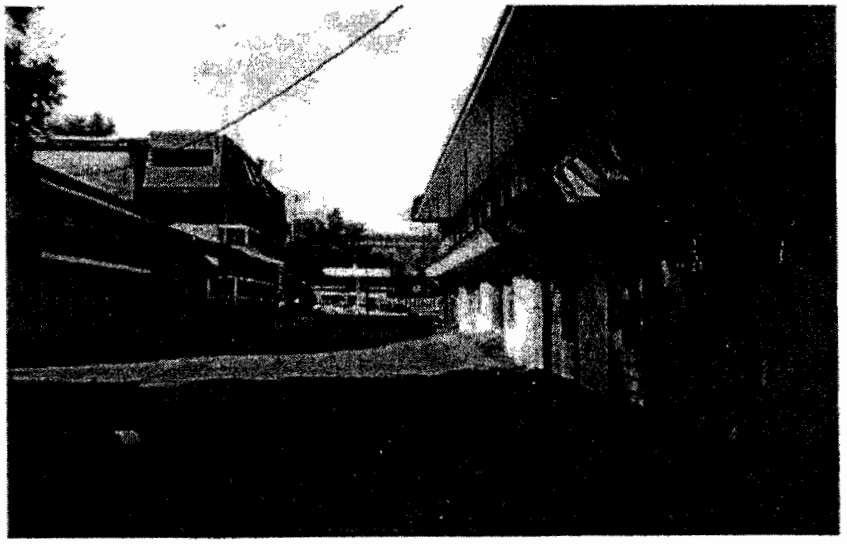
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

REMEDIAL INVESTIGATION REPORT

93 Main Street
Inactive Hazardous Waste Disposal Site



Site No. 7-04-027
City of Binghamton,
Broome County, NY

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SECTION 1: SCOPE OF THE PROJECT

In October of 1998, the New York State Department of Environmental Remediation (DER) finalized a Work Plan for the Remedial Investigation and Feasibility Study (RI/FS) of the 93 Main Street Site. The remedial investigation (RI) was planned in response to the identified presence of pesticides and herbicides in the soil and ground water which resulted in the placement of the site on the New York State Registry of Inactive Hazardous Waste Sites, as a class 2. A class 2 site is defined as a site which posses a significant threat to human health or the environment. The purpose of the RI is to characterize the nature and extent of the contamination present at the site. The RI will be followed by a Feasibility Study (FS), which will evaluate alternative remedies to address any contamination identified at the site, which may be impacting human health or the environment.

During the RI it became obvious that the abandoned buildings on the 93 and 89-91 Main Street property would have to be demolished in order to completely investigate the site. To this end the City of Binghamton began the demolition process by taking bids on the demolition project. By the 20th of September 1999 the demolition was complete and the NYSDEC began Phase II of the Remedial Investigation. The purpose of Phase II was to better define groundwater flow at the northern end of the site and to investigate the area under the former garage of the 93 Main Street building. The following is the Remedial Investigation Report.

SECTION 2: BACKGROUND

2.1 Site Description

The 93 Main Street Site consists of four parcels of land, 89-91 and 93 main street and 25 and 25½ Arthur street, located in the City of Binghamton, Broome County. An abandoned former apartment building existed on 93 Main Street and a partially completed motel building existed on 89-91 Main Street. Both structures were in serious disrepair. The 93 Main Street Parcel was at one time home to the McMahon Brothers Pest Control company. The 25½ Arthur street property contains a house that is currently occupied, while the 25 Arthur Street property is a vacant lot. The areas of contamination are centered around a dry well located on 89-91 Main Street and a drain on 93 Main Street. Figure 1 shows the properties described above. The surrounding area is a mix of residential and commercial buildings, all of which are served by municipal water service.

2.2 Site History

2.2.1 Operating History

From the 1950's to the 1980's the McMahon Brothers Pest Control company operated at the 93 Main Street Site. It was reported that the site was used as a pesticide/herbicide storage and handling location for the company. There were also allegations of spills having taken place at the Site.

2.2.2 Remedial History

In 1995 Gaynor Associates of Cortland, NY performed a Phase II environmental audit on the 93 Main Street property for a financial institution. The results of the investigation revealed elevated concentrations of herbicides and pesticides in the soil, specifically 2,4,5-T at 12,000 μg/kg; 2,4-D at 4,030 μg/kg; and Chlordane at 15,000 μg/kg.

During the investigation, Gaynor determined that a back area of the building had been used by McMahon for pesticide storage and handling. This area had since been converted to apartments, and the concrete floor covered with tile or carpet. During the Gaynor study strong pesticide odors were noted in the abandoned apartments, which were in serious disrepair.

In 1995 the City, in response to these and other complaints, entered into a Voluntary Cleanup Agreement with the NYSDEC in order to perform a limited investigation of the site. This investigation focused on the rear of the 93 Main Street building and consisted of Geoprobe sampling of the soil and groundwater. The results of this investigation revealed elevated concentrations of pesticides/herbicides such as chlordane, aldrin, dieldrin, and 2,4,5-T in the Site's groundwater and/or soil. These pesticide concentrations exceeded, in some instances, the NYSDEC's groundwater standards by orders of magnitude. Soil guidance value exceedences were also significant. The presence of these pesticides indicate a threat to the area's sole source aquifer and was the basis for the Site's class "2" designation on the New York State Registry of Inactive Hazardous Waste Sites.

SECTION 3: REMEDIAL INVESTIGATION PHASE I

In order to determine the nature and extent of contamination present at the 93 Main Street Site, the DER initiated a Remedial Investigation (RI) at the site in October 1998. This section summarizes the methodology and findings of the various investigations undertaken as part of the RI. More detail relative to the investigation is available in the workplan entitled "Remedial Investigation/Feasibility Study On-site Work Plan" dated October 1998.

As part of this investigation, the following activities took place:

- Surface and subsurface soil samples were collected using a Geoprobe rig. The samples were then analyzed for pesticides and herbicides using immunoassay test kits.

- Groundwater samples were collected, also using a Geoprobe, and analyzed to help determine the extent of groundwater contamination.

- Monitoring wells were installed to define groundwater flow direction and determine the extent of groundwater contamination.

- A test pit investigation was conducted to determine if there were any pipes connected to the drywell on 89-91 Main, the drain on 93 Main or to determine whether other underground structures existed.

3.1 Geoprobe Investigation

It was known that a pest control company operated from the site and that equipment and chemicals had been stored at the site. Previous investigations revealed contamination in both the soil and groundwater. Since the limited historical data available suggested possible wide spread contamination such as spills or other disposal during the operation, immunoassay testing in conjunction with geoprobe subsurface soil sampling was used to identify impacted areas of the site. Information gathered during preliminary soil sampling was used to focus subsequent soil sampling. Samples were initially collected on a twenty foot grid at locations of suspected contamination (i.e: around the drywell on 89-91) and to an approximate depth of 20 feet. Sample collection continued until soil contamination was fully delineated. Samples were analyzed for 2,4-D, Chlordane, and DDT using immunoassay test kits.

As part of the geoprobe investigation 56 subsurface soil samples and 3 groundwater samples were collected and analyzed. A summary of the immunoassay test results are provided in Table 1 (see Appendix A)

Of the 56 soil samples collected from the site DDT, 2,4-D, and Chlordane registered positives on 8, 37, and 31 soil samples, respectively. The highest levels detected were immediately around the drain located on the 93 Main Street property. Since immunoassay tests can react to compounds that are closely related in structure to the target compounds, results are confirmed by standard laboratory testing. One out of every ten samples collected was sent to the lab for full analysis. Table 1 compares results from the immunoassay testing to results obtained from laboratory analysis. Overall the immunoassay tests tended to give a slightly higher positive result when compared to lab analysis of the sample. This is due to the qualitative nature of the test.

The geoprobe investigation identified two areas of localized contamination, both areas are centered around the identified drywell on the 89-91 and the drain, discovered during monitoring well installation, on 93 Main Street. The area of greatest contamination is located around the drain located on the 93 Main Street property. This area extends from approximately four feet below grade to the top of the water table which is located at approximately 23 feet below ground surface in this area. The contamination also appears to extend approximately six feet radially around the drain. The area of contamination on the 89-91 street property appears much smaller, confined to approximately 4 to 6 feet below grade and extending two feet radially from the drywell.

3.2 Test Pit Investigation

As a component of the RI, tests pits were excavated to search for underground piping and other subsurface structures or drums. Test pits were also used to investigate the area behind 93 Main Street where there was evidence of fill having been placed which included various materials, such as tires and concrete blocks. Test pit locations are shown in Figure 2.

Tests pits were excavated using a backhoe and were generally three feet wide, six to eight feet long, and six to eight feet deep. Tests pits were visually inspected to examine the quality of subsurface soils and to check for piping, drums or subsurface structures. During excavation the test pits were also monitored using a photoionization detector. A photo-ionization detector (PID) measures toxic gases and vapors in low parts per million concentrations. A PID detects most volatile organic compounds (VOCs) with a carbon range from one (e.g., methylene chloride - CH2Cl2) to ten (e.g., naphthalene - C10H8). If contamination was identified which was similar to waste found during the geoprobe sampling, no additional samples were collected. One sample was taken from the test pit around the drain on 93 Main street and analyzed for pesticides/herbicides, metals, VOCs, and SVOCs. Analytical results were compared to applicable, Standards, Criteria, and Guidance (SCGs). There is a description of SCGs in Section 5.1. Table 2 compares the analytical results from the test pit sample to SCGs.

During the test pit excavation around the drain on 93 Main Street visually contaminated soil was identified at approximately four feet below the surface. Contaminated soil exhibited dark staining and a petroleum/pesticide odor. A sheen was evident on some of the excavated soil. During excavation it became evident that the site soils were not very stable, so the depth of the test pit excavation had to be limited. A side of the drain was exposed during excavation. It appeared to be constructed of bricks and cement. The test pit could not identify the total depth of the well due to the unstable nature of the site soil. At one time the well provided a direct pathway for contamination into the subsurface soil, it also allowed contamination to leach through it's walls into the surrounding soil, resulting in an area of contamination which extends approximately six feet radially from the drain and from four to twenty five feet below ground level. Currently the drain is filled with loosely packed soil, probably the result of years of accumulated decomposing leaves and surface run off. No inlet or outlet pipes were found to

be connected to the drain.

The test pit excavation around the drywell located on the 89-91 Main Street property also failed to reveal any inlet or outlet pipes. Contaminated soil in this area appeared similar to the contaminated soil described above. Excavation was also carried out in the debris pile behind the 93 Main Street building. The test pit investigation did not discover any subsurface structures or drums.

3.3 Monitoring Wells

Geologic and hydrogeologic properties of the overburden material were investigated at the site through a soil boring and monitoring well installation program. This program included six soil borings with monitoring wells constructed at each boring. Locations of the monitoring wells were selected based on site topography and the fact that the Site was believed to be within the zone of influence of an industrial water supply well. MW-2 was installed at a location up gradient from the site and therefore represents background groundwater conditions. Well locations are shown in Figure 2. A discussion of subsurface geology and hydrogeology can be found in Section 4.2, Site Geology and Hydrogeology.

Monitoring wells were drilled and installed using hollow stem auger (HSA) methods. Continuous split spoon sampling was utilized to visually classify the soil. Soil types were classified and recorded by a geologist. The total depth of each well ranged from 21 to 33 feet below ground surface. Monitoring wells were constructed of two inch ID Schedule 40 flush-threaded PVC well screen (0.010-inch machine slotted) and riser. The sand pack was constructed with No. 1 Morie sand. A bentonite seal was placed above the sand pack, followed by a cement/bentonite grout to be placed to within three feet of the ground surface. Each well has a vented cap and steel flush mounted protective casing. A cement pad was constructed to divert surface water from each well. Well construction details are included in Appendix B.

Monitoring wells were developed by pumping and bailing until temperature, pH, and conductivity stabilized. Turbidity was also monitored with a target value of 50 NTUs, which was accomplished at all monitoring wells except MW-4. MW-5 is a dry hole and therefore not developed.

3.4 Groundwater Sampling

During the geoprobe investigation three water samples were collected at geoprobe locations #2, #10, and #48. One of the samples was analyzed for the complete TCL list while the remaining two were only analyzed for pesticides, due to lack of volume. Figure 2 Shows the locations of these samples. The results are listed in Appendix A Table 3.

One round of groundwater sampling was collected from each of the six monitoring wells to determine if groundwater contamination had occurred from the disposal at the site. MW-5

could not be sampled because it did not produce any water. Due to difficult drilling conditions and auger refusal at twenty feet below ground surface, MW-5 is screened from 10 to 20 feet, approximately one foot above the water table based on the cross sections developed for the site. Of the remaining five wells sampled only MW-1 and MW-6 showed signs of contamination. Located in the area of highest contamination MW-6 exhibited elevated levels of volatiles, semivolatiles, and pesticides. MW-1 located down gradient of MW-6 only exhibited elevated levels of pesticides. The Results of the analysis for all monitoring wells is presented in Table 3 in Appendix A.

SECTION 4: REMEDIAL INVESTIGATION PHASE II

Phase I of the RI delineated the nature and extent of two areas of subsurface contamination, the drain on the 93 Main Street property and the drywell on the 89-91 Main Street property. However, the configuration of the monitoring wells one through six was not sufficient to describe groundwater flow patterns and contamination transport on the northeastern part of the site. Also the possibility of the a third source area under the garage area of the 93 Main Street building needed to be investigated.

As part of the second phase of this investigation, the following activities took place:

- Four additional groundwater monitoring wells were installed.
- Borings were made through the slab of the garage area of the 93 Main Street building to obtain soil samples.
- The concrete slab in the garage area was removed to obtain additional samples and investigate a floor drain found in the garage.

4.1 Monitoring Wells

During phase II of the RI four additional monitoring wells were constructed. Locations of the monitoring wells were selected based on site topography and hydrogeological data obtained from the monitoring wells already installed on the site. Well locations are shown in Figure 2. A discussion of subsurface geology and hydrogeology can be found in Section 5.2, Site Geology and Hydrogeology.

Monitoring wells were drilled and installed using hollow stem auger (HSA) methods. Continuous split spoon sampling was utilized to visually classify the soil. Soil types were classified and recorded by a geologist. The total depth of each well ranged from 21 to 33 feet below ground surface. Monitoring wells were constructed of two inch ID Schedule 40 flush-threaded PVC well screen (0.010-inch machine slotted) and riser. The sand pack was

constructed with No. 1 Morie sand. A bentonite seal was placed above the sand pack, followed by a cement/bentonite grout to be placed to within three feet of the ground surface. Each well has a vented cap and steel flush mounted protective casing. A cement pad was constructed to divert surface water from each well. Well construction details are included in Appendix B.

Monitoring wells were developed by pumping and bailing until temperature, pH, and conductivity stabilized. Turbidity was also monitored with a target value of 50 NTUs.

4.2 Groundwater Sampling

One round of groundwater samples was taken from monitoring wells 7 through 10, after development was complete. Additionally a second round of groundwater samples were taken from monitoring wells 1 and 6. All groundwater samples were analyzed for VOCs, SVOCs, pesticides and herbicides. This round of groundwater sampling revealed contamination in MW-6, MW-1, MW-8 and minor contamination in MW-10.The results of the sampling are present in Appendix A Table 4.

4.3 Garage Drain Investigation

Once the demolition of the 93 Main Street building was completed the NYSDEC was able to fully investigate the former garage area. The removal of a false floor that had been constructed over the garage slab revealed the presence of a floor drain. In an attempt to obtain soil samples for laboratory analysis a drill rig was used to bore through the concrete slab and take soil samples. The first bore hole was drilled to the east of the floor drain and a soil sample was obtained from the first foot of soil under the slab. At eight feet below the slab a large void was discovered that extended to approximately thirteen feet below ground surface. The boring was unable to be continued at thirteen feet due to the presence of what appeared to be broken concrete at the bottom of the void. Additional boreholes were placed in an attempt to delineate the extent of the void and to obtain soil samples.

To further investigate the void under the garage slab a backhoe was used to remove the slab. The void was approximately six feet in diameter and thirteen feet deep. Only a small area of stained soil was observed from which a soils sample was obtained. Samples were also taken from the bottom of the void and from the top foot of soil near the floor drain. There were two pipes found to be entering the void, one was within the floor drain and the other one was a clay pie approximately 10 feet below grade running toward main street. Soils samples revealed the presence of Silvex and 2,4,5-T in this area. Laboratory results can be found in Appendix A Table 5.

SECTION 5: GEOLOGIC AND HYDROGEOLOGIC SETTING

5.1 Regional Geology

The 93 Main Street Site is located in the Appalachian Plateau Physiographic province in south-central New York State. The area under study occupies approximately one half acre of the Susquehanna River Valley floor. The Bedrock in this region is predominantly interbedded shale and limestone (NYSDEC Bulletin 73, 1977).

The Susquehanna River Valley was carved into the Appalachian Plateau by a preglacial river and was deepened and widened through erosion by glacial ice (USGS, WRI Report 86-4123, 1986). The glacier carried consolidated material with it as it moved southward. As the glacier receded, the material was deposited on the land from the ice and melt-water. The well-sorted materials were typically deposited by the water and the poorly-sorted material, referred to as till, by the ice.

The Broome County region is covered by glacial, fluvial, and alluvial lake sediments which include coarse sand and gravel within the river valley, changing to finer sand, silt, and clay along the flood-plain approaching the Susquehanna River.

