benzo k fluoranthene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Biphenyl	µg/L	ND 1000	ND 1000	ND 10	-	-	-
bis 2-Chloroethoxy methane	µg/L	ND 1000	ND 1000	ND 10	-	-	-
bis 2-Chloroethyl ether	µg/L	ND 1000	ND 1000	ND 10	-	-	-
bis 2-Ethylhexyl phthalate	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Butyl benzylphthalate	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Caprolactam	µg/L	5100	4000	1600	-	-	-
Carbazole	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Chrysene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Dibenz a,h anthracene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Dibenzofuran	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Diethyl phthalate	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Dimethyl phthalate	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Di-n-butylphthalate	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Di-n-octyl phthalate	µg/L	ND 1000	ND 1000	ND 10	-	-	-

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-19*	*SB-21*	*SB-22*	*SB-23*	*SB-24*	*SB-24*
	Sample ID:	*082001-SB19-6-8*	*082001-SB21-6-8*	*082201-SB22-11-12*	*082201-SB23-11-12*	*082001-SB24-8-10*	*082001-SB35-8-10*
		6-8 ft	*6-8 ft*	*11-12 ft*	*11-12 ft*	*8-10 ft*	*8-10 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/22/2001*	*8/22/2001*	*8/20/2001*	*8/20/2001*
							Duplicate
Parameter	*Unit*						
Semi-Volatiles (Cont'd.)							
Dibenz a,h anthracene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Dibenzofuran	µg/kg	ND 410	-	-	-	ND 400	ND 400
Diethyl phthalate	µg/kg	ND 410	-	-	-	ND 400	ND 400
Dimethyl phthalate	µg/kg	ND 410	-	-	-	ND 400	ND 400
Di-n-butylphthalate	µg/kg	ND 410	-	-	-	ND 400	ND 400
Di-n-octyl phthalate	µg/kg	ND 410	-	-	-	ND 400	ND 400
Fluoranthene	µg/kg	43 J	-	-	-	ND 400	ND 400
Fluorene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Hexachlorobenzene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Hexachlorobutadiene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Hexachlorocyclopentadiene	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
Hexachloroethane	µg/kg	ND 410	-	-	-	ND 400	ND 400
Indeno 1,2,3-cd pyrene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Isophorone	µg/kg	ND 410	-	-	-	ND 400	ND 400
Naphthalene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Nitrobenzene	µg/kg	ND 410	-	-	-	ND 400	ND 400
N-Nitrosodi-n-propylamine	µg/kg	ND 410	-	-	-	ND 400	ND 400
N-Nitrosodiphenylamine	µg/kg	ND 410	-	-	-	ND 400	ND 400
Pentachlorophenol	µg/kg	ND 2000	-	-	-	ND 1900	ND 1900
Phenanthrene	µg/kg	ND 410	-	-	-	ND 400	ND 400
Phenol	µg/kg	ND 410	-	-	-	ND 400	ND 400
Pyrene	µg/kg	51 J	-	-	-	ND 400	ND 400
General Chemistry							
Total Solids	%	79.8	83.6	84.9	84.6	83.4	82.7

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-25*	*SB-26*	*SB-27*	*SB-28*	*SB-29*
	Sample ID:	*082001-SB25-8-10*	*082001-SB26-10-12*	*082001-SB27-10-12*	*082001-SB28-6-8*	*082001-SB29-8-10*
		8-10 ft	*10-12 ft*	*10-12 ft*	*6-8 ft*	*8-10 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/20/2001*	*8/20/2001*	*8/20/2001*
Parameter	*Unit*					
Volatiles						
1,1,1-Trichloroethane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,1,2,2-Tetrachloroethane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,1,2-Trichloroethane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,1-Dichloroethane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,1-Dichloroethene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,2,4-Trichlorobenzene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,2-Dibromo-3-chloropropane DBCP	µg/kg	ND 12	-	-	ND 12	ND 12
1,2-Dibromoethane Ethylene Dibromide	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,2-Dichlorobenzene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,2-Dichloroethane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,2-Dichloropropane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,3-Dichlorobenzene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
1,4-Dichlorobenzene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
2-Butanone	µg/kg	ND 24	-	-	ND 25	ND 25
2-Hexanone	µg/kg	ND 24	-	-	ND 25	ND 25
4-Methyl-2-pentanone	µg/kg	ND 24	-	-	ND 25	ND 25
Acetone	µg/kg	ND 24	-	-	ND 25	ND 25
Benzene, isopropyl	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Benzene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Bromodichloromethane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Bromoform	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Bromomethane	µg/kg	ND 12	-	-	ND 12	ND 12
Carbon disulfide	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Carbon tetrachloride	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Chlorobenzene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Chloroethane	µg/kg	ND 12	-	-	ND 12	ND 12
Chloroform Trichloromethane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Chloromethane	µg/kg	ND 12	-	-	ND 12	ND 12
cis-1,2-Dichloroethene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
cis-1,3-Dichloropropene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Cyclohexane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-25*	*SB-26*	*SB-27*	*SB-28*	*SB-29*
	Sample ID:	*082001-SB25-8-10*	*082001-SB26-10-12*	*082001-SB27-10-12*	*082001-SB28-6-8*	*082001-SB29-8-10*
		8-10 ft	*10-12 ft*	*10-12 ft*	*6-8 ft*	*8-10 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/20/2001*	*8/20/2001*	*8/20/2001*
Parameter	*Unit*					
Volatiles (Cont'd.)						
Dibromochloromethane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Dichlorodifluoromethane CFC-12	µg/kg	ND 12	-	-	ND 12	ND 12
Ethylbenzene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Methyl acetate	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Methyl cyclohexane	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Methyl Tert Butyl Ether	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Methylene chloride	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Styrene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Tetrachloroethene	µg/kg	1.5 J	-	-	ND 6.2	ND 6.2
Toluene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
trans-1,2-Dichloroethene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
trans-1,3-Dichloropropene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Trichloroethene	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Trichlorofluoromethane CFC-11	µg/kg	ND 12	-	-	ND 12	ND 12
Trifluorotrichloroethane Freon 113	µg/kg	ND 6.0	-	-	ND 6.2	ND 6.2
Vinyl chloride	µg/kg	ND 12	-	-	ND 12	ND 12
Xylene total	µg/kg	ND 18	-	-	ND 18	ND 19
Semi-Volatiles						
2,2'-oxybis 1-Chloropropane	µg/kg	-	ND 390	ND 400	-	-
2,4,5-Trichlorophenol	µg/kg	-	ND 390	ND 400	-	-
2,4,6-Trichlorophenol	µg/kg	-	ND 390	ND 400	-	-
2,4-Dichlorophenol	µg/kg	-	ND 390	ND 400	-	-
2,4-Dimethylphenol	µg/kg	-	ND 390	ND 400	-	-
2,4-Dinitrophenol	µg/kg	-	ND 1900	ND 1900	-	-
2,4-Dinitrotoluene	µg/kg	-	ND 390	ND 400	-	-
2,6-Dinitrotoluene	µg/kg	-	ND 390	ND 400	-	-
2-Chloronaphthalene	µg/kg	-	ND 390	ND 400	-	-
2-Chlorophenol	µg/kg	-	ND 390	ND 400	-	-
2-Methyl naphthalene	µg/kg	-	ND 390	ND 400	-	-
2-Methylphenol	µg/kg	-	ND 390	ND 400	-	-

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

Parameter	Unit					
	Sample Location:	SB-25	SB-26	SB-27	SB-28	SB-29
	Sample ID:	082001-SB25-8-10	082001-SB26-10-12	082001-SB27-10-12	082001-SB28-6-8	082001-SB29-8-10
		8-10 ft	10-12 ft	10-12 ft	6-8 ft	8-10 ft
	Sample Date:	8/20/2001	8/20/2001	8/20/2001	8/20/2001	8/20/2001
Semi-Volatiles (Cont'd.)						
2-Nitroaniline	µg/kg	-	ND 1900	ND 1900	-	-
2-Nitrophenol	µg/kg	-	ND 390	ND 400	-	-
3,3'-Dichlorobenzidine	µg/kg	-	ND 1900	ND 1900	-	-
3-Nitroaniline	µg/kg	-	ND 1900	ND 1900	-	-
4,6-Dinitro-2-methylphenol	µg/kg	-	ND 1900	ND 1900	-	-
4-Bromophenyl phenyl ether	µg/kg	-	ND 390	ND 400	-	-
4-Chloro-3-methylphenol	µg/kg	-	ND 390	ND 400	-	-
4-Chloroaniline	µg/kg	-	ND 390	ND 400	-	-
4-Chlorophenyl phenyl ether	µg/kg	-	ND 390	ND 400	-	-
4-Methylphenol	µg/kg	-	ND 390	ND 400	-	-
4-Nitroaniline	µg/kg	-	ND 1900	ND 1900	-	-
4-Nitrophenol	µg/kg	-	ND 1900	ND 1900	-	-
Acenaphthene	µg/kg	-	ND 390	ND 400	-	-
Acenaphthylene	µg/kg	-	ND 390	ND 400	-	-
Acetophenone	µg/kg	-	ND 390	ND 400	-	-
Anthracene	µg/kg	-	ND 390	ND 400	-	-
Atrazine	µg/kg	-	ND 390	ND 400	-	-
Benzaldehyde	µg/kg	-	ND 390	ND 400	-	-
Benzo a anthracene	µg/kg	-	ND 390	ND 400	-	-
Benzo a pyrene	µg/kg	-	ND 390	ND 400	-	-
Benzo b fluoranthene	µg/kg	-	ND 390	ND 400	-	-
Benzo g,h,i perylene	µg/kg	-	ND 390	ND 400	-	-
Benzo k fluoranthene	µg/kg	-	ND 390	ND 400	-	-
Biphenyl	µg/kg	-	ND 390	ND 400	-	-
bis 2-Chloroethoxy methane	µg/kg	-	ND 390	ND 400	-	-
bis 2-Chloroethyl ether	µg/kg	-	ND 390	ND 400	-	-
bis 2-Ethylhexyl phthalate	µg/kg	-	ND 390	ND 400	-	-
Butyl benzylphthalate	µg/kg	-	ND 390	ND 400	-	-
Caprolactam	µg/kg	-	ND 390	ND 400	-	-
Carbazole	µg/kg	-	ND 390	ND 400	-	-
Chrysene	µg/kg	-	ND 390	ND 400	-	-

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOILS
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*SB-25*	*SB-26*	*SB-27*	*SB-28*	*SB-29*
	Sample ID:	*082001-SB25-8-10*	*082001-SB26-10-12*	*082001-SB27-10-12*	*082001-SB28-6-8*	*082001-SB29-8-10*
		8-10 ft	*10-12 ft*	*10-12 ft*	*6-8 ft*	*8-10 ft*
	Sample Date:	*8/20/2001*	*8/20/2001*	*8/20/2001*	*8/20/2001*	*8/20/2001*
Parameter	*Unit*					
Semi-Volatiles (Cont'd.)						
Dibenz a,h anthracene	µg/kg	-	ND 390	ND 400	-	-
Dibenzofuran	µg/kg	-	ND 390	ND 400	-	-
Diethyl phthalate	µg/kg	-	ND 390	ND 400	-	-
Dimethyl phthalate	µg/kg	-	ND 390	ND 400	-	-
Di-n-butylphthalate	µg/kg	-	ND 390	ND 400	-	-
Di-n-octyl phthalate	µg/kg	-	ND 390	ND 400	-	-
Fluoranthene	µg/kg	-	ND 390	ND 400	-	-
Fluorene	µg/kg	-	ND 390	ND 400	-	-
Hexachlorobenzene	µg/kg	-	ND 390	ND 400	-	-
Hexachlorobutadiene	µg/kg	-	ND 390	ND 400	-	-
Hexachlorocyclopentadiene	µg/kg	-	ND 1900	ND 1900	-	-
Hexachloroethane	µg/kg	-	ND 390	ND 400	-	-
Indeno 1,2,3-cd pyrene	µg/kg	-	ND 390	ND 400	-	-
Isophorone	µg/kg	-	ND 390	ND 400	-	-
Naphthalene	µg/kg	-	ND 390	ND 400	-	-
Nitrobenzene	µg/kg	-	ND 390	ND 400	-	-
N-Nitrosodi-n-propylamine	µg/kg	-	ND 390	ND 400	-	-
N-Nitrosodiphenylamine	µg/kg	-	ND 390	ND 400	-	-
Pentachlorophenol	µg/kg	-	ND 1900	ND 1900	-	-
Phenanthrene	µg/kg	-	ND 390	ND 400	-	-
Phenol	µg/kg	-	ND 390	ND 400	-	-
Pyrene	µg/kg	-	ND 390	ND 400	-	-
General Chemistry						
Total Solids	%	83.0	84.1	83.5	81.2	80.5

Notes:
- \- Not applicable.
- J Estimated.
- ND Non-detect at associated value.