5.2 Regional Hydrogeology

The Susquehanna River drains many of the most productive aquifers in New York. These aquifers are composed mainly of sand and gravel, interbedded with silt and clay in varying proportions, and are generally located adjacent to major streams and rivers. Specific to the Johnson City/Binghamton area is the valley-fill aquifer defined by Holocek et. al., in the 1982 USGS Open-file Report 82-268. This aquifer and the surrounding drainage basin comprise the Clinton Street-Ballpark Sole Source Aquifer according to an April 1990 map provided by the USEPA Region 2 and is a NYS designated Primary aquifer according to the October 23, 1990 NYSDEC Division of Water Technical and Operational Guidance Series (2.1.3). The 93 Main Street Site is located on the southern boundary of this valley-fill aquifer. The map provided in Appendix D show the placement of the site relative to the aquifer boundaries.

The principal sources of recharge to the Susquehanna River Valley aquifers are: recharge directly from the Susquehanna and Chenango Rivers; precipitation (average annual precipitation is 36.78 inches for Binghamton, NOAA, 1988) and, infiltration from small streams crossing the aquifer (Randall, Bulletin 73, 1977).

Groundwater has been the primary source of water for Binghamton, Johnson City and Endicott since 1912, when compressed air was first used to pump wells in the Village of Endicott. Since then, a number of well fields have developed on which the three cities residential population and industry are very dependent.

5.3 Site Geology

As part of the RI, an extensive investigation of the overburden geology was conducted. This investigation included Geoprobe, test pit and monitoring well investigations. These investigations revealed the following stratigraphic units from the ground surface: Fill, Silt with Gravel and Sand, Gravel and Sand, Till. A more detailed description of these units is presented below. Figure 2 shows monitoring well and boring locations. Boring logs are included in Appendix C.

Fill:

The fill generally consists of cinders, ash, debris, and locally derived fine sand and coarse to fine gravel. The fill is generally one to five feet in thickness extending from the ground surface. The fill ranges in color from black and orange to brown and white. In some areas the fill also contains brick, concrete, and glass.

Silt with Gravel:

This unit found immediately below the fill is comprised of red-brown silt with coarse to fine gravel, generally moist to wet, and extends from the fill layer to approximately 12 feet below ground surface. This is generally moist and subject to sloughing in an open excavation. Soil saturated with contamination appeared black and oily.

Gravel and Sand:

This unit, where present, extends from below the silt and gravel unit described above down to the top of the lodgement till. It is comprised of cobble, coarse to fine gravel, and some coarse to fine sand. It is distinguishable from the silt and gravel unit by its brown to brown-grey color and lack of silt. The unit was not present at the southern most boring location, which coincide with the highest till surface elevation.

Till:

Lodgement till comprised of grey over compacted silt and clay with some fine gravel was encountered at most drilling locations except at the northern portion of the site. The unit is very dense and relatively impermeable. The surface dips from the south to the north-northeast, increasing in depth towards the aquifer. The till unit was not encountered at MW-5 and MW-1 due to difficult drilling through the sand and gravel unit above. These borings were advanced to depths sufficient to demonstrate that if present at these locations (published literature indicates that it does), the pattern of the surface dipping to the north-northeast continues. Overall thickness of the till unit was not determined during this investigation.

5.4 Site Hydrogeology

As briefly described in Section 3.4.3 above, six monitoring wells were installed during the Remedial Investigation. Monitoring wells were installed at six locations, although one, MW-5 did not produce any water since it was not advanced to the water table. Four rounds of groundwater elevation data has been recorded during the period between November 1998 and June 1999 to characterize groundwater flow direction.

Groundwater exists at depths ranging from 7 to 23 feet below ground surface, depending on location, under unconfined conditions within a thin saturation zone directly above the lodgment till across the study area. Measured groundwater elevations consistently show flow direction to be north-northeast towards the aquifer to the north, similar to the dip of the surface of the till unit. Recharge to the water table in this area occurs as downward infiltration of precipitation. Apparently, once it reaches the relatively impermeable till unit, groundwater flow is controlled by gravity as it flows along the surface of the till into the sand and gravel aquifer to the north. Monitoring well locations are shown on Figure 2.

A high capacity production well located approximately one half mile to the north within the sand and gravel aquifer operated at a rate of three million gallons per day. In January 1999, this rate was significantly reduced to approximately 1.5 mgd and eventually shut down permanently. Because the site is located on the aquifer boundary, and based on groundwater elevations recorded over the shut down period, it appears that the operation of this well did not have a direct effect on groundwater flow within the study area.

Aquifer tests, or slug tests as appropriate in this study, have not been performed during this investigation. Recovery rates observed during monitoring well development suggest a range of moderate to low hydraulic conductivity within the saturated sand and gravel unit. The moderately steep hydraulic gradient across the site further supports this interpretation.

SECTION 6: EXPOSURE PATHWAY ANALYSIS

6.1 Applicable Standards, Criteria, and Guidance (SCGs)

In order to identify potential exposure pathways, applicable SCG's must be identified. 6 NYCRR Part 375-1.10(c)(1)(I) requires that remedial actions comply with SCG's "unless good cause exists why conformity should be dispensed with." Standards and Criteria are cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance. Guidance includes non-promulgated criteria and guidelines that are not legal requirements; however, the site's remedial program should be designed with consideration given to guidance that, based on professional judgement, is determined to be applicable to the site.

SCG's are categorized as chemical specific, location specific, or action specific. These categories are defined as the following:

Chemical Specific: These are health or risk based numerical values or methodologies which, when applied to site specific conditions, result in the establishment of numerical values for the chemicals of interest. These values establish the acceptable amount or concentration of a chemical that may be found in or discharged to the environment.

Location Specific: These are restrictions placed on the concentrations of hazardous substances or the conduct of activities solely because they occur in a specific location.

Action Specific: These are usually technology or activity based requirements or limitations on actions taken with respect to hazardous waste management and site cleanup.

The following SCG's have been found to be applicable to the 93 Main Street site:

Soil
- NYSDEC Division of Hazardous Waste Remediation Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup and Cleanup Levels
- 6 NYCRR Part 371, Identification and listing of Hazardous Wastes
- NYSDEC Division of Hazardous Substances Regulation TAGM 3028, "Contained in Criteria for Environmental Media." (11/92)

Waste
- 6 NYCRR Part 371, Listing of Hazardous Waste
- NYSDEC Division of Hazardous Substances Regulation TAGM 3028, "Contained in Criteria for Environmental Media" (11/92)

Groundwater
- 6 NYCRR Part 700-705, Water Quality Regulations for Surface Water and Groundwater
- NYSDEC Division of Water TOGS 1.1.1

The analytical data summary tables present SCGs for the contaminants analyzed for in each media (i.e. soil, sediments, water, etc.)

6.2 Contaminants of Concern

By comparing data collected from the 93 Main Street Site to SCGs, the RI established that contaminants of concern for subsurface soils are as follows:

Volatiles:

Chlorobenzene
Ethylbenzene
Xylene

Semivolatiles:

1,2,4-Trichlorobenzene	Naphthalene
2 - Methylnaphthalene	2,4,5-Trichlorophenol
4-Nitrophenol	

Pesticides:

alpha-BHC	beta-BHC
delta-BHC	gamma-BHC (Lindane)
Aldrin	Heptachlor Epoxide
Endosulfan I	Dieldrin
4,4'-DDE	Endrin
Endosulfan II	4,4'-DDD
4,4'-DDT	gamma-Chlordane
Silvex	2,4,5-T

Metals:

Arsenic	Beryllium
Mercury	Zinc

6.3 Human Health Evaluation

5.3.1 Pathway Analysis

An exposure pathway is the route by which an individual comes in contact with a contaminant. The five elements of an exposure pathway are 1) a source of contamination; 2) the environmental medium and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. In order for an individual to be affected by contamination at the 93 Main Street Site, for example, a pathway must be complete. Pathways may be direct or indirect. Direct exposure pathways include dermal contact with, inhalation or ingestion of the contaminant. Ingestion of contaminated drinking water is an example of a complete direct exposure pathway. An example of an indirect exposure pathway is human consumption of fish which have been contaminated by eating smaller creatures living in contaminated sediments. The following sections address several potential exposure pathways at the 93 Main Street Site.

6.3.2 Groundwater Exposure Pathway

Data from monitoring wells at the Site have indicated that MW-1 and MW-6 showed signs of contamination. MW-1 had low levels of pesticides and MW-6 had relatively high levels of volatiles, semivolatiles, and pesticides. However, there are no known residential wells in the vicinity and the community is served by a municipal water supply. The site contamination is relatively insoluble in water, and groundwater is

generally twenty three feet below ground level. There are no apparent discharge points for the groundwater, such as streams or sewers. Contaminated groundwater is also well below basement level. However, groundwater from the site is flowing towards the sole source aquifer.

6.3.3 Surface Soil Exposure Pathway

Surface soils sampling results currently available do not indicate exposure concerns.

6.3.4 Air Exposure Pathway

The building at 93 Main Street was boarded up to discourage trespass and it was subsequently demolished by the City of Binghamton. Contaminant vapors might have accumulate in the building. Trespassers could have been potentially exposed to these vapors if they had entered this building. However, since routes of entry into the building were secured this pathway should not have been complete.

6.3.5 Conclusions

Potential human exposure pathways at the 93 Main Street site were assessed. Potential exposure pathways do not appear at this time to be completed for the public sector. Excavations on the site could expose workers, primarily, to contaminated subsurface soils, vapors, and waters. Engineering controls on fugitive dust, vapors, and water drainage during any excavation on site should be utilized to protect workers and the community. The site also has the potential to impact the sole source aquifer.

6.4 Habitat Based Assessment

A habitat based assessment is performed during a RI when it is determined that an impact to wildlife may exist as a result of contamination from the site. Field observations were made in conjunction with environmental sampling towards determining if such an assessment was necessary for this RI.

The potential impacts or routes of exposure to wildlife that were considered include but are not limited to the following:

- Uptake of contaminants by plant life on or near the site.
- Consumption of contaminated plants by animals in the area.
- Direct contact with contaminants at the surface by animal life on or near the site.
- Impacts to surface water via groundwater discharge.

Field observations at the site did not find any waste material at the surface. Stressed vegetation

on or off site was not found to exist. Analytical results combined with hydrogeologic observations indicate that any migration of contaminants is to the northeast. Groundwater discharge to the Chenango River does not likely occur in the vicinity of the site based on these observations. After consideration of the above mentioned potential impacts with the conditions defined for the site, it was determined that impacts to wildlife as a result of contamination from the site was not occurring. Therefore the habitat based assessment was not carried any further.

SECTION 7: FINDINGS OF THE REMEDIAL INVESTIGATION

7.1 Nature and Extent of Contamination

The purpose of the RI was to characterize the nature and extent of contamination at the 93 Main Street Site. The investigation involved subsurface soil sampling, ground water sampling and test pit investigation. Immunoassay analysis of the subsurface soil revealed two highly localized areas of subsurface soils contaminated with pesticides, herbicides, volatiles, and semivolatiles around the drywell on 89-91 Main Street and drain on 93 Main Street. Based on observations during the subsurface soil sampling the contamination, on 93 Main Street, extends radially six feet from the drain and from approximately four to twenty three feet below ground level. The hard till present at approximately twenty three feet appears to limit any further downward migration of the contamination. The contamination around the dry well, on 89-91 Main Street, extends from approximately four to six feet below ground level and two feet radially. A third area of contamination was also identified under the former garage area of the 93 Main Street building extends approximately 10 feet radially and 23 feet deep. Figure 3 shows the estimated limits of contamination

Out of the nine usable monitoring wells that were installed on the site MW-1, MW-6, MW-8 and MW-10 are contaminated. MW-6 was located directly in the area of highest contamination, around the drain on 93 Main Street, and exhibited levels many times higher than SCG's for volatiles, semivolatiles, and pesticides. MW-8 is located down gradient of the garage drain and exhibits levels of pesticide contamination slightly lower than MW-6. MW-1 was located down gradient and northeast of MW-6, pesticide contamination was detected in MW-1 at levels significantly lower than those in MW-6. MW-10 is located down gradient of MW-6 and MW-8 and exhibits pesticide contamination slightly above SCGs. Table 4 shows groundwater contamination levels in comparison to SCGs.

7.2 Recommendations and Conclusions

7.2.1 Recommendations

Based on the Remedial Investigation, approximately 1200 cubic yards of soil contaminated with petroleum, herbicides, and pesticides have been identified at the 93 Main Street site. The approximate limits of contamination are shown in Figure 3. It is recommended that a Feasibility Study be performed to assess the most suitable means of

addressing the media where contamination has been identified. As a component of the Feasibility Study, a detailed evaluation of relevant State standards, criteria, and guidance, should be conducted in the development of appropriate remedial objectives.

7.2.2 Conclusions

The 93 Main Street is located in an area that is highly developed. The area surrounding the site is both residential and commercial in nature. For these reasons, the potential future use of the 93 Main Street site would be negatively impacted by the ongoing presence of subsurface volatile, semivolatile, and pesticides contamination, as well as groundwater volatile, semivolatile, and pesticides contamination. The site also presents a continuing threat to the area's sole source aquifer.

Figures

Appendix A

Test Results

TABLE 1
93 MAIN STREET
IMMUNOASSAY RESULTS SUMMARY

		Immunoassay Results			Lab Results		
		Concentration Range (PPM)			Concentration Range (PPM)		
Boring Location	Sample Depth (FT)	Chlordane	DDT	2,4-D	Chlordane	DDT	2,4-D
GP-1	17	0.1- 0.6	NA	NA			
GP-2	0 - 4	NA	> 20	0.15 - 1.5	149	5.4	nd
GP-3	3	NA	NA	NA			
GP-4	5	NA	NA	NA			
GP-5	4	NA	NA	NA			
GP-6	15	0.1- 0.6	NA	NA			
GP-6 DUP	15	0.1- 0.6	NA	0.15 - 1.5			
GP-7	4 - 5	>6	NA	0.15 - 1.5			
GP-8	16 - 18	0.1- 0.6	NA	0.15 - 1.5			
GP-9	4 - 5	0.1- 0.6	NA	0.15 - 1.5			
GP-10	4 - 8	NA	> 20	3 - 150			
GP-10	8 - 12	>0.6	> 20	2 - 3	490	140	nd
GP-11	0 - 4	NA	NA	NA			
GP-12	7 - 8	0.1- 0.6	NA	NA			
GP-12	10 - 11	NA	NA	NA			
GP-13	12 - 13	NA	NA	NA			
GP-13	17 - 18	0.1- 0.6	NA	0.15 - 1.5			
GP-14	10 - 12	NA	NA	0.15 - 1.5			
GP-15	17 - 18	0.1- 0.6	NA	0.15 - 1.5			
GP-16	11 - 12	>0.6	NA	0.15 - 1.5			
GP-17	16 - 17	>0.6	2 - 20	0.15 - 1.5			
GP-18	3 - 4	NA	NA	NA			
GP-19	4 - 5	>0.6	NA	0.15 - 1.5			
GP-20	10 - 12	NA	NA	0.15 - 1.5	nd	nd	nd
GP-21	14 - 15	NA	NA	0.15 - 1.5			
GP-21 DUP	14 - 15	NA	NA	0.15 - 1.5			
GP-22	3.5 - 4	>0.6	NA	NA	0.62	0.047	nd
GP-23	5 - 6	NA	NA	NA			
GP-24	5 - 6	NA	NA	0.15 - 1.5			
GP-25	5 - 6	NA	NA	NA			
GP-26	0.5 - 1	>0.6	NA	0.15 - 1.5			
GP-26	14 - 15	>0.6	NA	0.15 - 1.5			
GP-27	0.5 - 1	>0.6	NA	NA			
GP-27	9 - 10	>0.6	NA	NA			
GP-28	0.5 - 1	NA	NA	NA			
GP-28	8 - 9	NA	NA	NA			
GP-29	0.5 - 1	NA	NA	0.15 - 1.5			
GP-30	0.5 - 1	NA	NA	NA			
GP-31	0.5 - 1	>0.6	NA	1.5 - 7.5			
GP-31 DUP	0.5 - 1	>0.6	NA	1.5 - 7.5			
GP-31	19 - 20	>0.6	> 20	1.5 - 7.5			
GP-32	18 - 19	>0.6	> 400	1.5 - 7.5			
GP-33	12 - 13	>0.6	> 20	1.5 - 7.5			

TABLE 1 (Continued)
93 MAIN STREET
IMMUNOASSAY RESULTS SUMMARY

		Immunoassay Results			Lab Results		
		Concentration Range (PPM)			Concentration Range (PPM)		
Boring Location	Sample Depth (FT)	Chlordane	DDT	2,4-D	Chlordane	DDT	2,4-D
GP-34	12 - 13	>0.6	NA	0.15 - 1.5			
GP-35	12 - 13	>0.6	NA	0.15 - 1.5			
GP-36	4 - 5	NA	NA	NA			
GP-37	4 - 5	NA	NA	NA			
GP-38	0.5 - 1	NA	NA	NA			
GP-39	4 - 5	>0.6	NA	NA			
GP-40	4 - 5	NA	NA	0.15 - 1.5			
GP-41	4 - 5	NA	NA	NA			
GP-42	3.5 - 4	0.1- 0.6	NA	0.15 - 1.5			
GP-43	3.5 - 4	NA	NA	NA			
GP-44	3.5 - 4	0.1- 0.6	NA	0.15 - 1.5			
GP-45	3.5 - 4	NA	NA	0.15 - 1.5			
GP-46	2 - 2.5	NA	NA	0.15 - 1.5			
GP-46 DUP	2 - 2.5	NA	NA	NA			
GP-47	0.5 - 1	NA	NA	0.15 - 1.5			
GP-48	0 - 2	0.1- 0.6	NA	0.15 - 1.5	0.028	0.013	nd
GP-49	2 - 3	NA	NA	0.15 - 1.5			
GP-50	0 - 2	NA	NA	0.15 - 1.5			
GP-51	16 - 17	>0.6	2 - 20	> 7.5			
GP-52	16 - 17	0.1- 0.6	NA	NA			