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-4A*	*MW-5*
	Sample ID:	*W-091901-FG-MW1*	*W-092001-FG-MW2*	*W-092001-FG-MW3*	*W-092401-F6-MW4*	*W-092401-F6-MW4A*	*W-091901-FG-MW5*
	Sample Date:	*9/19/2001*	*9/20/2001*	*9/20/2001*	*9/24/2001*	*9/24/2001*	*9/19/2001*
Parameter	*Unit*						
Volatiles							
1,1,1-Trichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,1,2,2-Tetrachloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,1,2-Trichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,1-Dichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,1-Dichloroethene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2,4-Trichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2-Dibromo-3-chloropropane DBCP	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
1,2-Dibromoethane Ethylene Dibromide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2-Dichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2-Dichloropropane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,3-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,4-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
2-Butanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20
2-Hexanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20
4-Methyl-2-pentanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20
Acetone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20
Benzene, isopropyl	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Benzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Bromodichloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Bromoform	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Bromomethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
Carbon disulfide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Carbon tetrachloride	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Chlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Chloroethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
Chloroform Trichloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Chloromethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
cis-1,2-Dichloroethene	µg/L	ND 5.0	180	ND 5.0	3.8 J	33	ND 5.0
cis-1,3-Dichloropropene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Cyclohexane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Dibromochloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Dichlorodifluoromethane CFC-12	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-4A*	*MW-5*
	Sample ID:	*W-091901-FG-MW1*	*W-092001-FG-MW2*	*W-092001-FG-MW3*	*W-092401-F6-MW4*	*W-092401-F6-MW4A*	*W-091901-FG-MW5*
	Sample Date:	*9/19/2001*	*9/20/2001*	*9/20/2001*	*9/24/2001*	*9/24/2001*	*9/19/2001*
Parameter	***Unit***						
Volatiles (Cont'd.)							
Ethylbenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Methyl acetate	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Methyl cyclohexane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Methyl Tert Butyl Ether	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Methylene chloride	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Styrene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Tetrachloroethene	µg/L	ND 5.0	50	ND 5.0	41	65	ND 5.0
Toluene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
trans-1,2-Dichloroethene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
trans-1,3-Dichloropropene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Trichloroethene	µg/L	ND 5.0	210	ND 5.0	6.5	270	ND 5.0
Trichlorofluoromethane CFC-11	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
Trifluorotrichloroethane Freon 113	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Vinyl chloride	µg/L	ND 10	4.5 J	ND 10	ND 10	ND 10	ND 10
Xylene total	µg/L	ND 15	ND 15	ND 15	ND 15	ND 15	ND 15
Semi-Volatiles							
2,2'-oxybis 1-Chloropropane	µg/L	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L	-	-	-	-	-	-
2,4,6-Trichlorophenol	µg/L	-	-	-	-	-	-
2,4-Dichlorophenol	µg/L	-	-	-	-	-	-
2,4-Dimethylphenol	µg/L	-	-	-	-	-	-
2,4-Dinitrophenol	µg/L	-	-	-	-	-	-
2,4-Dinitrotoluene	µg/L	-	-	-	-	-	-
2,6-Dinitrotoluene	µg/L	-	-	-	-	-	-
2-Chloronaphthalene	µg/L	-	-	-	-	-	-
2-Chlorophenol	µg/L	-	-	-	-	-	-
2-Methyl naphthalene	µg/L	-	-	-	-	-	-
2-Methylphenol	µg/L	-	-	-	-	-	-
2-Nitroaniline	µg/L	-	-	-	-	-	-
2-Nitrophenol	µg/L	-	-	-	-	-	-
3,3'-Dichlorobenzidine	µg/L	-	-	-	-	-	-
3-Nitroaniline	µg/L	-	-	-	-	-	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-4A*	*MW-5*
	Sample ID:	*W-091901-FG-MW1*	*W-092001-FG-MW2*	*W-092001-FG-MW3*	*W-092401-F6-MW4*	*W-092401-F6-MW4A*	*W-091901-FG-MW5*
	Sample Date:	*9/19/2001*	*9/20/2001*	*9/20/2001*	*9/24/2001*	*9/24/2001*	*9/19/2001*
Parameter	*Unit*						
Semi-Volatiles (Cont'd.)							
4,6-Dinitro-2-methylphenol	μg/L	-	-	-	-	-	-
4-Bromophenyl phenyl ether	μg/L	-	-	-	-	-	-
4-Chloro-3-methylphenol	μg/L	-	-	-	-	-	-
4-Chloroaniline	μg/L	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	μg/L	-	-	-	-	-	-
4-Methylphenol	μg/L	-	-	-	-	-	-
4-Nitroaniline	μg/L	-	-	-	-	-	-
4-Nitrophenol	μg/L	-	-	-	-	-	-
Acenaphthene	μg/L	-	-	-	-	-	-
Acenaphthylene	μg/L	-	-	-	-	-	-
Acetophenone	μg/L	-	-	-	-	-	-
Anthracene	μg/L	-	-	-	-	-	-
Atrazine	μg/L	-	-	-	-	-	-
Benzaldehyde	μg/L	-	-	-	-	-	-
Benzo a anthracene	μg/L	-	-	-	-	-	-
Benzo a pyrene	μg/L	-	-	-	-	-	-
Benzo b fluoranthene	μg/L	-	-	-	-	-	-
Benzo g,h,i perylene	μg/L	-	-	-	-	-	-
Benzo k fluoranthene	μg/L	-	-	-	-	-	-
Biphenyl	μg/L	-	-	-	-	-	-
bis 2-Chloroethoxy methane	μg/L	-	-	-	-	-	-
bis 2-Chloroethyl ether	μg/L	-	-	-	-	-	-
bis 2-Ethylhexyl phthalate	μg/L	-	-	-	-	-	-
Butyl benzylphthalate	μg/L	-	-	-	-	-	-
Caprolactam	μg/L	-	-	-	-	-	-
Carbazole	μg/L	-	-	-	-	-	-
Chrysene	μg/L	-	-	-	-	-	-
Dibenz a,h anthracene	μg/L	-	-	-	-	-	-
Dibenzofuran	μg/L	-	-	-	-	-	-
Diethyl phthalate	μg/L	-	-	-	-	-	-
Dimethyl phthalate	μg/L	-	-	-	-	-	-
Di-n-butylphthalate	μg/L	-	-	-	-	-	-
Di-n-octyl phthalate	μg/L	-	-	-	-	-	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-4A*	*MW-5*
	Sample ID:	*W-091901-FG-MW1*	*W-092001-FG-MW2*	*W-092001-FG-MW3*	*W-092401-F6-MW4*	*W-092401-F6-MW4A*	*W-091901-FG-MW5*
	Sample Date:	*9/19/2001*	*9/20/2001*	*9/20/2001*	*9/24/2001*	*9/24/2001*	*9/19/2001*
Parameter	*Unit*						
Semi-Volatiles (Cont'd.)							
Fluoranthene	µg/L	-	-	-	-	-	-
Fluorene	µg/L	-	-	-	-	-	-
Hexachlorobenzene	µg/L	-	-	-	-	-	-
Hexachlorobutadiene	µg/L	-	-	-	-	-	-
Hexachlorocyclopentadiene	µg/L	-	-	-	-	-	-
Hexachloroethane	µg/L	-	-	-	-	-	-
Indeno 1,2,3-cd pyrene	µg/L	-	-	-	-	-	-
Isophorone	µg/L	-	-	-	-	-	-
Naphthalene	µg/L	-	-	-	-	-	-
Nitrobenzene	µg/L	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	µg/L	-	-	-	-	-	-
N-Nitrosodiphenylamine	µg/L	-	-	-	-	-	-
Pentachlorophenol	µg/L	-	-	-	-	-	-
Phenanthrene	µg/L	-	-	-	-	-	-
Phenol	µg/L	-	-	-	-	-	-
Pyrene	µg/L	-	-	-	-	-	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-6*	*MW-6*	*MW-7*	*MW-7A*	*MW-8*	*MW-8A*
	Sample ID:	*W-092401-F6-MW6*	*W-092401-F6-MW15*	*W-092401-F6-MW7*	*W-092001-FG-MW7A*	*W-092401-F6-MW8*	*W-092001-FG-MW8A*
	Sample Date:	*9/24/2001*	*9/24/2001*	*9/24/2001*	*9/20/2001*	*9/24/2001*	*9/20/2001*
			Duplicate				
Parameter	*Unit*						
Volatiles							
1,1,1-Trichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,1,2,2-Tetrachloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,1,2-Trichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,1-Dichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,1-Dichloroethene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2,4-Trichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2-Dibromo-3-chloropropane DBCP	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
1,2-Dibromoethane Ethylene Dibromide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2-Dichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,2-Dichloropropane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,3-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
1,4-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
2-Butanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20
2-Hexanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20
4-Methyl-2-pentanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20
Acetone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 20	13 J
Benzene, isopropyl	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Benzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Bromodichloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Bromoform	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Bromomethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
Carbon disulfide	µg/L	ND 5.0	ND 5.0	1.1 J	ND 5.0	ND 5.0	ND 5.0
Carbon tetrachloride	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Chlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Chloroethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
Chloroform Trichloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Chloromethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
cis-1,2-Dichloroethene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
cis-1,3-Dichloropropene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Cyclohexane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Dibromochloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Dichlorodifluoromethane CFC-12	µg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-6*	*MW-6*	*MW-7*	*MW-7A*	*MW-8*	*MW-8A*
	Sample ID:	*W-092401-F6-MW6*	*W-092401-F6-MW15*	*W-092401-F6-MW7*	*W-092001-FG-MW7A*	*W-092401-F6-MW8*	*W-092001-FG-MW8A*
	Sample Date:	*9/24/2001*	*9/24/2001*	*9/24/2001*	*9/20/2001*	*9/24/2001*	*9/20/2001*
			Duplicate				
Parameter	*Unit*						
Volatiles (Cont'd.)							
Ethylbenzene	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Methyl acetate	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Methyl cyclohexane	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Methyl Tert Butyl Ether	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Methylene chloride	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Styrene	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Tetrachloroethene	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Toluene	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
trans-1,2-Dichloroethene	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
trans-1,3-Dichloropropene	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Trichloroethene	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Trichlorofluoromethane CFC-11	μg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
Trifluorotrichloroethane Freon 113	μg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
Vinyl chloride	μg/L	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
Xylene total	μg/L	ND 15	ND 15	ND 15	ND 15	ND 15	ND 15
Semi-Volatiles							
2,2'-oxybis 1-Chloropropane	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2,4,5-Trichlorophenol	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2,4,6-Trichlorophenol	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2,4-Dichlorophenol	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2,4-Dimethylphenol	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2,4-Dinitrophenol	μg/L	ND 5000	ND 5000	ND 50	-	-	-
2,4-Dinitrotoluene	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2,6-Dinitrotoluene	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2-Chloronaphthalene	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2-Chlorophenol	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2-Methyl naphthalene	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2-Methylphenol	μg/L	ND 1000	ND 1000	ND 10	-	-	-
2-Nitroaniline	μg/L	ND 5000	ND 5000	ND 50	-	-	-
2-Nitrophenol	μg/L	ND 1000	ND 1000	ND 10	-	-	-
3,3'-Dichlorobenzidine	μg/L	ND 5000	ND 5000	ND 50	-	-	-
3-Nitroaniline	μg/L	ND 5000	ND 5000	ND 50	-	-	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-6*	*MW-6*	*MW-7*	*MW-7A*	*MW-8*	*MW-8A*
	Sample ID:	*W-092401-F6-MW6*	*W-092401-F6-MW15*	*W-092401-F6-MW7*	*W-092001-FG-MW7A*	*W-092401-F6-MW8*	*W-092001-FG-MW8A*
	Sample Date:	*9/24/2001*	*9/24/2001*	*9/24/2001*	*9/20/2001*	*9/24/2001*	*9/20/2001*
			Duplicate				
Parameter	*Unit*						
Semi-Volatiles (Cont'd.)							
Fluoranthene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Fluorene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Hexachlorobenzene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Hexachlorobutadiene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Hexachlorocyclopentadiene	µg/L	ND 5000	ND 5000	ND 50	-	-	-
Hexachloroethane	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Indeno 1,2,3-cd pyrene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Isophorone	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Naphthalene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Nitrobenzene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
N-Nitrosodi-n-propylamine	µg/L	ND 1000	ND 1000	ND 10	-	-	-
N-Nitrosodiphenylamine	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Pentachlorophenol	µg/L	ND 5000	ND 5000	ND 50	-	-	-
Phenanthrene	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Phenol	µg/L	ND 1000	ND 1000	ND 10	-	-	-
Pyrene	µg/L	ND 1000	ND 1000	ND 10	-	-	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-9*	*MW-9A*	*MW-10*	*MW-10A*	*MW-11*	*MW-11A*
	Sample ID:	*W-092101-FG-MW9*	*W-092101-FG-MW9A*	*W-092001-FG-MW10*	*W-092001-FG-MW10A*	*W-092101-FG-MW11*	*W-092001-FG-MW11A*
	Sample Date:	*9/21/2001*	*9/21/2001*	*9/20/2001*	*9/20/2001*	*9/21/2001*	*9/20/2001*
Parameter	*Unit*						
Volatiles							
1,1,1-Trichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,1,2,2-Tetrachloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,1,2-Trichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,1-Dichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,1-Dichloroethene	µg/L	2.0 J	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,2,4-Trichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,2-Dibromo-3-chloropropane DBCP	µg/L	ND 10	ND 10	ND 10	ND 10	ND 20	ND 10
1,2-Dibromoethane Ethylene Dibromide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,2-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,2-Dichloroethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,2-Dichloropropane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,3-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
1,4-Dichlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
2-Butanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 40	ND 20
2-Hexanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 40	ND 20
4-Methyl-2-pentanone	µg/L	ND 20	ND 20	ND 20	ND 20	ND 40	ND 20
Acetone	µg/L	ND 20	ND 20	ND 20	5.7 J	ND 40	ND 20
Benzene, isopropyl	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Benzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Bromodichloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Bromoform	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Bromomethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 20	ND 10
Carbon disulfide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	1.5 J
Carbon tetrachloride	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Chlorobenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Chloroethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 20	ND 10
Chloroform Trichloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Chloromethane	µg/L	ND 10	ND 10	ND 10	ND 10	ND 20	ND 10
cis-1,2-Dichloroethene	µg/L	230 J	ND 5.0	ND 5.0	ND 5.0	4.3 J	5.5
cis-1,3-Dichloropropene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Cyclohexane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Dibromochloromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Dichlorodifluoromethane CFC-12	µg/L	ND 10	ND 10	ND 10	ND 10	ND 20	ND 10

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	MW-9	MW-9A	MW-10	MW-10A	MW-11	MW-11A
	Sample ID:	W-092101-FG-MW9	W-092101-FG-MW9A	W-092001-FG-MW10	W-092001-FG-MW10A	W-092101-FG-MW11	W-092001-FG-MW11A
	Sample Date:	9/21/2001	9/21/2001	9/20/2001	9/20/2001	9/21/2001	9/20/2001
Parameter	*Unit*						
Volatiles (Cont'd.)							
Ethylbenzene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Methyl acetate	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Methyl cyclohexane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Methyl Tert Butyl Ether	µg/L	ND 5.0	ND 5.0	2.9 J	ND 5.0	ND 10	ND 5.0
Methylene chloride	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Styrene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Tetrachloroethene	µg/L	12000	27	ND 5.0	ND 5.0	240	480
Toluene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
trans-1,2-Dichloroethene	µg/L	2.2 J	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
trans-1,3-Dichloropropene	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Trichloroethene	µg/L	1200	3.7 J	ND 5.0	ND 5.0	12	75
Trichlorofluoromethane CFC-11	µg/L	ND 10	ND 10	ND 10	ND 10	ND 20	ND 10
Trifluorotrichloroethane Freon 113	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 10	ND 5.0
Vinyl chloride	µg/L	2.7 J	ND 10	ND 10	ND 10	ND 20	ND 10
Xylene total	µg/L	ND 15	ND 15	ND 15	ND 15	ND 30	ND 15
Semi-Volatiles							
2,2'-oxybis 1-Chloropropane	µg/L	-	-	ND 10	-	ND 10	-
2,4,5-Trichlorophenol	µg/L	-	-	ND 10	-	ND 10	-
2,4,6-Trichlorophenol	µg/L	-	-	ND 10	-	ND 10	-
2,4-Dichlorophenol	µg/L	-	-	ND 10	-	ND 10	-
2,4-Dimethylphenol	µg/L	-	-	ND 10	-	ND 10	-
2,4-Dinitrophenol	µg/L	-	-	ND 50	-	ND 50	-
2,4-Dinitrotoluene	µg/L	-	-	ND 10	-	ND 10	-
2,6-Dinitrotoluene	µg/L	-	-	ND 10	-	ND 10	-
2-Chloronaphthalene	µg/L	-	-	ND 10	-	ND 10	-
2-Chlorophenol	µg/L	-	-	ND 10	-	ND 10	-
2-Methyl naphthalene	µg/L	-	-	ND 10	-	ND 10	-
2-Methylphenol	µg/L	-	-	ND 10	-	ND 10	-
2-Nitroaniline	µg/L	-	-	ND 50	-	ND 50	-
2-Nitrophenol	µg/L	-	-	ND 10	-	ND 10	-
3,3'-Dichlorobenzidine	µg/L	-	-	ND 50	-	ND 50	-
3-Nitroaniline	µg/L	-	-	ND 50	-	ND 50	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-9*	*MW-9A*	*MW-10*	*MW-10A*	*MW-11*	*MW-11A*
	Sample ID:	*W-092101-FG-MW9*	*W-092101-FG-MW9A*	*W-092001-FG-MW10*	*W-092001-FG-MW10A*	*W-092101-FG-MW11*	*W-092001-FG-MW11A*
	Sample Date:	*9/21/2001*	*9/21/2001*	*9/20/2001*	*9/20/2001*	*9/21/2001*	*9/20/2001*
Parameter	*Unit*						
Semi-Volatiles (Cont'd.)							
4,6-Dinitro-2-methylphenol	µg/L	-	-	ND 50	-	ND 50	-
4-Bromophenyl phenyl ether	µg/L	-	-	ND 10	-	ND 10	-
4-Chloro-3-methylphenol	µg/L	-	-	ND 10	-	ND 10	-
4-Chloroaniline	µg/L	-	-	ND 10	-	ND 10	-
4-Chlorophenyl phenyl ether	µg/L	-	-	ND 10	-	ND 10	-
4-Methylphenol	µg/L	-	-	ND 10	-	ND 10	-
4-Nitroaniline	µg/L	-	-	ND 50	-	ND 50	-
4-Nitrophenol	µg/L	-	-	ND 50	-	ND 50	-
Acenaphthene	µg/L	-	-	ND 10	-	ND 10	-
Acenaphthylene	µg/L	-	-	ND 10	-	ND 10	-
Acetophenone	µg/L	-	-	ND 10	-	ND 10	-
Anthracene	µg/L	-	-	ND 10	-	ND 10	-
Atrazine	µg/L	-	-	ND 10	-	ND 10	-
Benzaldehyde	µg/L	-	-	ND 10	-	ND 10	-
Benzo a anthracene	µg/L	-	-	ND 10	-	ND 10	-
Benzo a pyrene	µg/L	-	-	ND 10	-	ND 10	-
Benzo b fluoranthene	µg/L	-	-	ND 10	-	ND 10	-
Benzo g,h,i perylene	µg/L	-	-	ND 10	-	ND 10	-
Benzo k fluoranthene	µg/L	-	-	ND 10	-	ND 10	-
Biphenyl	µg/L	-	-	ND 10	-	ND 10	-
bis 2-Chloroethoxy methane	µg/L	-	-	ND 10	-	ND 10	-
bis 2-Chloroethyl ether	µg/L	-	-	ND 10	-	ND 10	-
bis 2-Ethylhexyl phthalate	µg/L	-	-	ND 10	-	ND 10	-
Butyl benzylphthalate	µg/L	-	-	ND 10	-	ND 10	-
Caprolactam	µg/L	-	-	ND 10	-	ND 10	-
Carbazole	µg/L	-	-	ND 10	-	ND 10	-
Chrysene	µg/L	-	-	ND 10	-	ND 10	-
Dibenz a,h anthracene	µg/L	-	-	ND 10	-	ND 10	-
Dibenzofuran	µg/L	-	-	ND 10	-	ND 10	-
Diethyl phthalate	µg/L	-	-	ND 10	-	ND 10	-
Dimethyl phthalate	µg/L	-	-	ND 10	-	ND 10	-
Di-n-butylphthalate	µg/L	-	-	ND 10	-	ND 10	-
Di-n-octyl phthalate	µg/L	-	-	ND 10	-	ND 10	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY SAMPLING MONITORING PROGRAM
PARCEL #2 - SENECA STREET
BUFFALO, NEW YORK
AUGUST - SEPTEMBER 2001