TABLE 2
TEST PITS-
SOIL SAMPLE ANALYTICAL RESULTS
93 MAIN STREET

Location I.D.			TEST PIT 1	TEST PIT 1	TEST PIT 5
Sample I.D.			MSTP1ASE	MSTP1DW	MS-981210-TP5
Matrix			Soil	Soil	Soil
Date Sampled			11/18/98	11/18/98	12/10/98
Parameter	**Units**	**Criteria***			
Volatiles					
Methylene Chloride	UG/KG	100			
Chlorobenzene	UG/KG	1700			240
Ethylbenzene	UG/KG	5500			290
Xylene (total)	UG/KG	1200			2900
Semivolatiles					
1,2,4-Trichlorobenzene	UG/KG	3400			
Naphthalene	UG/KG	13000			
2-Methylnaphthalene	UG/KG	36400		300	6600
2,4,5-Trichlorophenol	UG/KG	100			
Acenaphthylene	UG/KG	41000			
Acenaphthene	UG/KG	50000			
4-Nitrophenol	UG/KG	100			
Fluorene	UG/KG	50000			
Phenanthrene	UG/KG	50000	87		
Anthracene	UG/KG	50000			
Carbazole	UG/KG				
Di-n-butylphthalate	UG/KG	8100			
Fluoranthene	UG/KG	50000	280	190	
Pyrene	UG/KG	50000	350	460	
Butylbenzylphthalate	UG/KG	50000	42		
Benzo(a)anthracene	UG/KG	224	130	100	
Chrysene	UG/KG	400	150	130	
bis(2-Ethylhexyl)phthalate	UG/KG	50000	160	230	
Benzo(b)fluoranthene	UG/KG	224	350	190	
Benzo(k)fluoranthene	UG/KG	224	140	83	
Benzo(a)pyrene	UG/KG	61	170	110	
Indeno(1,2,3-cd)pyrene	UG/KG	3200	64	83	
Dibenz(a,h)anthracene	UG/KG	14			
Benzo(g,h,i)perylene	UG/KG	50000	62	150	
PEST					
alpha-BHC	UG/KG	110			
beta-BHC	UG/KG	200			
delta-BHC	UG/KG	300	430	2600	4900
gamma-BHC (Lindane)	UG/KG	60			

* - TAGM #4046 (Revised April, 1995) Criteria.

Only detected results reported.

( ) - Concentration exceeds Criteria.

TABLE 2
TEST PITS-
SOIL SAMPLE ANALYTICAL RESULTS
93 MAIN STREET

Location I.D.			TEST PIT 1	TEST PIT 1	TEST PIT 5
Sample I.D.			MSTP1ASE	MSTP1DW	MS-981210-TP5
Matrix			Soil	Soil	Soil
Date Sampled			11/18/98	11/18/98	12/10/98
Parameter	Units	Criteria*			
PEST					
Heptachlor	UG/KG	100	4600		22000
Aldrin	UG/KG	41	530		46000
Heptachlor epoxide	UG/KG	20			
Endosulfan I	UG/KG	900			
Dieldrin	UG/KG	44	630		97000
4,4'-DDE	UG/KG	2100			3900
Endrin	UG/KG	100	650		19000
Endosulfan II	UG/KG	900			
4,4'-DDD	UG/KG	2900	2900		69000
Endosulfan sulfate	UG/KG	1000			
4,4'-DDT	UG/KG	2100	4000		32000
Endrin aldehyde	UG/KG				
alpha-Chlordane	UG/KG		23000	55000	220000
gamma-Chlordane	UG/KG	540	21000	46000	230000
HERB					
2,4,5-TP (Silvex)	UG/KG	700	77		500
2,4,5-T	UG/KG	1900	230	73	190
Metals					
Aluminum	MG/KG		6090	6520	7770
Antimony	MG/KG				
Arsenic	MG/KG	7.5	6.6	6.1	19.1
Barium	MG/KG	300	69.2	55.8	51.2
Beryllium	MG/KG	0.16	0.40	0.34	0.43
Cadmium	MG/KG	10	0.81	0.71	2.2
Calcium	MG/KG		21900	27100	14000
Chromium	MG/KG	50	12.8	13.1	13.2
Cobalt	MG/KG	30	8.2	8.0	7.4
Copper	MG/KG	25	31.5	30.8	32.9
Iron	MG/KG	2000	20200	16100	18400
Lead	MG/KG		163	198	113
Magnesium	MG/KG		6270	7020	4890
Manganese	MG/KG		650	418	460
Mercury	MG/KG	0.1			0.17
Nickel	MG/KG	13	19.7	17.5	16.4

* - TAGM #4046 (Revised April, 1995) Criteria.

Only detected results reported.

( ) - Concentration exceeds Criteria.

TABLE 2
TEST PITS-
SOIL SAMPLE ANALYTICAL RESULTS
93 MAIN STREET

Location I.D.			TEST PIT 1	TEST PIT 1	TEST PIT 5
Sample I.D.			MSTP1ASE	MSTP1DW	MS-981210-TP5
Matrix			Soil	Soil	Soil
Date Sampled			11/18/98	11/18/98	12/10/98
Parameter	**Units**	**Criteria***			
Metals					
Potassium	MG/KG		678	600	579
Selenium	MG/KG	2			
Silver	MG/KG		0.63	0.69	R
Sodium	MG/KG		273	317	469
Vanadium	MG/KG	150	21.1	20.4	14.2
Zinc	MG/KG	20	161	185	194
Cyanide	MG/KG		R	R	0.50

* - TAGM #4046 (Revised April, 1995) Criteria.

Only detected results reported.

(oval) - Concentration exceeds Criteria.

TABLE 3
GROUNDWATER SAMPLE ANALYTICAL RESULTS
93 MAIN STREET

Location I.D.			MW-3	MW-4	MW-6	MW-6
Sample I.D.			MS-981202-MW3	MS-981202-MW4	MS-981201-MW6	MS-981201-MW6D
Matrix			Water	Water	Water	Water
Date Sampled			12/02/98	12/02/96	12/01/98	12/01/98
Parameter	Units	Criteria*				DUP
Volatiles						
Acetone	UG/L	50			24	21
1,2-Dichloroethane	UG/L	0.6			74	83
Benzene	UG/L	1			64	72
4-Methyl-2-Pentanone	UG/L	50			21	22
Tetrachloroethene	UG/L	5			28	34
Toluene	UG/L	5			78	89
Chlorobenzene	UG/L	5			110	120
Ethylbenzene	UG/L	5			110	120
Xylene (total)	UG/L	5			580	650
Semivolatiles						
2,4-Dichlorophenol	UG/L	5			1400	1000
Naphthalene	UG/L	10			140	51
2-Methylnaphthalene	UG/L				12	27
2,4,5-Trichlorophenol	UG/L	1			1500	1200
Pentachlorophenol	UG/L	1			25	
bis(2-Ethylhexyl)phthalate	UG/L	5	3	5		
PEST						
alpha-BHC	UG/L	0.01				
beta-BHC	UG/L	0.04				
delta-BHC	UG/L	0.04				
gamma-BHC (Lindane)	UG/L	0.05			91	78
Heptachlor	UG/L	0.04				
Aldrin	UG/L					
Heptachlor epoxide	UG/L	0.03				
Endosulfan I	UG/L	50				
Dieldrin	UG/L	0.004			13	12
4,4'-DDE	UG/L	0.2				
Endrin	UG/L					
4,4'-DDD	UG/L	0.3				
Endosulfan sulfate	UG/L	50				
4,4'-DDT	UG/L	0.2				
Endrin ketone	UG/L	5				
alpha-Chlordane	UG/L	0.05				
gamma-Chlordane	UG/L	0.05				

*** - T.O.G.S 1.1.1 (Revised June, 1998) Criteria.**

Only detected results reported.

( ) - Concentration exceeds Criteria.

TABLE 3
GROUNDWATER SAMPLE ANALYTICAL RESULTS
93 MAIN STREET

Location I.D.			MSGP10WG	MSGPSB39WG	MSGPSB42WG	MW-1	MW-2
Sample I.D.			MSGP10WG	MSGPSB39WG	MSGPSB42WG	MS-981201-MW1	MS-981201-MW2
Matrix			Water	Water	Water	Water	Water
Date Sampled			11/03/98	11/05/98	11/05/98	12/01/98	12/01/98
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50	NA	NA			
1,2-Dichloroethane	UG/L	0.6	NA	NA	5		
Benzene	UG/L	1	NA	NA			
4-Methyl-2-Pentanone	UG/L	50	NA	NA			
Tetrachloroethene	UG/L	5	NA	NA			
Toluene	UG/L	5	NA	NA			
Chlorobenzene	UG/L	5	NA	NA			
Ethylbenzene	UG/L	5	NA	NA			
Xylene (total)	UG/L	5	NA	NA			
Semivolatiles							
2,4-Dichlorophenol	UG/L	5	NA	NA			
Naphthalene	UG/L	10	NA	NA			
2-Methylnaphthalene	UG/L		NA	NA			
2,4,5-Trichlorophenol	UG/L	1	NA	NA			
Pentachlorophenol	UG/L	1	NA	NA			
bis(2-Ethylhexyl)phthalate	UG/L	5	NA	NA		2	2
PEST							
alpha-BHC	UG/L	0.01		0.64	0.057		
beta-BHC	UG/L	0.04		0.59	0.17	0.16	
delta-BHC	UG/L	0.04		0.96	0.14	0.11	
gamma-BHC (Lindane)	UG/L	0.05	1600	55	4.8		
Heptachlor	UG/L	0.04		1.0	0.22		
Aldrin	UG/L			0.80	0.26		
Heptachlor epoxide	UG/L	0.03			0.10	0.11	
Endosulfan I	UG/L	50			0.060		
Dieldrin	UG/L	0.004	190	12	11	9.6	
4,4'-DDE	UG/L	0.2			0.10	0.11	
Endrin	UG/L				0.70	0.80	
4,4'-DDD	UG/L	0.3	210	8.6	2.4		
Endosulfan sulfate	UG/L	50			0.14		
4,4'-DDT	UG/L	0.2	460	9	3.1		
Endrin ketone	UG/L	5			0.59	1.1	
alpha-Chlordane	UG/L	0.05	120	5.9	2.8	0.12	
gamma-Chlordane	UG/L	0.05	93	4.1	2.0	0.088	

* - T.O.G.S 1.1.1 (Revised June, 1998) Criteria.

Only detected results reported.

( ) - Concentration exceeds Criteria.

TABLE 3
GROUNDWATER SAMPLE ANALYTICAL RESULTS
93 MAIN STREET

Location I.D.			MSGP10WG	MSGPSB39WG	MSGPSB42WG	MW-1	MW-2
Sample I.D.			MSGP10WG	MSGPSB39WG	MSGPSB42WG	MS-981201-MW1	MS-981201-MW2
Matrix			Water	Water	Water	Water	Water
Date Sampled			11/03/98	11/05/98	11/05/98	12/01/98	12/01/98
Parameter	**Units**	**Criteria***					
HERB							
Dicamba	UG/L	0.44	3.0			R	R
2,4-D	UG/L	50		1.2		R	R
Metals							
Aluminum	UG/L		NA	NA	61900	1350	1280
Arsenic	UG/L	25	NA	NA	106		6.0
Barium	UG/L	1000	NA	NA	1610	98.9	141
Beryllium	UG/L	3	NA	NA	6.2		
Calcium	UG/L		NA	NA	1190000	132000	165000
Chromium	UG/L	50	NA	NA	174	3.1	2.9
Cobalt	UG/L		NA	NA	R	12.7	15.0
Copper	UG/L	200	NA	NA	448	2.0	
Lead	UG/L	25	NA	NA	226		
Magnesium	UG/L	35000	NA	NA	233000	34300	23100
Manganese	UG/L		NA	NA	20600	797	851
Mercury	UG/L	0.7	NA	NA	6.7		
Nickel	UG/L	100	NA	NA	78.5	3.0	1.5
Potassium	UG/L		NA	NA	36900	12600	2870
Selenium	UG/L	10	NA	NA	8.2		
Sodium	UG/L	20000	NA	NA	33400	35300	11600
Vanadium	UG/L		NA	NA	147	8.6	6.7
Zinc	UG/L	2000	NA	NA	656	16.8	18.1
Cyanide	UG/L	200	NA	NA	10.9		

* - T.O.G.S 1.1.1 (Revised June, 1998) Criteria.

Only detected results reported.

( ) - Concentration exceeds Criteria.

TABLE 3
GROUNDWATER SAMPLE ANALYTICAL RESULTS
93 MAIN STREET

Location I.D.			MW-3	MW-4	MW-6	MW-6
Sample I.D.			MS-981202-MW3	MS-981202-MW4	MS-981201-MW6	MS-981201-MW6D
Matrix			Water	Water	Water	Water
Date Sampled			12/02/98	12/02/98	12/01/98	12/01/98
Parameter	Units	Criteria*				DUP
HERB						
Dicamba	UG/L	0.44			1.7	2.6
2,4-D	UG/L	50				
Metals						
Aluminum	UG/L		1720	218	1200	162
Arsenic	UG/L	25	4.1		19.2	19.0
Barium	UG/L	1000	76.5	53.9	104	114
Beryllium	UG/L	3				
Calcium	UG/L		99300	106000	123000	121000
Chromium	UG/L	50	3.5	0.72	3.4	1.4
Cobalt	UG/L		8.9	9.1	11.3	10.8
Copper	UG/L	200	2.7			
Lead	UG/L	25				
Magnesium	UG/L	35000	15500	16000	23000	22300
Manganese	UG/L		750	502	1770	1760
Mercury	UG/L	0.7				
Nickel	UG/L	100	1.5		3.0	1.9
Potassium	UG/L		6100	2730	16400	9440
Selenium	UG/L	10				
Sodium	UG/L	20000	19800	34500	60200	57400
Vanadium	UG/L		6.6	2.2	6.0	3.9
Zinc	UG/L	2000	26.3	10.0	25.8	17.0
Cyanide	UG/L	200		120		

* - T.O.G.S 1.1.1 (Revised June, 1998) Criteria.

Only detected results reported.

( ) - Concentration exceeds Criteria.

TABLE 4
SUMMARY OF DETECTED ANALYTES
93 MAIN ST.

Location I.D.			MW-01	MW-06	MW-07	MW-08	MW-09
Sample I.D.			MW-1	MW-6	MW-7	MW-8	MW-9
Matrix			Water	Water	Water	Water	Water
Date Sampled			09/29/99	09/29/99	09/29/99	09/29/99	09/29/99
Parameter	**Units**	**Criteria***					
Volatiles							
Acetone	UG/L	50				62	55
Chloroform	UG/L	7		2			
1,2-Dichloroethane	UG/L	0.6		31		6	
Methyl Ethyl Ketone (2-Butanone)	UG/L	50		1			
Benzene	UG/L	1		48			
4-Methyl-2-Pentanone	UG/L	NV		4			
Tetrachloroethene	UG/L	5		15			
Toluene	UG/L	5		19			
Chlorobenzene	UG/L	5		72			
Ethylbenzene	UG/L	5		67			
Xylene (total)	UG/L	5		130			
Semivolatiles							
Phenol	UG/L	1		2			
2-Chlorophenol	UG/L	1		5			
1,4-Dichlorobenzene	UG/L	3		4			
2-Methylphenol (o-cresol)	UG/L	1		2			
4-Methylphenol (p-cresol)	UG/L	1		4			
2,4-Dichlorophenol	UG/L	5		330		6	
2,4-Dimethylphenol	UG/L	50		2			
Naphthalene	UG/L	10		28			
2,4,5-Trichlorophenol	UG/L	1		440		5	
Pentachlorophenol	UG/L	1		12			
Phenanthrene	UG/L	50		3			
Fluoranthene	UG/L	50		4			
Pyrene	UG/L	50		3			
Butylbenzylphthalate	UG/L	50			1		
Di-n-butylphthalate	UG/L	50					1
Benzo(a)anthracene	UG/L	0.002		1			
Chrysene	UG/L	0.002		1			
bis(2-Ethylhexyl)phthalate	UG/L	5		7	2		
Benzo(b)fluoranthene	UG/L	0.002		2			
Benzo(a)pyrene	UG/L	ND		1			
Pesticides							
alpha-BHC	UG/L	0.01		1.5			

*** -New York State Department of Environmental Conservation. 1998. Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June, Class GA.**

Only detected results reported.

( ) - Concentration exceeds Standard or Guidance Value.

TABLE 4
SUMMARY OF DETECTED ANALYTES
93 MAIN ST.

Location I.D.			MW-01	MW-06	MW-07	MW-08	MW-09
Sample I.D.			MW-1	MW-6	MW-7	MW-8	MW-9
Matrix			Water	Water	Water	Water	Water
Date Sampled			09/29/99	09/29/99	09/29/99	09/29/99	09/29/99
Parameter	**Units**	**Criteria***					
Pesticides							
beta-BHC	UG/L	0.04	0.14	0.89		0.097	
delta-BHC	UG/L	0.04	0.13	1.2		0.14	
gamma-BHC (Lindane)	UG/L	0.05		78		0.68	
Heptachlor epoxide	UG/L	0.03	0.071				
Dieldrin	UG/L	0.004	1.5	11		0.35	
Endrin	UG/L	ND	0.15				
Endrin ketone	UG/L	5	0.51	1.0		0.11	
alpha-Chlordane	UG/L	0.05	0.064	1.0			
gamma-Chlordane	UG/L	0.05	0.059	R			
Herbicides							
Dicamba	UG/L	0.44		NA		2.3	
2,4,5-TP (Silvex)	UG/L	0.26		NA		7.5	
2,4,5-T	UG/L	35		NA		0.35	

*** -New York State Department of Environmental Conservation. 1998. Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June, Class GA.**

Only detected results reported.

( ) - Concentration exceeds Standard or Guidance Value.

TABLE 4
SUMMARY OF DETECTED ANALYTES
93 MAIN ST.

Location I.D.			MW-10
Sample I.D.			MW-10
Matrix			Water
Date Sampled			09/29/99
Parameter	**Units**	**Criteria***	
Volatiles			
Acetone	UG/L	50	
Chloroform	UG/L	7	3
1,2-Dichloroethane	UG/L	0.6	
Methyl Ethyl Ketone (2-Butanone)	UG/L	50	
Benzene	UG/L	1	
4-Methyl-2-Pentanone	UG/L	NV	
Tetrachloroethene	UG/L	5	
Toluene	UG/L	5	
Chlorobenzene	UG/L	5	
Ethylbenzene	UG/L	5	
Xylene (total)	UG/L	5	
Semivolatiles			
Phenol	UG/L	1	
2-Chlorophenol	UG/L	1	
1,4-Dichlorobenzene	UG/L	3	
2-Methylphenol (o-cresol)	UG/L	1	
4-Methylphenol (p-cresol)	UG/L	1	
2,4-Dichlorophenol	UG/L	5	
2,4-Dimethylphenol	UG/L	50	
Naphthalene	UG/L	10	
2,4,5-Trichlorophenol	UG/L	1	
Pentachlorophenol	UG/L	1	
Phenanthrene	UG/L	50	2
Fluoranthene	UG/L	50	
Pyrene	UG/L	50	
Butylbenzylphthalate	UG/L	50	
Di-n-butylphthalate	UG/L	50	
Benzo(a)anthracene	UG/L	0.002	
Chrysene	UG/L	0.002	
bis(2-Ethylhexyl)phthalate	UG/L	5	
Benzo(b)fluoranthene	UG/L	0.002	
Benzo(a)pyrene	UG/L	ND	
Pesticides			
alpha-BHC	UG/L	0.01	

*** -New York State Department of Environmental Conservation. 1998. Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June, Class GA.**

Only detected results reported.

( ) - Concentration exceeds Standard or Guidance Value.

TABLE 4
SUMMARY OF DETECTED ANALYTES
93 MAIN ST.

Location I.D.			MW-10
Sample I.D.			MW-10
Matrix			Water
Date Sampled			09/29/99
Parameter	**Units**	**Criteria***	
Pesticides			
beta-BHC	UG/L	0.04	0.05
delta-BHC	UG/L	0.04	
gamma-BHC (Lindane)	UG/L	0.05	
Heptachlor epoxide	UG/L	0.03	0.094
Dieldrin	UG/L	0.004	0.27
Endrin	UG/L	ND	0.15
Endrin ketone	UG/L	5	
alpha-Chlordane	UG/L	0.05	
gamma-Chlordane	UG/L	0.05	
Herbicides			
Dicamba	UG/L	0.44	
2,4,5-TP (Silvex)	UG/L	0.26	
2,4,5-T	UG/L	35	

*** -New York State Department of Environmental Conservation. 1998. Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June, Class GA.**

Only detected results reported.

( ) - Concentration exceeds Standard or Guidance Value.

TABLE 5
SUMMARY OF DETECTED ANALYTES
93 MAIN ST.

Location I.D.			BH-01	BH-01	BH-02	BH-03D	BH-04
Sample I.D.			BH-1 (18'-20')	BH-1 (4'-6')	BH-2 (2'-4')	BH-3D (6'-10')	BH-4 (6'-8')
Matrix			Soil	Soil	Soil	Soil	Soil
Date Sampled			09/23/99	09/23/99	09/23/99	09/23/99	09/23/99
Parameter	**Units**	**Criteria***					
Pesticides							
alpha-BHC	UG/KG	110	360	79		3000	
gamma-BHC (Lindane)	UG/KG	60	1400	420		6400	2.8
Heptachlor	UG/KG	100	4900	160	450	150000	47
Aldrin	UG/KG	41			42		2.7
Heptachlor epoxide	UG/KG	20		46		7200	
Dieldrin	UG/KG	44	820				
4,4'-DDE	UG/KG	2100		70	620	12000	4.0
4,4'-DDD	UG/KG	2900	1900	R	290	52000	15
4,4'-DDT	UG/KG	2100	6300	1000	1300	150000	45
alpha-Chlordane	UG/KG	540	8500	210	940	280000	99
gamma-Chlordane	UG/KG	540	8600	250	1000	280000	96

*** - NYSDEC TAGM: Determination of Soil Cleanup Objectives and Cleanup Levels; HWR-94-4046 April 1, 1995 (Revised).**

Only detected results reported.

( ) - Concentration exceeds Standard or Guidance Value.

Appendix B

Monitoring Well Details

DRILLING SUMMARY

Geologist:
Brian Demme

Drilling Company:
Buffalo Drilling Company, Inc.

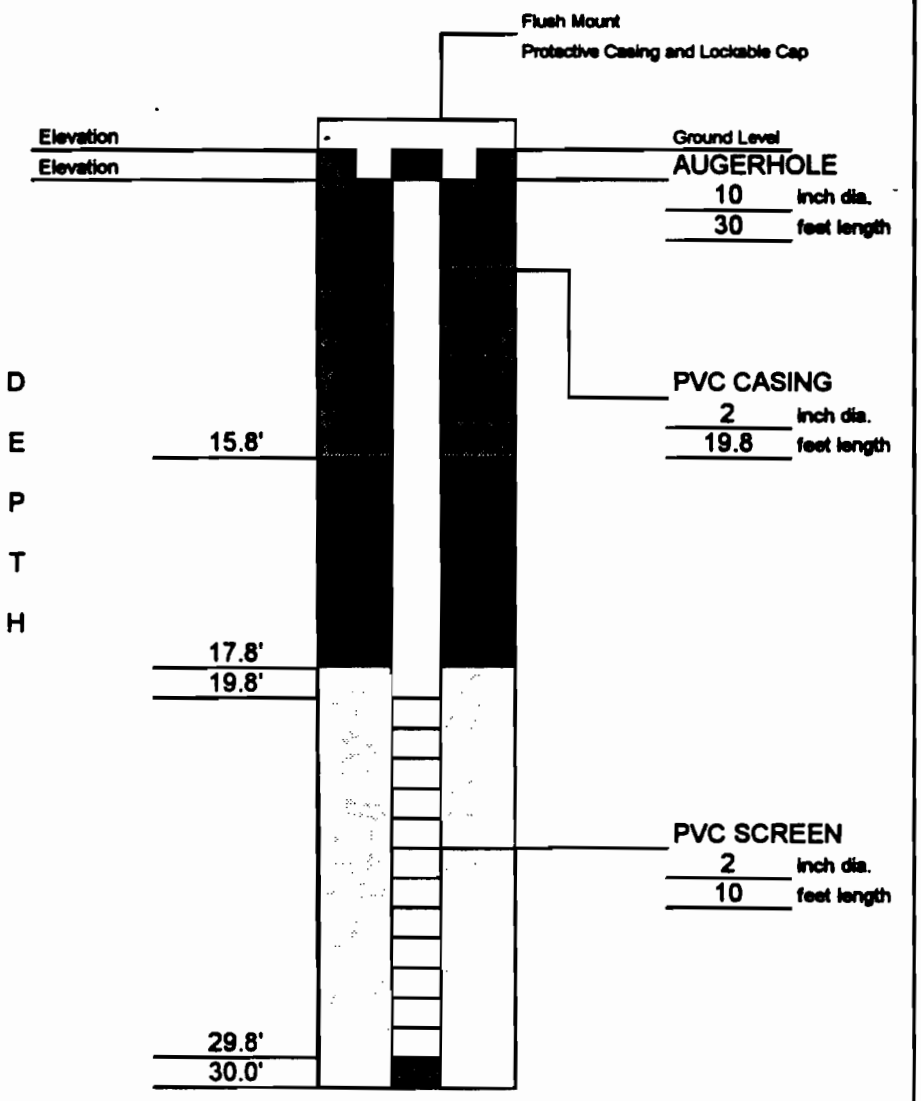
Driller:
Don Rimbeck

Rig Make/Model:
CME-55

Date:
November 20, 1998

GEOLOGIC LOG

Depth(ft.)	Description
0-0.4	Asphalt
0.4-5	Fill: C-F gravel and c-f sand, cinders, wood, cobbles and bricks
5-12	Fine-sand and c-f gravel, cobbles, sandstone fragments
12-24	Cobbles and c-f gravel, some c-f sand
24-30	C-F gravel with weathered shale



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: Steel grade box	Type: 2" PVC	Type: #2 Sand Setting: 19.8'-29.8'
Monitor: 2" PVC	Slot Size: 0.02	SEAL MATERIAL Type: Bentonite Setting: 15.8'-17.8'

COMMENTS:
Installed in asphalt parking area.

LEGEND

- Bottom cap
- J- Plug
- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	Location: 93 Main Street Binghamton, NY	Project No.: 0535598.02
URS Greiner, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-1

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02/02/9

DRILLING SUMMARY

Geologist:
Brian Demme

Drilling Company:
Buffalo Drilling Company, Inc.

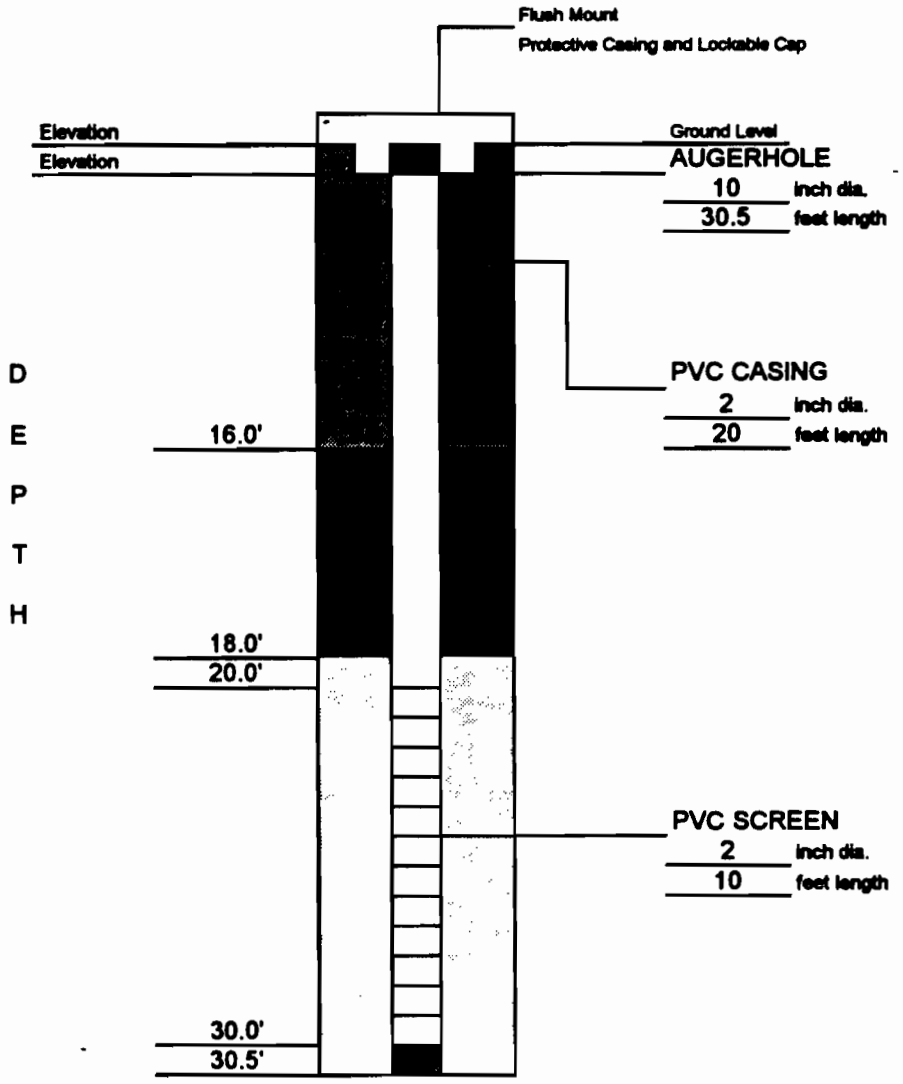
Driller:
Don Rimbeck

Rig Make/Model:
CME-55

Date:
November 18, 1998

GEOLOGIC LOG

Depth(ft.)	Description
0-0.4	Fill: Cinders, some organics, and ash
3-16	Silt, some c-f gravel, some to trace sand, cobbles
14-18	Boulders, cobbles, C-F gravel, trace silt
18-30.5	Silt (till) with some gravel boulders, cobbles.



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: Steel grade box	Type: 2" PVC	Type: #2 Sand Setting: 20'-30'
Monitor: 2" PVC	Slot Size: 0.02	SEAL MATERIAL Type: Bentonite Setting: 16'-18'

COMMENTS:

LEGEND

- Bottom cap
- J- Plug
- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	Location: 93 Main Street Binghamton, NY	Project No.: 0535598.02
URS Greiner, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-3

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02/02/9

DRILLING SUMMARY

Geologist:
Brian Demme

Drilling Company:
Buffalo Drilling Company, Inc.

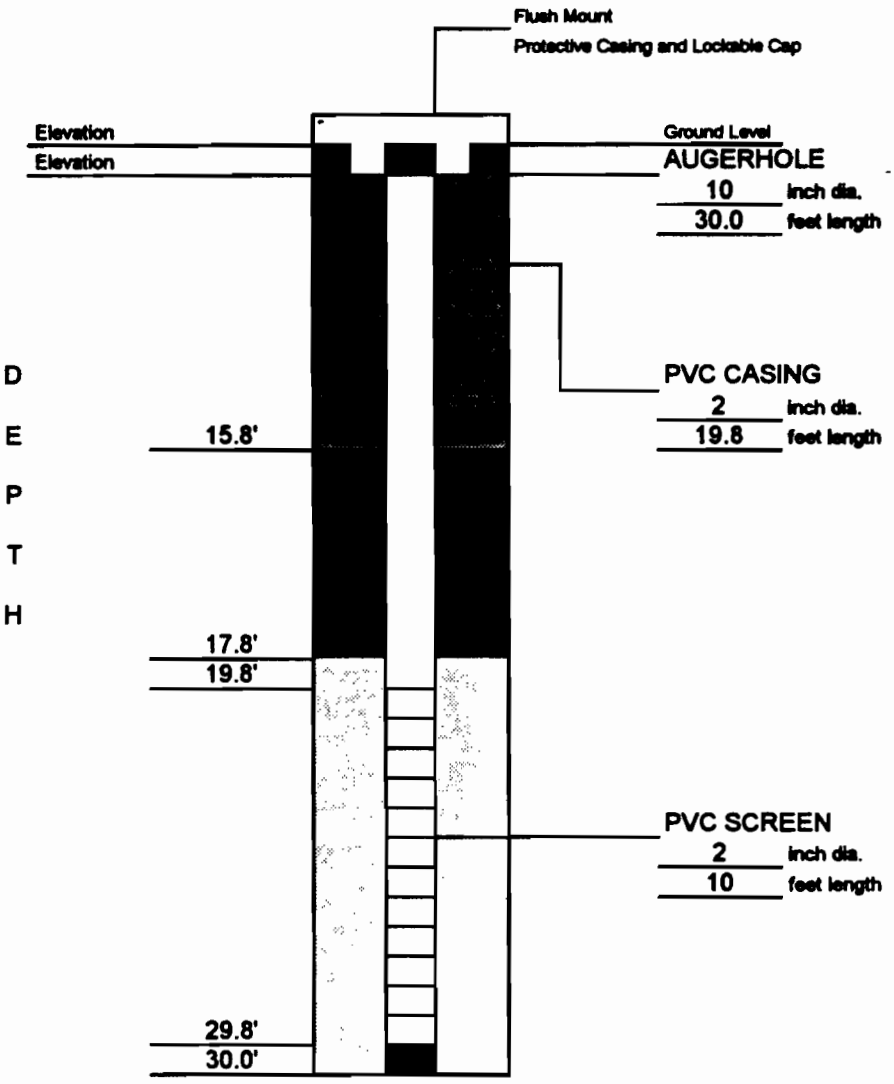
Driller:
Don Rimbeck

Rig Make/Model:
CME-55

Date:
November 20, 1998

GEOLOGIC LOG

Depth(ft.)	Description
0-0.1	Organics
0.1-10	Fill: c-f sand, and c-f gravel, cinders, silt, ash
10-14	Cobbles and Boulders
14-18	Silt (till) with some gravel, cobbles
18-27	Boulders
27-30	Silt (till) with some gravel, trace clay



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: Steel grade box	Type: 2" PVC	Type: #2 Sand Setting: 17.8'-30'
Monitor: 2" PVC	Slot Size: 0.02	SEAL MATERIAL Type: Bentonite Setting: 15.8'-17.8'

COMMENTS:

LEGEND

- Bottom cap
- J- Plug
- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	Location: 93 Main Street Binghamton, NY	Project No.: 0535598.02
URS Greiner, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-4

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DRILLING SUMMARY

Geologist:
Brian Demme

Drilling Company:
Buffalo Drilling Company, Inc.