	Sample Location:	*MW-9*	*MW-9A*	*MW-10*	*MW-10A*	*MW-11*	*MW-11A*
	Sample ID:	*W-092101-FG-MW9*	*W-092101-FG-MW9A*	*W-092001-FG-MW10*	*W-092001-FG-MW10A*	*W-092101-FG-MW11*	*W-092001-FG-MW11A*
	Sample Date:	*9/21/2001*	*9/21/2001*	*9/20/2001*	*9/20/2001*	*9/21/2001*	*9/20/2001*
Parameter	*Unit*						
Semi-Volatiles (Cont'd.)							
Fluoranthene	µg/L	-	-	ND 10	-	ND 10	-
Fluorene	µg/L	-	-	ND 10	-	ND 10	-
Hexachlorobenzene	µg/L	-	-	ND 10	-	ND 10	-
Hexachlorobutadiene	µg/L	-	-	ND 10	-	ND 10	-
Hexachlorocyclopentadiene	µg/L	-	-	ND 50	-	ND 50	-
Hexachloroethane	µg/L	-	-	ND 10	-	ND 10	-
Indeno 1,2,3-cd pyrene	µg/L	-	-	ND 10	-	ND 10	-
Isophorone	µg/L	-	-	ND 10	-	ND 10	-
Naphthalene	µg/L	-	-	ND 10	-	ND 10	-
Nitrobenzene	µg/L	-	-	ND 10	-	ND 10	-
N-Nitrosodi-n-propylamine	µg/L	-	-	ND 10	-	ND 10	-
N-Nitrosodiphenylamine	µg/L	-	-	ND 10	-	ND 10	-
Pentachlorophenol	µg/L	-	-	ND 50	-	ND 50	-
Phenanthrene	µg/L	-	-	ND 10	-	ND 10	-
Phenol	µg/L	-	-	ND 10	-	ND 10	-
Pyrene	µg/L	-	-	ND 10	-	ND 10	-