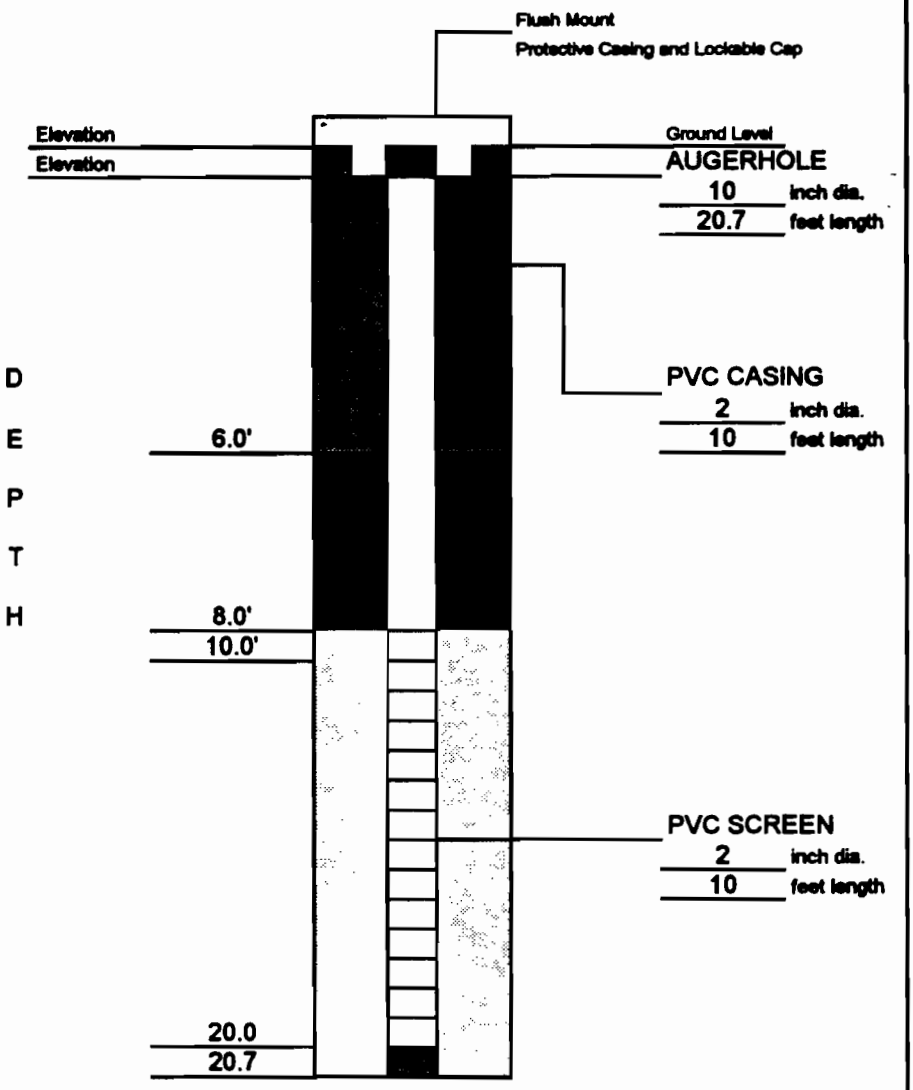
Driller:
Don Rimbeck

Rig Make/Model:
CME-55

Date:
November 23, 1998

GEOLOGIC LOG

Depth(ft.)	Description
0-0.4	Asphalt
0.4-4	Fill: silt, with fine gravel trace brick, sandstone frags
4-8	Clayey silt
8-9	Fine sand
9-14	Silt with c-f gravel
14-19	Fine sand, some c-f gravel, m-c sand
19-20.7	Silt with c-f gravel, boulders



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: Steel grade box	Type: 2" PVC	Type: #2 Sand Setting: 10'-20'
Monitor: 2" PVC	Slot Size: 0.02	SEAL MATERIAL Type: Bentonite Setting: 6'-8'

COMMENTS:
Borehole terminated due to auger refusal.

LEGEND

- Bottom cap
- J- Plug
- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	Location: 93 Main Street Binghamton, NY	Project No.: 0535598.02
URS Greiner, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-5

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DRILLING SUMMARY

Geologist:
Brian Demme

Drilling Company:
Buffalo Drilling Company, Inc.

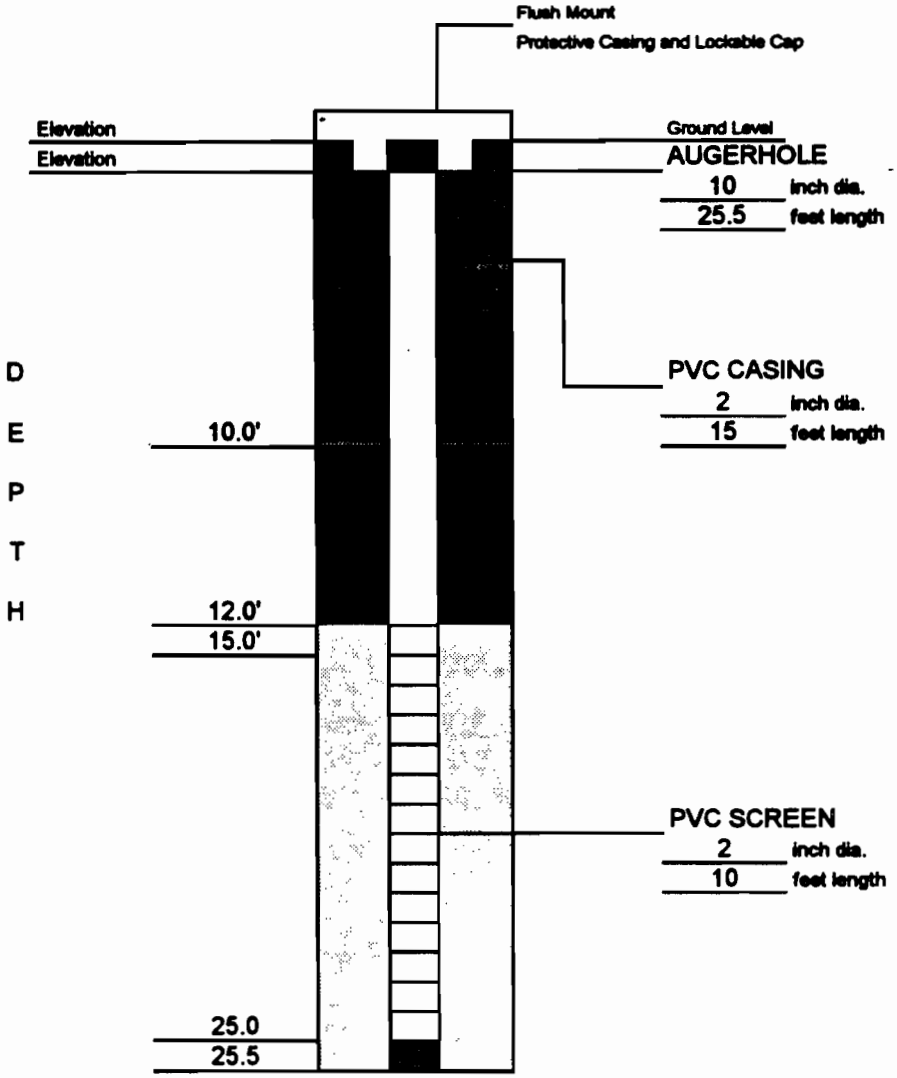
Driller:
Don Rimbeck

Rig Make/Model:
CME-55

Date:
November 24, 1998

GEOLOGIC LOG

Depth(ft.)	Description
0-0.1	Organic material
0.1-3	Flagstone pieces
3-4	Organics with silt
4-10	Coarse-fine gravel
10-18	Silt with c-f gravel
18-21	Silty gravel
21-25.5	Silt (till) with trace gravel clay



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: Steel grade box	Type: 2" PVC	Type: #2 Sand Setting: 15'-25'
Monitor: 2" PVC	Slot Size: 0.02	SEAL MATERIAL Type: Bentonite Setting: 10'-12'

COMMENTS:
Borehole terminated due to auger refusal.
Pesticide odor when pulling augers.

LEGEND

- Bottom cap
- J- Plug
- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	Location: 93 Main Street Binghamton, NY	Project No.: 0535598.02
URS Greiner, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-6

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Appendix C

Boring Logs

URS Greiner, Inc.

TEST BORING LOG

BORING NO.: MW-1

PROJECT: 93 MAIN STREET BINGHAMTON NY
SHEET: 1 OF
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: BUFFALO DRILLING COMPANY INC.
BORING LOCATION: N. 1193375.6051 E. 1054121.0646
GROUNDWATER:
GROUND ELEVATION: Slab. 89'
DATE STARTED: 11-16-98
DATE FINISHED: 11-17-98
DRILLER: TED SMITH
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DUANE LENHARDT

DATE	TIME	LEVEL	TYPE
11-17		24'	SOIL IS WET
11-17		29.5'	FROM TOP OF HSA AT BOREHOLE COMPLETION.

	CAS.	SAMPLER	CORE	TUBE
TYPE		SPLIT SPOON (SS)		
DIA.		2"		
WT.		140		
FALL		30		

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS: MOISTURE
								ASPHALT 0.4'	-	
		1	SS	- 5 / 8 8	30%	BROWN/ BLACK/	MEDIUM DENSE	FILL: C-F GRAVEL AND C-F SAND, CINDERS, WOOD COBBLES, BRICKS		DRY-MOIST
		2	SS	7 7 / - -	30%	ORANGE/ GRAY			-	
5		3	SS	5 5 / 8 11	50%	RED/ BROWN		FINE SAND AND C-F GRAVEL, SANDSTONE FRAGMENTS COBBLES	SP GW	
		4	SS	15 17 / 27 34	60%		DENSE			
		5	SS	35 33 / 35 38	60%		VERY DENSE			
10		6	SS	20 33 / 36 35	70%					
		7	SS	70 50/1 / - -	50%	BROWN		COBBLES AND C-F GRAVEL, SOME C-F SAND	GW	DRY
15		8	SS	18 45 / 39 47	60%					
		9	SS	33 46 / 33 32	70%					DRY-MOIST
		10	SS	27 15 / 10 6	20%		MEDIUM DENSE			
20		11	SS	50 9 / 5 4	20%					MOIST-VERY MOIST
		12	SS	7 7 / 10 6	TRACE					MOIST
		13	SS	19 25 / 47 50/3	50%	BROWN GRAY	VERY DENSE	C-F GRAVEL, WEATHERED SHALE	GW	WET @ 24'
25		14	SS	50/1 - / - -	NR					
		15	SS	50/1 - / - -	NR					HSA GRINDING
30								END OF BORING @ 30.0' AUGER REFUSAL		WELL INSTALLED SCREENED FROM 29.8'-19.8'
										HNU - INOPERABLE DUE TO MOISTURE
35										

COMMENTS: BORING ADVANCED WITH CME-55 DRILL RIG. 4 1/4" ID HSA UTILIZED.
NR = NO RECOVERY

PROJECT NO.: 35598.02
BORING NO.: MW-1

URS Greiner, Inc.

TEST BORING LOG

BORING NO.: MW-2

PROJECT: 93 MAIN STREET - BINGHAMTON - NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: BUFFALO DRILLING COMPANY INC.

BORING LOCATION: N. 1193157.2915, E. 1052533.2564

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-17		22'	Soil is Wet
11-17		15.4'	From Top of HSA at Borehole
11-17		7.8'	Well Completion Top of Riser

	CAS.	SAMPLER	CORE	TUBE
TYPE		SPLIT(SS) SPOON		
DIA.		2"		
WT.		140#		
FALL		30"		

* POCKET PENETROMETER READING

GROUND ELEVATION: 858.54'

DATE STARTED: 11-17-98

DATE FINISHED: 11-17-98

DRILLER: Don Rimbeck

GEOLOGIST: Brian Demme

REVIEWED BY: Duane Leshaist

DEPTH FEET	STRATA	SAMPLE NO.	TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS Moisture / PID
		1	SS	5 10 / 10 12	20%	Dark Brown/ Brown	Medium Dense	Silt with Organics		Moist - Dry 1-3
								Silt	SM	
		2	SS	22 26 / 25 18	40%	Lt. Brown/ Orange	Very Dense	with C-F Gravel	GW	Dry
-5		3	SS	15 27 / 48 50/1	50%	Red/ Brown		Cobbles, Sandstone Frags		
		4	SS	19 24 / 41 48	40%	Brown/ Gray				Moist - Dry
		5	SS	21 33 / 50/1 -	30%					Moist - Dry
-10						Lt. Gray		Silt (Till)	ML	Dry Slow Drilling
		6	SS	50 - / - -	NR	Dark Gray				
		7	SS	65 50/4 / - -	40%					Moist
-15		8	SS	17 34 / 41 28	40%			Trace Clay Weathered Shale		Dry
		9	SS	15 25 / 32 47	100%					Moist - Dry
		10	SS	19 35 / 50/5 -	60%					Moist Wet @ 18'
-20		11	SS	11 27 / 50/3 -	60%					Very Moist Wet @ 22'
		12	SS	2 2 / 10 18	80%		Medium Dense			
-25		13	SS	16 35 / 50/1 -	60%		Very Dense			
								End of Boring @ 25.1		Well Installed Screen from 25'-15'.
-30										
-35										

COMMENTS: Boring Advanced with CME-55 Drill Rig, 4 1/4" ID HSA utilized.
NR = No Recovery

PROJECT NO.: 35598.02

BORING NO.: MW-2

URS Greiner, Inc.

TEST BORING LOG

BORING NO.: MW-3

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: BUFFALO DRILLING COMPANY INC.
BORING LOCATION: N. 1193300. 4146 E. 1052970. 0584
GROUNDWATER:
GROUND ELEVATION: 861.25'
DATE STARTED: 11-18-98
DATE FINISHED: 11-18-98
DRILLER: DON RIMBECK
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DUANE LENHART

DATE	TIME	LEVEL	TYPE
11-18		29'	SOIL IS WET
11-18		28.3'	FROM TOP OF HSA AT BOREHOLE COMPLETION

	CAS.	SAMPLER	CORE	TUBE
TYPE		SPLIT (SS) SPOON		
DIA.		2"		
WT.		140#		
FALL		30"		

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID
		1	SS	4 4 / 4 4	50%	BROWN/ BLACK/ GRAY	LOOSE	FILL: CINDERS, SOME ORGANICS, ASH	—	MOIST	7-10
		2	SS	6 8 / 9 9	30%	RED/ BROWN	MEDIUM DENSE	SILT, SOME C-F GRAVEL	ML		
5		3	SS	8 5 / 8 8	40%			SOME-TRACE COARSE SAND	SM		
		4	SS	6 9 / 40 37	30%	BROWN	DENSE			DRY	
		5	SS	12 19 / 17 12	40%					MOIST	
10		6	SS	14 13 / 9 9	20%	DARK GRAY	MEDIUM DENSE	COBBLES FROM AUGERS		DRY-MOIST	
		7	SS	10 10 / 10 10	TRACE	BROWN					
15		8	SS	8 11 / 61 53	30%	LT. GRAY	VERY DENSE				
		9	SS	30 50/1 / — —	40%	GRAY		SILT (TILL) WITH SOME GRAVEL	ML	MOIST	
		10	SS	22 51 / 50/1 —	60%						
20		11	SS	15 18 / 27 22	70%		DENSE	BOULDERS, COBBLES		VERY MOIST	
		12	SS	30 33 / 42 41	70%		VERY DENSE			MOIST	
25		13	SS	50/5 — / — —	20%					SLOW DRILLING GRINDING	
		14	SS	12 33 / 40 46	60%			MOTTLING			
		15	SS	22 44 / 40 47	80%					DRY-MOIST	
30		16	SS	50/5 — / — —	NR					WET @ 29'	
								END OF BORING @ 30.5'		GRINDING	
										WELL INSTALLED SCREENED FROM 30'-20'.	
35											

COMMENTS: BORING ADVANCED WITH CME-55 DRILL RIG. 4¼" ID HSA UTILIZED. INITIAL AUGER REFUSAL AT 14'. BOREHOLE RELOCATED ~3' NORTH AND DRILLED TO 30.5'.

PROJECT NO.: 35598.02
BORING NO.: MW-3

URS Greiner, Inc.

TEST BORING LOG

BORING NO.: MW-4

PROJECT: 93 MAIN STREET - BINGHAMPTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: BUFFALO DRILLING COMPANY INC.
BORING LOCATION: N 1193315.1920 E 1052222.6449
GROUND ELEVATION: 860.63'
DATE STARTED: 11-19-98
DATE FINISHED: 11-20-98
DRILLER: DON RIMBECK
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DUANE LENHARDT

GROUNDWATER:					CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		SPLIT SPOON(SS)		
11-19		5'	PERCHED WATER	DIA.		2"		
11-20		28'	SOIL IS WET	WT.		140#		
11-20		12.15'	FROM TOP OF HSA AT BOREHOLE	FALL		30"		
			COMPLETION	* POCKET PENETROMETER READING				

DEPTH FEET	STRATA	SAMPLE NO.	TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID
0								ORGANICS 0.1'	—		
		1	SS	8 10 / 7 14	20%	Brown/ Black	MEDIUM DENSE	FILL: C-F SAND AND C-F GRAVEL, WITH CINDERS	—	MOIST	5-10
		2	SS	2 2 / 2 3	<5%	Black	LOOSE			DRY	
5		3	SS	3 4 / 4 11	50%	RED/ Brown Gray		SILT AND ASH		VERY MOIST WET @ 5'	
		4	SS	12 12 / 8 33	50%		MEDIUM DENSE			VERY MOIST	
		5	SS	15 20 / 14 11	20%		DENSE				
10		6	SS	7 15 / 17 50/5	80%	GRAY		COBBLES & BOULDERS		DRY-MOIST	
		7	SS	23 50/3 / — —	60%	OLIVE GRAY	VERY DENSE				
15		8	SS	50/5 — / — —	10%	GRAY		SILT, WITH SOME GRAVEL (TILL) COBBLES	ML	DRY	
		9	SS	14 33 / 40 43	80%					MOIST-DRY	
		10	SS	50/3 — / — —	NR			BOULDERS		DRY SLOW DRILLING DIFFICULT DRILLING SPLIT SPOON BOUNCING NO SOIL SAMPLES COLLECTED FROM 22'-27' DUE TO COBBLES + BOULDERS	
20		11	SS	50/0 — / — —	NR						
25											
		12	SS	39 37 / 34 34	60%			TRACE CLAY		WET @ 28'	
30										HSA GRINDING	
								END OF BORING AT 30'		WELL INSTALLED SCREEN FROM 29.8' - 19.8'	
35											

COMMENTS: BORING ADVANCED WITH CME-55 DRILL RIG. 4¼" ID HSA.
NR = NO RECOVERY.

PROJECT NO.: 35598.02
BORING NO.: MW-4

URSF-031 H1 OF2/TBL/GCM

URS Greiner, Inc.

TEST BORING LOG

BORING NO.: MW-5

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: BUFFALO DRILLING COMPANY INC.
BORING LOCATION: N. 1193319.4829 E. 1053360.9603
GROUNDWATER:
GROUND ELEVATION: 865.15'
DATE STARTED: 11-23-98
DATE FINISHED: 11-23-98
DRILLER: DON RIMBECK
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DUANE LENHARDT

DATE	TIME	LEVEL	TYPE
11-23		4'	PERCHED WATER
11-23		18'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE		SPLIT (SS) SPOON		
DIA.		2"		
WT.		140*		
FALL		30"		

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID
								ASPHALT 0.4'	—		
		1	SS	- 3 / 3 4	60%	RED/ BROWN	LOOSE	FILL: SILT WITH F-GRAVEL TRACE BRICK		VERY MOIST	1-3
		2	SS	3 3 / 3 3	60%			SANDSTONE FRAGS		WET @ 4'	
5		3	SS	5 3 / 3 3	<5%	BROWN	MEDIUM STIFF	CLAYEY SILT	CL		
		4	SS	3 4 / 4 5	10%					DRY	
		5	SS	4 5 / 8 12	80%	RED/ BROWN	MEDIUM DENSE	FINE SAND	SP		
10		6	SS	12 20 / 20 11	50%		DENSE	SILT WITH C-F GRAVEL COBBLES STRATIFIED	ML GW	MOIST	
		7	SS	13 30 / 33 37	70%		VERY DENSE				
15		8	SS	24 30 / 36 44	85%	BROWN		FINE SAND, SOME C-F GRAVEL, MEDIUM-COARSE SAND	SW	DRY	
		9	SS	11 27 / 23 12	70%		DENSE			WET @ 18'	
		10	SS	9 8 / 8 9	60%		MEDIUM DENSE				
20		11	SS	19 50/1 / - -	20%		VERY DENSE	SILT WITH C-F GRAVEL BOULDERS	ML GW	SLOW DRILLING GRINDING	
								END OF BORING @ 20.7' AUGER REFUSAL		WELL INSTALLED SCREEN FROM 20'-10'.	
25											
30											
35											

COMMENTS: BORING ADVANCED WITH CME-55 DRILL RIG. 4 1/4" ID HSA UTILIZED.

PROJECT NO.: 35598.02
BORING NO.: MW-5

URS Greiner, Inc.

TEST BORING LOG

BORING NO.: MW-6

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: BUFFALO DRILLING COMPANY INC.
BORING LOCATION: N. 1193276. 5518 E. 105353. 5738
GROUNDWATER:
GROUND ELEVATION: 863.52'
DATE STARTED: 11-23-98
DATE FINISHED: 11-24-98
DRILLER: DON RIMBECK
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DUANE LENHARDT

DATE	TIME	LEVEL	TYPE
11-23		4'	PERCHED WATER
11-23		18'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE		SPLIT (SS) SPOON		
DIA.		2"		
WT.		140#		
FALL		30"		

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID
		1	SS	7 / -	50/5 / -	40%	BLACK/ GRAY	VERY DENSE	ORGANIC LAYER	-	
									FLAGSTONE PIECES	-	VERY MOIST	
		2	SS	3 / 3	2 / 3	50%	BROWN		ORGANICS WITH SILT	PT/SM	
									COARSE-FINE GRAVEL	GW	WET @ 4'	100
5		3	SS	3 / 3	8 / 8	80%		MEDIUM DENSE				5-7
		4	SS	9 / 18	14 / 20	10%		DENSE			MOIST-. VERY MOIST	15-20
		5	SS	7 / 18	14 / 20	25%						
10		6	SS	8 / 14	10 / 16	40%		MEDIUM DENSE	SILT WITH COARSE-FINE GRAVEL STRATIFIED	ML / GW		20
		7	SS	14 / 8	10 / 6	50%						
15		8	SS	7 / 8	7 / 7	<5%						
		9	SS	5 / 6	6 / 4	NR					WET @ 18'	
		10	SS	3 / 3	3 / 12	60%	RED/ BROWN	LOOSE	SILT AND GRAVEL	GM		30
20		11	SS	9 / 50/5	34 / -	50%	GRAY	VERY DENSE				
		12	SS	29 / 27	33 / 52	90%	GRAY/ BROWN		SILT (TILL) WITH TRACE GRAVEL, CLAY	ML		20
25		13	SS	23 / 50/5	45 / -	70%					DIFFICULT DRILLING	
									END OF BORING AT 25.5' AUGER REFUSAL		STRONG PESTICIDE ODOR THROUGHOUT BORING. WELL INSTALLED SCREENED FROM 25'-15'.	
30												
35												

COMMENTS: BORING ADVANCED WITH CME-55 DRILL RIG. 4¼" ID UTILIZED. BORING DRILLED IN DEPRESSIONAL AREA.

PROJECT NO.: 35598.02
BORING NO.: MW-6

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#1

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N. 1193219.6887 E. 1053359.3631

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-2		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 864.01'

DATE STARTED: 11-2-98

DATE FINISHED: 11-2-98

DRILLER: JOE NOSSAL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				BLACK RED/ Brown		FILL: CINDERS, FINE SAND, C-F GRAVEL	—	DRY	7-10
5		2				RED/ Brown		FINE SAND AND COARSE - FINE GRAVEL Stratified	SP GW	MOIST - VERY MOIST	
10		3						SANDSTONE FRAGMENTS		MOIST	
15		4						COBBLES			
		* 5								WET @ 19'	
20								END of BORING AT 20'		SAMPLE TAKEN AT 17' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#1

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#2

PROJECT: 93 MAIN STREET - BINGHAMTON, NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193239.4011 E. 1053644.3924
GROUNDWATER:
GROUND ELEVATION: 863.60'
DATE STARTED: 11-2-98
DATE FINISHED: 11-2-98
DRILLER: JOE NOSSAL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE
11-2	1200	5'	PERCHED WATER ENCOUNTERED
11-2	1220	16'	SOIL IS WET

	TYPE	CAS.	SAMPLER	CORE / TUBE
DIA.				1½" ID
WT.				Percussion
FALL				N/A
* POCKET PENETROMETER READING				

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS: MOISTURE	PID PPM
		* 1				RED/ Brown; BLACK		ASPHALT 0.4'; FILL: FINE SAND AND GRAVEL COBBLES; F-C GRAVEL AND SILTY SAND	—	DRY	5-15
5		2				RED/ Brown		FINE SAND AND FINE-COARSE GRAVEL stratified	SP GW	WET @ 5'	
10		3				BLACK RED/ Brown				VERY MOIST; MOIST	
15		4								WET @ 16'	
20		5						END OF BORING AT 20'		SAMPLE TAKEN 0'-4' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#2

URSF-1298/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 3

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193258.1753 E. 1053688.6997
GROUNDWATER:
GROUND ELEVATION: 864.00'
DATE STARTED: 11-2-98
DATE FINISHED: 11-2-98
DRILLER: JOE NOSSAL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE
11-2		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				BROWN/ BLACK RED		FILL: SILT, GRAVEL BRICKS, ASPHALT, TAR COBBLES, SAND, SANDSTONE	—	DRY MOIST	7-10
5		2				BROWN/ RED		FINE-COARSE GRAVEL WITH COBBLES, SANDSTONE FRAGS SOME C-F SAND	GW		
10		3									
15		4									
		5								WETE 19'	
20								END of BORING AT 20'		SAMPLE TAKEN AT 3' FOR ANALYSIS	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 3

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 4

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193277.6626 E. 1053760.0581
GROUNDWATER:
GROUND ELEVATION: 864.29'
DATE STARTED: 11-2-98
DATE FINISHED: 11-2-98
DRILLER: JOE NOSSAL
GEOLOGIST: BRIAN DEMMER
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE
11-2		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				Brown Black		FILL: ASH, FINE SAND		Dry - Moist Very Moist	7-10
5		2				Brown Red		FINE SAND AND COARSE FINE GRAVEL STRATIFIED	SP GW	Moist	
10		3									
		4						SHALE FRAGMENTS			
15						Gray					
		5								Wet @ 19'	
20								END OF BORING AT 20'		SAMPLE TAKEN AT 5' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#4

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#5

PROJECT: 93 MAIN STREET - BINGHAMTON, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N. 1193298.3471 E. 1053382.1423

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-2		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 864.76'

DATE STARTED: 11-2-98

DATE FINISHED: 11-2-98

DRILLER: JOE NOSSAL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS: MOISTURE	PID PPM
								ASPHALT 0.4'			
		*1				BLACK		FILL: F-C GRAVEL, CONCRETE FRAGMENTS, FINE SAND		MOIST	ND
5		2						FINE-COARSE GRAVEL AND F-C SAND, WITH SOME COBBLES STRATIFIED	GW SW	VERY MOIST	
10		3				BROWN/ RED					
15		4									
		5								WET @ 19'	
20								END OF BORING AT 20'		SAMPLE TAKEN AT 4' FOR ANALYSIS.	
25										ND: NOT DETECTED.	
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#5

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#6

PROJECT: 93 MAIN STREET - BINGHAMTON, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY. INC.

BORING LOCATION: N. 1193318. 5755 E. 1053817. 3347

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-2		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 865.98'

DATE STARTED: 11-2-98

DATE FINISHED: 11-2-98

DRILLER: JOE NOSSAL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				GRAY BROWN ORANGE WHITE		FILL: CRUSHED STONE 6" FINE SAND, SILT, CONCRETE, BRICK	-	DRY MOIST	7-10
5		2				BROWN RED		FINE SAND WITH SOME COARSE-FINE GRAVEL	SP		
10		3									
15		* 4									
		5								WET @ 19'	
20								END of BORING AT 20'		SAMPLE TAKEN AT 15' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#6

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#7

PROJECT: 93 MAIN STREET - BINGHAMTON, NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUNDWATER:
GROUND ELEVATION:
DATE STARTED: 11-2-98
DATE FINISHED: 11-2-98
DRILLER: JOE NOSSAL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE
11-2		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
		*1				BROWN ORANGE GRAY WHITE BLACK		FILL: F-C GRAVEL, SAND BRICKS, ASH, CONCRETE FRAGMENTS		MOIST	7-10
5		2				BLACK GRAY		SILTY GRAVEL	GM		
10		3						COBBLES			
15		4								VERY MOIST	
20		5								WET @ 19'	
								END OF BORING AT 20'		SAMPLE TAKEN AT 4'-5' ANALYSIS	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#7

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 8

PROJECT: 93 MAIN STREET - BINGHAMTON, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-2		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION:

DATE STARTED: 11-2-98

DATE FINISHED: 11-2-98

DRILLER: JOE NOSSAL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	SAMPLE BLOWS PER 6"	SAMPLE RECOVERY RQD %	DESCRIPTION COLOR	DESCRIPTION CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	DESCRIPTION CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
0		1				Brown/ RED		F-C GRAVEL WITH FINE SAND, COBBLES AND SANDSTONE FRAGMENTS.	GW	DRY	7-8
										MOIST	
5		2									
10		3									
		4									
15										VERY MOIST	
		* 5								WET @ 19'	
20								END of BORING AT 20'		SAMPLE TAKEN AT 16'-18' ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 8

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#9

PROJECT: 93 MAIN STREET - BINGHAMTON, NY

CLIENT: NYSDEC

BORING CONTRACTOR: GEOLOGIC NY INC.

SHEET: 1 OF 1

JOB NO.: 35598.02

BORING LOCATION: SEE SITE PLAN

GROUND ELEVATION:

DATE STARTED: 11-3-98

DATE FINISHED: 11-3-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

GROUNDWATER:					CAS.	SAMPLER	CORE / TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve
11-3		19'	SOIL IS WET	DIA.			1½" ID
				WT.			Percussion
				FALL			N/A
				* POCKET PENETROMETER READING			

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	SAMPLE BLOWS PER 6"	SAMPLE RECOVERY RQD %	DESCRIPTION COLOR	DESCRIPTION CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	DESCRIPTION CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
						GRAY		FILL: CRUSHED STONE 0.6'		DRY	ND
		1				BROWN BLACK		C-GRAVEL AND REGRADED SILT, WOOD FILL	—	MOIST	
						BROWN		FINE SAND AND SILT	SM		
5		2									
								F-C SAND & F-C GRAVEL WITH SOME COBBLES STRATIFIED	GW SW		
10		3									
		4									
15											
		5								WET @ 19'	
20								END of BORING AT 20'		SAMPLE TAKEN AT 4'-5'. ANALYSIS ND: NOT DETECTED.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#9

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 10

PROJECT: 93 MAIN STREET - BINGHAMTON, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-3		19'	Soil is Wet

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION:

DATE STARTED: 11-3-98

DATE FINISHED: 11-3-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
0								ASPHALT 0.4'			
		1				BLACK/ ORANGE		FILL: F-C SAND AND F-C GRAVEL, CINDERS, BRICK	—	MOIST	5
5		2								VERY MOIST	40-60
						Brown		C-f GRAVEL AND SILT, SAND	GM		
10		3				BLACK		SILT	ML	STRONG ODOR PESTICIDE STAINED SOILS	100-150
		4				Brown RED/ Brown		COARSE-FINE GRAVEL AND C-F SAND, COBBLES STRONG PESTICIDE ODOR STRATIFIED	GW SW		
15						GRAY/ Brown					
		5								WET @ 19'	
20								END OF BORING AT 20'		SAMPLE TAKEN AT 4'-8' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 10

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 11

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-3		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION:

DATE STARTED: 11-3-98

DATE FINISHED: 11-3-98

DRILLER: STEVE CARAMESE

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		* 1				BROWN		FINE-COARSE GRAVEL AND FINE-COARSE SAND. STRATIFIED	GW SW	MOIST	10
5		2									
						RED/ BROWN				VERY MOIST	
10		3									
		4									
15											
		5				BLACK		F-C-GRAVEL	GW	WET @ 19' ODOR	20
20								END OF BORING AT 20'		SAMPLE TAKEN AT 0'-4' FOR ANALYSIS	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#11

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 12

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-3		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION:

DATE STARTED: 11-3-98

DATE FINISHED: 11-3-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				LT. Brown/ Brown GRAY		FILL: F-C SAND AND F-C-GRAVEL	-	MOIST	ND
								ASH			
5		2				Brown/ Black		SILT, WITH SOME COBBLES	SM/ GW	VERY MOIST	
								F-C GRAVEL AND FINE SAND, COBBLES.			
								STRATIFIED			
10		3									20
		4									
15						Brown/ RED		SANDSTONE FRAGMENTS			
		5								WET @ 19'	
20								END of BORING AT 20'		SAMPLE TAKEN AT 7'-8' AND 10'-11' FOR ANALYSIS. ND= NOT DETECTED.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 12

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 13

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N: 1193303.2416 E: 1053647.3402

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-3		19'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 864.57'

DATE STARTED: 11-3-98

DATE FINISHED: 11-3-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMMIE

REVIEWED BY: VMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				BROWN ORANGE BLACK		FILL: SILT, BRICKS, CINDERS	—	MOIST	ND
5		2				LT. BROWN		COARSE GRAVEL, WITH SOME COBBLES.	GP		
		3						FINE SAND AND COARSE GRAVEL. STRATIFIED	SP/GP	VERY MOIST	12-18
10										MOIST DRY	
		4						SANDSTONE FRAGS			
15											
		5								VERY MOIST WET @ 19	
20								END of BORING AT 20'		SAMPLE TAKEN AT 12'-13' AND 17'-18' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#13