Notes:

-	Not applicable.
J	Estimated.
ND	Non-detect at associated value.

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name): STL Pittsburgh
450 William Pitt Way
Pittsburgh PA 15238

REFERENCE NUMBER: 015867
2183 Seneca St.
Buffalo NY [illegible]

SAMPLER'S SIGNATURE: Frank Garbe
PRINTED NAME: Frank Garbe

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	PARAMETERS: VOA	SVOC							REMARKS
	8/20/01	11:[illegible]	082001 - SB22-10-12	Soil	1		1							
✓	↓	11:[illegible]	082001 - SB26-10-12	↓	1	-	1							
✓✓		11:[illegible]	082001 - SB21-6-8		2	2	-							
✓✓		16:15	082001 - SB19-6-8		3	2	1							
✓✓		15:00	082001 - SB23-6-8		2	2	-							
✓✓		16:00	082001 - SB24-5-10		2	2	-							
✓✓✓		17:00	082001 - SB27-8-10		3	2	1							
✓✓✓		17:20	082001 - SB35-8-10		3	2	1							
✓✓		14:10	082001 - SB17-2-4		2	2	-							
✓✓		11:20	082001 - SB17-6-8		2	2	-							
		~~[illegible]~~	~~082001 - SB[illegible]-[illegible]-10~~											
✓✓	↓	18:00	082001 - SB25-8-10	↓	2	2	-							

TOTAL NUMBER OF CONTAINERS: 24 | HEALTH/CHEMICAL HAZARDS:

RELINQUISHED BY: ① Frank Garbe	DATE: 8/21/01 TIME: 17:00 (FedEx)	RECEIVED BY: ① (FedEx)	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:

METHOD OF SHIPMENT: WAY BILL No.

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM: Frank Garbe
Jane [illegible]

RECEIVED FOR LABORATORY BY:
DATE: TIME:

No M 3523

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name): [illegible]

REFERENCE NUMBER: [illegible]

SAMPLER'S SIGNATURE: [illegible] PRINTED NAME: Frank Garbe

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	PARAMETERS [illegible]	[illegible]	REMARKS
	[illegible]	[illegible]	[illegible]	[illegible]	3	2	1	
	↓	[illegible]	[illegible]	↓	2	2	-	
	↓	[illegible]	[illegible]	↓	2	2	-	
	↓	[illegible]	[illegible]	↓	2	2	-	
	↓	[illegible]	[illegible]	↓	2	2	-	
	↓	[illegible]	[illegible]	↓	2	2	-	

TOTAL NUMBER OF CONTAINERS: 13

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY: ① Frank Garbe	DATE: [illegible] TIME: 17:00 [illegible]	RECEIVED BY: ① FEDEX	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:

METHOD OF SHIPMENT: WAY BILL No.

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM: Frank Garbe, [illegible]

RECEIVED FOR LABORATORY BY:
DATE: TIME:

No N 3524

1001 (D) APR 28/97(NF) REV. 0 (F-15)

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name): STL Pittsburgh, 450 William Pitt Way, Pittsburg, PA 15238

REFERENCE NUMBER: #015867, 3137 S[illegible] St.

SAMPLER'S SIGNATURE: ______ PRINTED NAME: Frank Gorbe

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	TCL VOA	TCL BNA	REMARKS
	9/19/01	1030	W-091901-FG-MW1	water	3	X		- Contact Susan Scroochi w/ ques + results.
	9/19/01	1055	W-091901-FG-MW5	water	3	X		- hot turbid
	9/20/01	1120	W-092001-FG-MW3	water	3	X		samples settle
	9/20/01	1220	W-092001-FG-MW10A	water	3	X		and decant.
	9/20/01	1320	W-092001-FG-MW9A	water	3	X		
	9/20/01	1405	W-092001-FG-MW10	water	~~2~~ 5	X	X	
	9/20/01	1415	W-092001-FG-MW7A	water	~~5~~ 3	X	~~X~~	
	9/20/01	1510	W-092001-FG-MW2	water	3	X		
	9/19/01	—	TB-1	water	2	X		Trip [illegible]
	9/20/01	1605	W-092001-FG-MW11A	water	3	X		

TOTAL NUMBER OF CONTAINERS: 31

HEALTH/CHEMICAL HAZARDS:

RELINQUISHED BY: ① Frank Gorbe	DATE: 9/20/01 TIME: 17:30	RECEIVED BY: ①	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:

METHOD OF SHIPMENT: WAY BILL No.