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 14

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193325. 7586 E. 1053355. 2238
GROUNDWATER:
GROUND ELEVATION: 865.18'
DATE STARTED: 11-3-98
DATE FINISHED: 11-3-98
DRILLER: STEVE LARAMEE
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE
11-3		19.6'	Soil is Wet

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4			
		1				Brown/ Orange		FILL: FINE SAND, SILT F-C GRAVEL, BRICKS	—	DRY VERY MOIST	ND
5		2				Brown		FINE SAND WITH M-C SAND. GRAVEL	SW GW	MOIST	
								SILT WITH F-C SAND AND F-C GRAVEL	SM GW		
10		*3						FINE SAND, AND SILT, COBBLES	SM	VERY MOIST MOIST	
		4									
15											
		5								WET @ 19.6'	
20								END of BORING AT 20'		SAMPLE TAKEN AT 10'-12' FOR ANALYSIS	
										ND: NOT DETECTED	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 14

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP #15

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUND ELEVATION:
DATE STARTED: 11-3-98
DATE FINISHED: 11-3-98
DRILLER: STEVE LARAMEE
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

GROUNDWATER:					CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve	
				DIA.			1½" ID	
				WT.			Percussion	
				FALL			N/A	
				* POCKET PENETROMETER READING				

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
								ASPHALT 0.4'			
		1				BROWN/ ORANGE		FILL: SILT WITH F-C GRAVEL BRICKS, TAR.	—	DRY MOIST	ND
						RED/ BROWN		SILTY GRAVEL	GM	DRY	
5		2				LT. BROWN					
						BROWN		COBBLES			
10		3									
		4						FINE SAND AND C-F. GRAVEL STRATIFIED	SP GW	MOIST	
15											
		* 5									
20								END OF BORING AT 20'		SAMPLE TAKEN AT 17'-18' FOR ANALYSIS. ND: NOT DETECTED.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#15

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP #16

PROJECT: 93 MAIN STREET - BINGHAMTON - NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUNDWATER:
GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DATE STARTED: 11-3-98
DATE FINISHED: 11-3-98
DRILLER: STEVE LARAMEE
GEOLOGIST: BRIAN DEIMME
REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.6'			
		1				GRAY/ BLACK		FILL: FINE SAND AND COBBLES, WITH SOME F-C GRAVEL	—	DRY	ND
						BROWN				MOIST	
5		2						FINE - COARSE GRAVEL WITH SOME SILT	GW SM		
						RED ORANGE		FINE SAND (SEAM) SANDSTONE FRAGMENTS	SP	SAND SEAM	
10		*3									
		4									
15								END OF BORING AT 16' GEOPROBE REFUSAL		SAMPLE TAKEN AT 11'-12' FOR ANALYSIS.	
20										ND: NOT DETECTED.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#16

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 17

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION:

DATE STARTED: 11-3-98

DATE FINISHED: 11-3-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS: MOISTURE	REMARKS: PID PPM
								ASPHALT 0.4'			
		1				BLACK/GRAY		FILL: CINDERS, ASH, WOOD	-	DRY MOIST	5
						BROWN/BLACK		SILT CINDERS, ASH, WOOD			
5		2				BROWN/RED		FINE-COARSE GRAVEL, SOME COBBLES, SANDSTONE FRAGMENTS	GW		
10		3									
						BROWN		FINE-COARSE SAND AND FINE-COARSE GRAVEL WITH SOME COBBLES	SW GW		
		4				BLACK					
15						BROWN		STRATIFIED			
						BLACK GRAY					
		5				BROWN					
20								END OF BORING AT 18.6' GEOPROBE REFUSAL		SAMPLE TAKEN AT 16'-17' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.0

BORING NO.: GP#17

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 18

PROJECT: 93 MAIN STREET - BINGHAMTON - NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N. 1193240.4719 E. 1053196165

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 863.99'

DATE STARTED: 11-4-98

DATE FINISHED: 11-4-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	SAMPLE BLOWS PER 6"	SAMPLE RECOVERY ROD %	DESCRIPTION COLOR	DESCRIPTION CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	DESCRIPTION CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
								ASPHALT 0.4'			
		* 1				BROWN		FILL: C-F GRAVEL SAND, ASH	-	Moist	3-5
						LT. BROWN GRAY / BROWN / RED		FINE SAND WITH SOME COBBLES, C-F GRAVEL	SP		
5		2									
						BROWN / LT. BROWN		C-F GRAVEL AND C-F SAND, COBBLES Stratified	GW SW		
10		3									
		4								Dry Moist	
15											
		5								Very Moist	
								END of BORING AT 18' GEOPROBE Refusal		SAMPLE TAKEN AT 3'-4' FOR ANALYSIS	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#18

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 19

PROJECT: 93 MAIN STREET - BINGHAMTON - NY
SHEET: 1 OF 1
CLIENT: NYS DEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUNDWATER:
GROUND ELEVATION:
DATE STARTED: 11-4-98
DATE FINISHED: 11-4-98
DRILLER: STEVE LACAMERE
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
0		1				LT. BROWN		FILL: C-F SAND, WOOD		DRY	5-7
						BROWN/ DARK BROWN		SILT, ORGANICS, ASH		MOIST	
5		2				BLACK/ BROWN					
						RED/ BROWN		SILT WITH C-F SAND, GRAVEL	GM	VERY MOIST	
						BLACK/ BROWN		COBBLES		MOIST	
10		3						C-F SAND	SW		
								COBBLES			
						RED/ BROWN		SILT WITH SOME C-F GRAVEL	GM		
15		4								VERY MOIST	
		5						C-F GRAVEL AND COBBLES	GW		
20								END OF BORING AT 18' GEOPROBE REFUSAL		SAMPLE TAKEN AT 4'-5' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#19

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 20

PROJECT: 93 MAIN STREET - BINGHAMTON NY
CLIENT: NYSDEC
BORING CONTRACTOR: GEOLOGIC NY INC.
SHEET: 1 OF 1
JOB NO.: 35598.02
BORING LOCATION: N. 1193159.0487 E. 1057796.0369
GROUND ELEVATION: 858.95'
DATE STARTED: 11-4-98
DATE FINISHED: 11-4-98
DRILLER: STEVE LARAMEE
GEOLOGIST: BRIAN DEMME
REVIEWED BY: PMS

GROUNDWATER:					CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve	
11-4		11'	Soil is Wet	DIA.			1½" ID	
				WT.			Percussion	
				FALL			N/A	
				* POCKET PENETROMETER READING				

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
		1				DARK BROWN RED/ BROWN		SILT, WITH ORGANICS	SM	DRY MOIST	ND
								COARSE - FINE GRAVEL AND COARSE - FINE SAND STRATIFIED	GW SW		
5		2									
										VERY MOIST	
10		3								WET @ 11'	
						GRAY		SILT, WITH COBBLES AND GRAVEL. (TILL)	SM GM	MOIST	
		4									
								END of BORING AT 13' GEOPROBE REFUSAL		SAMPLE TAKEN AT 10'-12' FOR ANALYSIS. ND: NOT DETECTED.	
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 20

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 21

PROJECT: 93 MAIN STREET - BINGHAMTON - NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N. 1193211.7357 E. 1054765.2359

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 864.06'

DATE STARTED: 11-4-98

DATE FINISHED: 11-4-98

DRILLER: JOE MENZEL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				BLACK RED/ BROWN		FILL: CINDERS SILT, C-f GRAVEL, C-f SAND, BRICKS		DRY - MOIST	ND
5		2				LT BROWN/ BLACK		FINE SAND AND C-f GRAVEL, SOME M-C SAND. STRATIFIED	SW GW	VERY MOIST → MOIST	
10		3				RED					4
15		4									
								END of BORING @ 16' GEOPROBE REFUSAL		SAMPLES TAKEN AT FOR LAB ANALYSIS	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 21

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 22

PROJECT: 93 MAIN STREET - BINGHAMTON - NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN.
GROUNDWATER:
GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE
11-4		23'	SOIL IS WET

	TYPE	CAS.	SAMPLER	CORE / TUBE
	Plastic Sleeve			
DIA.	1½" ID			
WT.	Percussion			
FALL	N/A			

* POCKET PENETROMETER READING

DATE STARTED: 11-4-98
DATE FINISHED: 11-4-98
DRILLER: STEVE LARAMEE
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		* 1				BROWN/ BLACK		FILL: C-F GRAVEL, AND C-F SAND, CINDERS		DRY MOIST	5-10
						RED/ BROWN/ ORANGE		SANDSTONE FRAGS COBBLES, WOOD, GLASS BRICKS			
5		2				RED/ BROWN		FINE-COARSE SAND AND GRAVEL STRATIFIED	SW GW		
10		3								DRY	
		4				BROWN		COARSE - FINE GRAVEL AND COBBLES, WITH SOME SILT, C-F SAND	GM		
15											
		5									
20										WET @ 23	
		6									
								END OF BORING AT 23'		SAMPLE TAKEN AT 3.5'-4' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP # 22

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 23

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193344.7349 E. 1054443.6168
GROUNDWATER:
GROUND ELEVATION: 867.32'
DATE STARTED: 11-4-98
DATE FINISHED: 11-4-98
DRILLER: STEVE LARAMEE
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
								ASPHALT 0.4'			
		1				BLACK / LT. BROWN		FILL: CINDERS SILT, C-f GRAVEL, FINE SAND. SILTY CLAY SILT, TAR, WOOD	—	moist	ND
5		2				BROWN		FINE SAND	SP		
						RED/ BROWN		FINE SAND AND SILT with some C-f GRAVEL, C-f SAND	SM GW		
10		3									
						BROWN		COARSE GRAVEL AND C-f SAND, SILT, COBBLES STRATIFIED	GW SM		
15		4									
		5						END of BORING AT 17' GEOPROBE REFUSAL		SAMPLE TAKEN AT 5'-6' FOR ANALYSIS. ND: NOT DETECTED.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 23

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#24

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUNDWATER:
GROUND ELEVATION:
DATE STARTED: 11-4-98
DATE FINISHED: 11-4-98
DRILLER: STEVE LARAMEE
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE
11-4		16'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
						DARK BROWN BLACK RED/ BROWN		SILT WITH ORGANICS		DRY	ND
		1						FILL: C-F SAND, GRAVEL	—	MOIST	
								SILT WITH C-F SAND, C-F GRAVEL	SM		
5		2				ORANGE BROWN		FINE SAND	SP		
								C-F GRAVEL & C-F SAND	GW		
								COBBLES AND ORGANICS	SW		
10		3						STRATIFIED			
		4						SILT WITH C-F GRAVEL	SM SW	WET @ 16'	
15								END OF BORING AT 16' GEOPROBE REFUSAL		SAMPLE TAKEN AT 5'-6' FOR ANALYSIS. ND: NOT DETECTED	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#24

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 25

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUNDWATER:
GROUND ELEVATION:
DATE STARTED: 11-4-98
DATE FINISHED: 11-4-98
DRILLER: STEVE LARAMEE
GEOLOGIST: BRIAN DEMMIE
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE / TUBE
TYPE			Plastic Sleeve
DIA.			1½" ID
WT.			Percussion
FALL			N/A

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	SAMPLE BLOWS PER 6"	SAMPLE RECOVERY RQD %	DESCRIPTION COLOR	DESCRIPTION CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	DESCRIPTION CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
0						BLACK		FILL: CINDERS, C-F SAND SILT		DRY	ND
		1				GRAY					
						BLACK		ASH, TAR, GLASS	—		
						BROWN		SILT, SAND, GRAVEL			
5						BLACK		C-F SAND, COBBLES			
		2				BROWN		FINE SAND, AND C-F GRAVEL	SP GW		
10		3						SILT WITH SAND, GRAVEL, COBBLES Stratified	SM		
		4									
15											
								END OF BORING AT 16.1' GEOPROBE REFUSAL		SAMPLE TAKEN AT 5'-6' FOR ANALYSIS. ND: NOT DETECTED.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 25

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 26

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION:

DATE STARTED: 11-4-98

DATE FINISHED: 11-4-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	SAMPLE BLOWS PER 6"	SAMPLE RECOVERY RQD %	DESCRIPTION COLOR	DESCRIPTION CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	DESCRIPTION CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
0		1				DARK BLACK Brown		C-F SAND, WITH ORGANICS	SW	DRY	3-4
								SILT	SM		
								COBBLES			
5		2						C-F SAND & C-F GRAVEL	SW GW		
								COBBLES			
								Stratified			
10		3									
		* 4								MOIST	
15								END of BORING AT 15.6' GEOPROBE REFUSAL		SAMPLE TAKEN AT 14'-15' FOR ANALYSIS.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 26

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 27

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193281. 9762 E. 1053310. 0150
GROUNDWATER:
GROUND ELEVATION: 861.85'
DATE STARTED: 11-4-98
DATE FINISHED: 11-4-98
DRILLER: STEVE LARAMORE
GEOLOGIST: BRIAN DEMMS
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
		1				BLACK		ORGANICS & SILT	OL/OH	DRY	7-8
						LT. BROWN		SILT, WITH ORGANICS			
						BROWN		SILT WITH GRAVEL, SAND	SM GW		
5		2						COBBLES WITH SAND, GRAVEL STRATIFIED	SW, GW		
10		3						END of BORING AT 11' GEOPROBE REFUSAL		SAMPLE TAKEN AT 0'-1' AND 9'-10' FOR ANALYSIS.	
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 27

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#28

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N. 1193303.9604 E. 1053314.7920

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 861.75'

DATE STARTED: 11-4-98

DATE FINISHED: 11-4-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMMLE

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS: MOISTURE	REMARKS: PID PPM
0		* 1				LT. BROWN/ BROWN		SILT, WITH COBBLES, GRAVEL SAND, ORGANICS STRATIFIED	SM GW	DRY	7-8
5		2									
		* 3									
10								END OF BORING AT 9' GEOPROBE REFUSAL		SAMPLE TAKEN AT 0.5'-1.0' AND 8'-9' for ANALYSIS.	
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#28

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 29

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N. 1193314.0270 E. 1053310.6944

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 861.35'

DATE STARTED: 11-4-98

DATE FINISHED: 11-4-98

DRILLER: STEVE LARAMEE

GEOLOGIST: BRIAN DEMMIE

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
0		*				BLACK		FILL: CINDERS, CONCRETE	—	DRY	5
		1				BROWN		SILT, WITH SOME COBBLES	SM		
5		2									
		3									
10								END of BORING AT 9' GEOPROBE REFUSAL		SAMPLES TAKEN AT 0.5 - 1.0' FOR ANALYSIS.	
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 29

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 30

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUNDWATER:
GROUND ELEVATION:
DATE STARTED: 11-4-98
DATE FINISHED: 11-4-98
DRILLER: STEVE CARAMEE
GEOLOGIST: BRIAN DEMMES
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
						BLACK		ORGANICS WITH SILT	OL/OH	DRY	5-6
						Brown		FILL: CONCRETE FRAGS	-		
		1				LT Brown		SILT WITH SOME GRAVEL COBBLES, F-C GRAVEL	SM	MOIST	
5		2								DRY	
						Brown		C-F SAND. WITH COBBLES	SW		
10		3									
						RED/ BROWN		FINE SAND AND F-C GRAVEL STRATIFIED	SP GW	MOIST	
		4									
15						GRAY		SILT	ML		
								END OF BORING AT 15.5 GEOPROBE REFUSAL		SAMPLE TAKEN AT 0.5-1.0 FOR ANALYSIS.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 30

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 31

PROJECT: 93 MAIN STREET - BINGHAMTON, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:					CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve	
11-5		16'	SOIL IS WET	DIA.			1½" ID	
				WT.			Percussion	
				FALL			N/A	
				* POCKET PENETROMETER READING				

GROUND ELEVATION:

DATE STARTED: 11-5-98

DATE FINISHED: 11-5-98

DRILLER: JOE MENZEL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
								ASPHALT 0.4'	-		
		* 1				BLACK		C-F- SAND WITH GRAVEL (FILL)	—	DRY MOIST	5-7
						RED/ BROWN		SILT WITH C-F GRAVEL	SM GW		
5		2						C-F SAND AND C-F GRAVEL WITH SOME COBBLES STRATIFIED	SW GW		
10		3									
		4									
15						LT. BROWN					
		X 5				RED/ BROWN				VERY MOIST, WET @ 16', STRONG PETROLEUM ODOR	100
20						GRAY		END OF BORING AT 20'		SAMPLE TAKEN AT 0.5'-1.0' AND 19'-20' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 31

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 32

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUNDWATER:
GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE
11-5		17'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DATE STARTED: 11-5-98
DATE FINISHED: 11-5-98
DRILLER: JOE MENZEL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS Moisture	PID PPM
						BLACK		FILL: COARSE SAND, BRICKS	—	MOIST	70
		1				RED/BROWN		SILT WITH C-F GRAVEL AND C-F SAND	SM GW		
								COBBLES			
5		2						SANDSTONE FRAGMENTS		VERY MOIST	
										DRY-MOIST	100
						GRAY		C-F GRAVEL AND C-F SAND STRATIFIED	GW SW		15
10		3									
		4								STAINING OILY PESTICIDE ODOR	
15											140
		* 5								WET @ 17'	
20								END OF BORING AT 20'		SAMPLE TAKEN AT 18'-19' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 32