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM: Frank Gorbe, Ja[illegible] D[illegible]

RECEIVED FOR LABORATORY BY: ______

DATE: ______ TIME: ______

No N 0875

1001 (D) APR 28/97(NF) REV. 0 (F-15)

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-6150

SHIPPED TO (Laboratory Name): STL Pittsburgh
450 William Pitt Way
Pittsburgh, PA 15238

REFERENCE NUMBER: #015867
2137 Seneca St ('Pizza Hut')

SAMPLER'S SIGNATURE: Frank Garbe
PRINTED NAME: Frank Garbe

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	TCL VOC	TCL SVOC						REMARKS
	9-21-01	13:30	W-092101-FG-MW11	Water	15	9	6	MS/MSD					Contact: Sue Scrocchi (716 297-6150) w/results & questions
	↓	14:30	W-092101-FG-MW9	" "	3	3							
	↓	16:10	W-092101-FG-MW9A	" "	3	3							
	9/21/01	—	TB-2	" "	2	2		Trip Blank					
													* Please let turbid samples settle & decant sample volume

TOTAL NUMBER OF CONTAINERS: 23

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY: ① Frank Garbe	DATE: 9/21/01 TIME: 17:30	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: FedEx
WAY BILL No.

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM: Frank Garbe

RECEIVED FOR LABORATORY BY:
DATE: TIME:

№ NF-2458

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-6150

SHIPPED TO (Laboratory Name): STL Pittsburgh, 450 William Pitt Way, Pittsburgh PA 15238

REFERENCE NUMBER: # 015867 2137 Seneca St. (Pizza Hut)

SAMPLER'S SIGNATURE: Frank Garbe PRINTED NAME: Frank Garbe

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	TCL VOCs	TCL SVOCs	REMARKS
	9-24-01	11:10	W-092401-FG-MW4	W	3	3		
	↓	12:30	W-092401-FG-MW4A	W	3	3		
		13:00	W-092401-FG-MW8	W	3	3		
		15:10	W-092401-FG-MW6	W	5	3	2	
		14:30	W-092401-FG-MW15	W	5	3	2	
		16:30	W-092401-FG-MW7	W	5	3	2	
		–	TB-3	W	2	2		Trip Blank

Remarks: Please let turbid samples settle & decant

Contact Sue Scrocchi (CRA) w/ results & questions

TOTAL NUMBER OF CONTAINERS: 24 HEALTH/CHEMICAL HAZARDS:

RELINQUISHED BY: ① Frank Garbe	DATE: 9/24/01 TIME: 17:30	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fedex WAY BILL No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Frank Garbe

RECEIVED FOR LABORATORY BY:
DATE: TIME:

№ NF- 2459

1001 (D) OCT 31/94(NF) REV.1 (F-05)

CONESTOGA-ROVERS
& ASSOCIATES

2055 Niagara Falls Blvd., Suite #3
Niagara Falls, New York 14304
Telephone: (716) 297-6150 Fax: (716) 297-2265
www.CRAworld.com

MEMORANDUM

TO:	Carol Dunnigan	REF. NO.:	15867
FROM:	Susan Scrocchi/js/3 SS	DATE:	January 7, 2002
		Revised:	January 15, 2002

RE: **Data Usability Summary Report**
Site Investigation
Parcel #2 - Seneca Street
Buffalo, New York

INTRODUCTION

The following details an evaluation of results reported by Severn Trent Laboratories (STL) located in Pittsburgh, Pennsylvania, for 10 groundwater samples in November 2001 at the Parcel #2 Site located in Buffalo, New York.

The samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) using Method SW-846 8260, referenced from "Test Methods for Solid Waste Physical/Chemical Methods", SW-847, 3rd Edition, September 1986 (with all subsequent revisions).

A summary of the analytical results is presented in Table 1.

The Quality Assurance/Quality Control (QA/QC) criteria by which these data have been evaluated is outlined in the analytical methods and the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999, United States Environmental Protection Agency [USEPA] 540/R-99/008).

QA/QC REVIEW

Deliverables

The data package was complete as defined under the requirements for Analytical Services Protocol (ASP) Category A deliverables.

Holding Times

Based on the methods, all required holding times were met.

Blanks

Method blanks were analyzed on a daily basis and were non-detect for the compounds of interest.

TABLE 1

ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING
PARCEL #2, SENECA STREET
NOVEMBER 2001

	Sample Location:	*MW-11*	*MW-11A*	*MW-12*	*MW-12A*	*MW-2*
	Sample ID:	*GW-112801-JP-005*	*GW-112901-JP-008*	*GW-112701-JP-001*	*GW-113001-JP-010*	*GW-112901-JP-009*
	Sample Date:	*11/28/2001*	*11/29/2001*	*11/27/2001*	*11/30/2001*	*11/29/2001*
Parameter	***Unit***					
Volatiles						
cis-1,2-Dichloroethene	µg/L	29	7.1 J	360	33	140
cis-1,3-Dichloropropene	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Cyclohexane	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Dibromochloromethane	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Dichlorodifluoromethane (CFC-12)	µg/L	ND 10	ND 20	ND 10	ND 10	ND 10
Ethylbenzene	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Methyl acetate	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Methyl cyclohexane	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Methyl Tert Butyl Ether	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Methylene chloride	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Styrene	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Tetrachloroethene	µg/L	1700	240	6200	100	85
Toluene	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
trans-1,2-Dichloroethene	µg/L	ND 5.0	ND 10	3.0 J	ND 5.0	ND 5.0
trans-1,3-Dichloropropene	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Trichloroethene	µg/L	84	80	2000	36	140
Trichlorofluoromethane (CFC-11)	µg/L	ND 10	ND 20	ND 10	ND 10	ND 10
Trifluorotrichloroethane (Freon 113)	µg/L	ND 5.0	ND 10	ND 5.0	ND 5.0	ND 5.0
Vinyl chloride	µg/L	ND 10	ND 20	3.3 J	ND 10	5.0 J
Xylene (total)	µg/L	ND 15	ND 30	ND 15	ND 15	ND 15

TABLE 1

ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING
PARCEL #2, SENECA STREET
NOVEMBER 2001

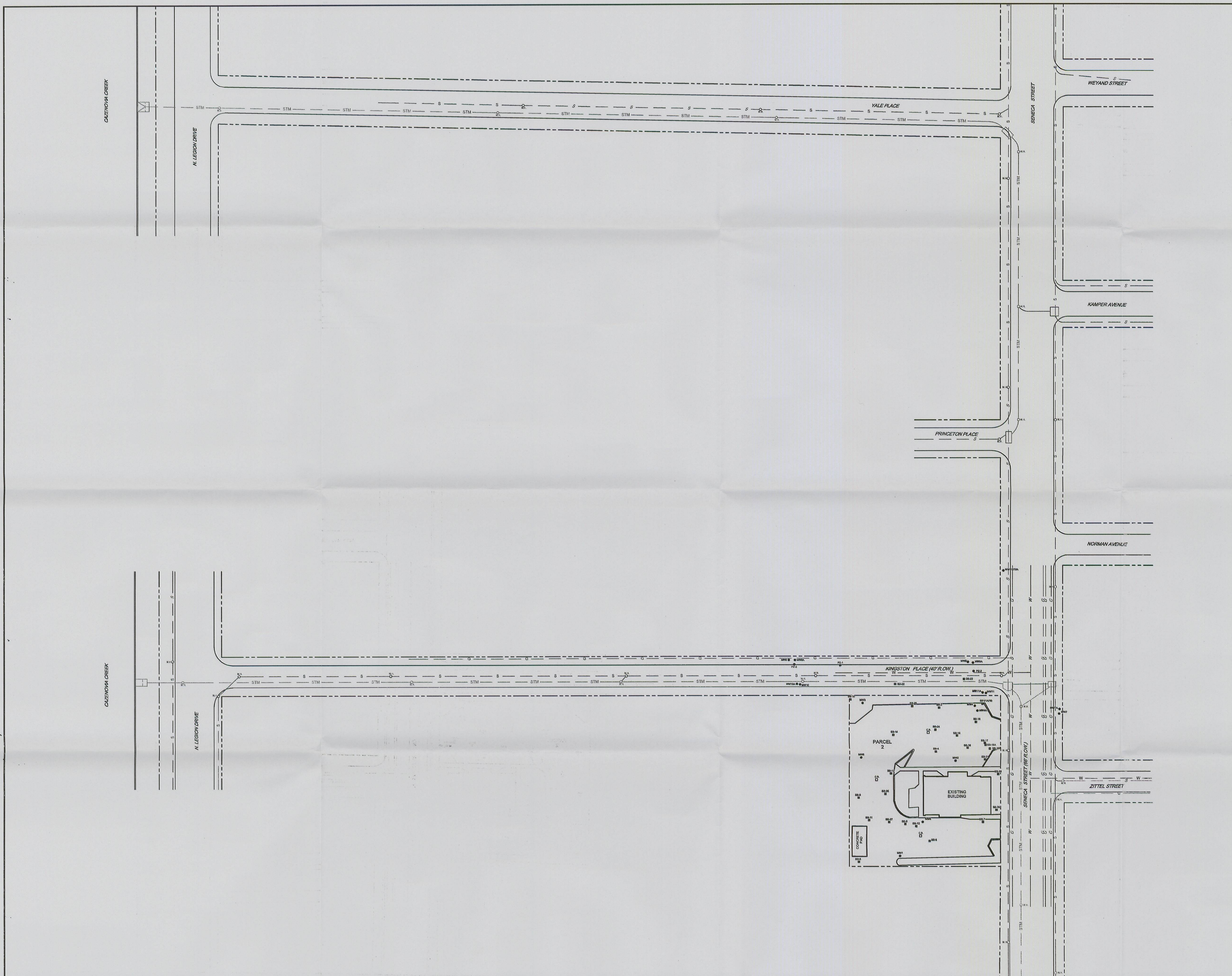
Parameter	*Unit*	*Sample Location:* MW-4 *Sample ID:* GW-112801-JP-003 *Sample Date:* 11/28/2001	MW-4 GW-112801-JP-004 11/28/2001 (Field Duplicate)	MW-4A GW-112901-JP-007 11/29/2001	MW-9 GW-112701-JP-002 11/27/2001	MW-9A GW-112801-JP-006 11/28/2001
Volatiles						
1,1,1-Trichloroethane	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,1,2,2-Tetrachloroethane	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,1,2-Trichloroethane	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,1-Dichloroethane	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,1-Dichloroethene	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,2,4-Trichlorobenzene	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	ND 300	ND 500	ND 10	ND 500	ND 10
1,2-Dibromoethane (Ethylene Dibromide)	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,2-Dichlorobenzene	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,2-Dichloroethane	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,2-Dichloropropane	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,3-Dichlorobenzene	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
1,4-Dichlorobenzene	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
2-Butanone	µg/L	ND 600	ND 1000	ND 20	ND 1000	ND 20
2-Hexanone	µg/L	ND 600	ND 1000	ND 20	ND 1000	ND 20
4-Methyl-2-pentanone	µg/L	ND 600	ND 1000	ND 20	ND 1000	ND 20
Acetone	µg/L	ND 600	ND 1000	ND 20	ND 1000	ND 20
Benzene, isopropyl	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Benzene	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Bromodichloromethane	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Bromoform	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Bromomethane	µg/L	ND 300	ND 500	ND 10	ND 500	ND 10
Carbon disulfide	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Carbon tetrachloride	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Chlorobenzene	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Chloroethane	µg/L	ND 300	ND 500	ND 10	ND 500	ND 10
Chloroform (Trichloromethane)	µg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Chloromethane	µg/L	ND 300	ND 500	ND 10	ND 500	ND 10

TABLE 1

ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING
PARCEL #2, SENECA STREET
NOVEMBER 2001

Parameter	*Unit*					
	Sample Location:	*MW-4*	*MW-4*	*MW-4A*	*MW-9*	*MW-9A*
	Sample ID:	*GW-112801-JP-003*	*GW-112801-JP-004*	*GW-112901-JP-007*	*GW-112701-JP-002*	*GW-112801-JP-006*
	Sample Date:	*11/28/2001*	*11/28/2001*	*11/29/2001*	*11/27/2001*	*11/28/2001*
			(Field Duplicate)			
Volatiles						
cis-1,2-Dichloroethene	μg/L	100 J	160 J	46	260	2.0 J
cis-1,3-Dichloropropene	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Cyclohexane	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Dibromochloromethane	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Dichlorodifluoromethane (CFC-12)	μg/L	ND 300	ND 500	ND 10	ND 500	ND 10
Ethylbenzene	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Methyl acetate	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Methyl cyclohexane	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Methyl Tert Butyl Ether	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Methylene chloride	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Styrene	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Tetrachloroethene	μg/L	5800	9400	32	9500	41
Toluene	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
trans-1,2-Dichloroethene	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
trans-1,3-Dichloropropene	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Trichloroethene	μg/L	360	580	95	1000	7.7
Trichlorofluoromethane (CFC-11)	μg/L	ND 300	ND 500	ND 10	ND 500	ND 10
Trifluorotrichloroethane (Freon 113)	μg/L	ND 150	ND 250	ND 5.0	ND 250	ND 5.0
Vinyl chloride	μg/L	ND 300	ND 500	ND 10	ND 500	ND 10
Xylene (total)	μg/L	ND 450	ND 750	ND 15	ND 750	ND 15

Notes:
J Estimated.
ND Non-detect at associated value.



Nº	Revision	Date	Initial

0 20 50ft

LEGEND

SB-5 SOIL BORING
MW-1 MONITORING WELL
PZ-2 PIEZOMETER
C.B. CATCH BASIN
M.H. MANHOLE

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

HODGSON, RUSS, ANDREWS WOODS & GOODYEAR

PARCEL 2 - SENECA STREET

SEWER SYSTEMS PLOT PLAN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BUFFALO SEWER AUTHORITY

Project Manager:	Reviewed By:	Date:	
R. SHEPHERD	CFD	01/17/02	
Scale: 1"=50'	Project Nº: 15867-00	Report Nº: 002	Drawing Nº: PLAN 1

15867-00(002)GN-NF011 FEB 12/2002