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 33

PROJECT: 93 MAIN STREET - BINGHAMTON NY
CLIENT: NYSDEC
BORING CONTRACTOR: GEOLOGIC NY INC.
SHEET: 1 OF 1
JOB NO.: 35598.02
BORING LOCATION: SEE SITE PLAN
GROUND ELEVATION:
DATE STARTED: 11-5-98
DATE FINISHED: 11-5-98
DRILLER: JOE MENZEL
GEOLOGIST: BRIAN DEMMES
REVIEWED BY: DMS

GROUNDWATER: DATE	TIME	LEVEL	TYPE
11-5		16'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				BLACK		C-F SAND, AND C-F GRAVEL	SW GW	DRY	
								FINE SAND	SP		
						RED/BROWN		SILT	SM		15
5		2				GRAY		SILT WITH C-F GRAVEL AND C-F SAND stratified	SM GW	VERY MOIST	70
											100
											120
10		3								PETROLEUM ODOR	150
											150
											100
15		4								STAINING	
										WET @ 16'	
		5									
20								END OF BORING AT 20'		SAMPLE TAKEN AT 12'-13' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 33

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#34

PROJECT: 93 MAIN STREET - BINGHAMTON, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:					CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve	
11-5		16'	SOIL IS WET	DIA.			1½" ID	
				WT.			Percussion	
				FALL			N/A	
				* POCKET PENETROMETER READING				

GROUND ELEVATION:

DATE STARTED: 11-5-98

DATE FINISHED: 11-5-98

DRILLER: JOE MENZEL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				BLACK		C-F SAND	SW	DRY	7-10
						BROWN		SILT, WITH C-F GRAVEL C-F SAND.	SM GW	MOIST	
5		2				RED/ BROWN		FINE SAND LAYER		VERY MOIST	
										MOIST	
10		3						C-F GRAVEL, COBBLES SOME C-F SAND, SANDSTONE FRAGMENTS	GW		
		4								WET @ 16'	
15								END OF BORING AT 16' GEOPROBE REFUSAL		SAMPLE TAKEN AT 12'-13' FOR ANALYSIS.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#34

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 35

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:					CAS.	SAMPLER	CORE / TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve
				DIA.			1½" ID
				WT.			Percussion
				FALL			N/A
				* POCKET PENETROMETER READING			

GROUND ELEVATION:

DATE STARTED: 11-5-98

DATE FINISHED: 11-5-98

DRILLER: JOE MENZEL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS: MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				BLACK BROWN/ GRAY		FILL: C-F SAND, TAR CONCRETE, ORGANICS C-F GRAVEL	- GM	DRY-MOIST	ND
						RED/ BROWN		SILT, WITH C-F GRAVEL AND C-F SAND STRATIFIED	ML GW	MOIST - VERY MOIST	6-8
5		2				BROWN					
10		3								DRY-MOIST	
								END of BORING AT 11.8' GEOPROBE REFUSAL		SAMPLE TAKEN AT FOR ANALYSIS. ND = NOT DETECTED.	
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 35

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 36

PROJECT: 93 Main Street - Binghamton, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: Geologic NY Inc.

BORING LOCATION: N. 1193208. 8628 E. 1053340. 8503

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-5		19'	Soil is Wet

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 863.81

DATE STARTED: 11-5-98

DATE FINISHED: 11-5-98

DRILLER: Joe Menzel

GEOLOGIST: Brian Dettmer

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
						BLACK		FILL: C-F SAND, TAR CONCRETE, COBBLES		Dry	2-3
		1				LT. BROWN BROWN GRAY		C-f GRAVEL, COBBLES WITH SILT	GW SM	Moist	
5		2				RED/ BROWN		SILT WITH C-f GRAVEL COBBLES, SOME C-f SAND.	SM GW	VERY MOIST	
10		3				BROWN		FINE SAND WITH C-F GRAVEL COBBLES	SP GW	MOIST	
		4				RED/ BROWN		C-f GRAVEL, COBBLES WITH SILT, SOME FINE SAND @ 14'	GW SM	VERY MOIST	
15						LT. BROWN		C-F GRAVEL, SILT, WITH SOME C-f SAND	GW SM		
		5				RED/ BROWN		FINE SAND	SP		
20								SILT WITH C-F GRAVEL, COBBLES	SM GW	WET @ 19'	
								END of BORING AT 20'		SAMPLE TAKEN AT 4'-5' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 36

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 37

PROJECT: 93 Main Street - Binghamton, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: Geologic NY Inc.

BORING LOCATION: N. 1193222. 8212 E. 105325. 2600

GROUNDWATER:

DATE	TIME	LEVEL	TYPE
11-5		18'	Soil is Wet

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 863.60'

DATE STARTED: 11-5-98

DATE FINISHED: 11-5-98

DRILLER: Joe Mendel

GEOLOGIST: Brian Demme

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
		1				BLACK / LT. BROWN GRAY / BROWN		FILL: SILT WITH ORGANICS, CONCRETE FRAGS	—	MOIST	5
5		2				BLACK / RED/BROWN		SILT WITH C-F GRAVEL, ORGANICS LAYER	ML GW		8
10		3				BLACK / BROWN		COBBLES, ORGANICS LAYER			
15		4								VERY MOIST	
		5								WET @ 18'	
20								END of BORING AT 18.5' GEOPROBE REFUSAL		SAMPLE TAKEN AT 4'-5' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 37

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 38

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193187.0217 E. 1053341.3681
GROUNDWATER:
GROUND ELEVATION: 864.02'
DATE STARTED: 11-5-98
DATE FINISHED: 11-5-98
DRILLER: JOE MENZEL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE
11-5		18'	SOIL IS WET

	TYPE	CAS.	SAMPLER	CORE	TUBE
TYPE				Plastic Sleeve	
DIA.				1½" ID	
WT.				Percussion	
FALL				N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
		* 1				BLACK		FILL: SILT WITH TAR, FINE SAND, C-F GRAVEL, CINDERS	—	MOIST	10
5		2				RED/BROWN		SILT WITH C-F GRAVEL, COBBLES	SM GW		
								C-F SAND SANDSTONE FRAGMENTS			
10		3						COBBLES			
15		4									
		5								WET @ 18'	
20		6									
								END of BORING AT 22'		SAMPLE TAKEN AT 0.5-1.0' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 38

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP # 39

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUND ELEVATION:
DATE STARTED: 11-5-98
DATE FINISHED: 11-5-98
DRILLER: JOE MENZEL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

GROUNDWATER:					CAS.	SAMPLER	CORE / TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve
11-5		18'	SOIL IS WET	DIA.			1½" ID
				WT.			Percussion
				FALL			N/A
				* POCKET PENETROMETER READING			

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
						BLACK		ASPHALT 0.4'			
						BROWN		C-F SAND	SW	DRY	5
		1				GRAY/ BROWN		FINE SAND	SP	MOIST	
								SILT	ML	VERY MOIST	10-11
5		2									
						BROWN		FINE SAND & C-F GRAVEL	SP GW	MOIST	10-12
10		3									
		4						C-F GRAVEL & C-F SAND WITH COBBLES	GW SW		
15								FINE SAND AND C-F GRAVEL	SP GW		
		5						SILT AND C-F SAND	SM SW	WET @ 18'	
20											
		6									
25								END OF BORING AT 24'		SAMPLE TAKEN AT 4'-5' FOR ANALYSIS.	
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 39

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 40

PROJECT: 93 MAIN STREET - BINGHAMTON, NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N. 1193245.8717 E. 1054458.5187

GROUND ELEVATION: 865.13'

DATE STARTED: 11-5-98

DATE FINISHED: 11-5-98

DRILLER: JOE MENZEL

GEOLOGIST: BRIAN DEMUNES

REVIEWED BY: DMS

GROUNDWATER:					CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve	
				DIA.			1½" ID	
				WT.			Percussion	
				FALL			N/A	
				* POCKET PENETROMETER READING				

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
								ASPHALT 0.4'			
		1				GRAY/RED/BROWN		FILL: GRAVEL	-	DRY	3-5
								F-C GRAVEL WITH COBBLES SOME FINE-COARSE SAND	GW	MOIST	
5		* 2									
								END OF BORING AT 8'		SAMPLE TAKEN AT 4'-5' FOR ANALYSIS.	
10											
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 40

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#41

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193199.9865 E. 105387.3636
GROUNDWATER:
GROUND ELEVATION: 864.09'
DATE STARTED: 11-5-98
DATE FINISHED: 11-5-98
DRILLER: JOE MENZEL
GEOLOGIST: BRIAN DEMMIE
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE / TUBE
TYPE			Plastic Sleeve
DIA.			1½" ID
WT.			Percussion
FALL			N/A

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	REMARKS PID PPM
								ASPHALT 0.4'			
		1				GRAY / LT. BROWN / DARK BROWN GRAY ORANGE		FILL: GRAVEL SILT WITH C-F GRAVEL CONCRETE, BRICKS FRAGS		DRY MOIST	10
5		* 2				RED/ BROWN		SILT WITH SOME C-F GRAVEL, TRACE CLAY	SM	VERY MOIST	
10		3						FINE SAND WITH C-F GRAVEL	SP GW	MOIST	
								END of BORING AT 12' GEOPROBE REFUSAL		SAMPLE TAKEN AT 4'-5' FOR ANALYSIS.	
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#41

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 42

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193337.2163 E. 1053929.9111
GROUND ELEVATION: 866.72'
DATE STARTED: 11-5-98
DATE FINISHED: 11-5-98
DRILLER: JOE MENZEL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

GROUNDWATER:					CAS.	SAMPLER	CORE / TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve
11-5		23'	SOIL IS WET	DIA.			1½" ID
				WT.			Percussion
				FALL			N/A
				* POCKET PENETROMETER READING			

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS: MOISTURE	REMARKS: PID PPM
								ASPHALT 0.4'			
		* 1				Brown / LT. Brown / RED		C-F GRAVEL WITH FINE SAND, SILT, COBBLES SOME FINE SAND, SANDSTONE FRAGMENTS, COARSE SAND.	GW SM	MOIST	3-5
5		2								DRY	
10		3									
15		4									
		5									
20		6								WET @ 23'	
25		7									
								END OF BORING AT 27.6'		SAMPLE TAKEN AT 3.5-4' FOR ANALYSIS.	
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP*42

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 43

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.07

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: N. 1193363.2347 E. 1054233.8600

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 866.97'

DATE STARTED: 11-6-98

DATE FINISHED: 11-6-98

DRILLER: JUDSON POWELL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		*				BLACK/ GRAY BROWN		FILL: CINDERS, ASH, SILT WOOD	—	MOIST	5-10
		1									
						LT. BROWN BROWN		SILT WITH C-F GRAVEL	ML GW	DRY	
5								END OF BORING AT 4'		SAMPLE TAKEN AT 3.5'-4' FOR ANALYSIS.	
10											
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#43

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP #44

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION:

DATE STARTED: 11-6-98

DATE FINISHED: 11-6-98

DRILLER: JUDSON POWELL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
						DARK BROWN/ LT. BROWN		FILL: C-F GRAVEL, SOME FINE SAND.		MOIST	3-5
5								END OF BORING AT 4'		SAMPLE TAKEN AT 3.5-4' FOR ANALYSIS	
10											
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#44

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.:	GP#45
SHEET:	1 OF 1
JOB NO.:	35598.02
BORING LOCATION:	N: 1193397.8665 E: 105420.0853
GROUND ELEVATION:	866.94'
DATE STARTED:	11-6-98
DATE FINISHED:	11-6-98
DRILLER:	Judson Powell
GEOLOGIST:	Brian Demmes
REVIEWED BY:	DMS

PROJECT: 93 Main Street - Binghamton NY

CLIENT: NYSDEC

BORING CONTRACTOR: Geologic, NY Inc.

GROUNDWATER:

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE			Plastic Sleeve	
				DIA.			1½" ID	
				WT.			Percussion	
				FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS Moisture	PID PPM
0–4		* 1				Brown/Red		ASPHALT 0.4' SILT, WITH C-F GRAVEL C-F SAND, SANDSTONE FRAGMENTS	SM GW	Moist	5-10
5								END OF BORING AT 4'		SAMPLE TAKEN AT 3.5-4' FOR ANALYSIS.	
10											
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#45

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#46

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC

BORING LOCATION: N. 1193382.9929 E. 1054460.6418

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION: 867.36'

DATE STARTED: 11-6-98

DATE FINISHED: 11-6-98

DRILLER: JUDSON POWELL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: JMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
	0.5 0.5 0.5	* 1				Brown/ RED		SILT WITH C-F GRAVEL C-F SAND, SANDSTONE FRAGMENTS	SM GW	Dry - Moist	S-10
								END OF BORING AT 3' GEOPROBE REFUSAL ON CONCRETE SLAB		SAMPLE TAKEN 2'-2.5' FOR ANALYSIS. THREE GEOPROBE ATTEMPTS AT GP# 46.	
5											
10											
15											
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#46

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 47

PROJECT: 93 MAIN STREET - BINGHAMTON NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: N. 1193340.2459 E. 1053302.0574
GROUNDWATER:
GROUND ELEVATION: 861.65'
DATE STARTED: 11-6-98
DATE FINISHED: 11-6-98
DRILLER: JUDSON POWELL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DATE	TIME	LEVEL	TYPE
11-6		16'	Soil is WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
0		*				BLACK		FILL: C-F SAND AND C-F GRAVEL, BRICKS, TAR, SILT	-	MOIST	5-10
		1				RED/BROWN		SILT WITH C-F GRAVEL	ML GW		
5		2						COBBLES			
10		3				LT. BROWN RED		SANDSTONE FRAGMENTS		DRY	
		4				LT. BROWN BROWN					
15						DARK BROWN		FINE SAND	SP	WET @ 16'	
								END OF BORING AT 16' GEOPROBE REFUSAL		SAMPLE TAKEN AT 0.5'-1'. FOR ANALYSIS.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP# 47

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#48

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:					CAS.	SAMPLER	CORE / TUBE	GROUND ELEVATION:
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve	DATE STARTED: 11-6-98
				DIA.			1½" ID	DATE FINISHED: 11-6-98
				WT.			Percussion	DRILLER: Judson Powell
				FALL			N/A	GEOLOGIST: Brian Demmee
				* POCKET PENETROMETER READING				REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	SAMPLE BLOWS PER 6"	SAMPLE RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
		* 1				DARK BROWN BROWN GRAY BLACK		SILT WITH ORGANICS 1" FILL: ASH, CINDERS, SILT WITH C-F GRAVEL, TAR C-F SAND, TRACE GYPSUM	—	DRY - MOIST	5-10
5		2				RED/ BROWN		SILT WITH COBBLES AND C-F GRAVEL STRATIFIED	ML GW	MOIST	
10		3									
		4				GRAY		SILT TRACE FINE GRAVEL (TILL)	ML	DRY - MOIST	
15								END OF BORING AT 15'		SAMPLE TAKEN AT 0-2' FOR ANALYSIS.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#48

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#49

PROJECT: 93 MAIN STREET - BINGHAMTON NY	SHEET: 1 OF 1
CLIENT: NYSDEC	JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.	BORING LOCATION: SEE SITE PLAN
GROUNDWATER:	GROUND ELEVATION:
DATE STARTED: 11-6-98	
DATE FINISHED: 11-6-98	
DRILLER: JUDSON POWELL	
GEOLOGIST: BRIAN DEMMES	
REVIEWED BY: DMS	

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
						DARK BROWN		SILT WITH ORGANICS 0.1'			
		* 1				LT. GRAY		FILL: SILT WITH C-F GRAVEL SOME C-F SAND, ASH	—	DRY	5-7
5		2				RED BROWN		COARSE - FINE SAND AND COARSE - FINE GRAVEL	SW GW	DRY-MOIST	
						LT. GRAY					
10		3						SILT WITH C-F GRAVEL	SM GW		
		4									
15								END OF BORING AT 14'		SAMPLES TAKEN AT 2-3' FOR ANALYSIS.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP#49

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 50

PROJECT: 93 MAIN STREET - BINGHAMTON - NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

GROUND ELEVATION:

DATE STARTED: 11-6-98

DATE FINISHED: 11-6-98

DRILLER: JUDSON POWELL

GEOLOGIST: BRIAN DEMMER

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
		* 1				BLACK/ GRAY		FILL: CINDERS, ASH	—	DRY	5-7
5		2				RED/ BROWN		CLAYEY SILT	CL	MOIST-VERY MOIST	
10		3				GRAY/ BROWN		SILT with C-F GRAVEL	SM GW		
15								END OF BORING AT 12' GEOPROBE REFUSAL		SAMPLE TAKEN AT 0'-2' for ANALYSIS.	
20											
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

BORING NO.: GP# 50

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP#51

PROJECT: 93 MAIN STREET - BINGHAMTON, NY
SHEET: 1 OF 1
CLIENT: NYSDEC
JOB NO.: 35598.02
BORING CONTRACTOR: GEOLOGIC NY INC.
BORING LOCATION: SEE SITE PLAN
GROUNDWATER:
GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE
11-6		18'	SOIL IS WET

	CAS.	SAMPLER	CORE	TUBE
TYPE			Plastic Sleeve	
DIA.			1½" ID	
WT.			Percussion	
FALL			N/A	

* POCKET PENETROMETER READING

DATE STARTED: 11-6-98
DATE FINISHED: 11-6-98
DRILLER: JUDSON POWELL
GEOLOGIST: BRIAN DEMME
REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				DARK GRAY BLACK BROWN ORANGE		FILL: SILT WITH ORGANICS CINDERS, BRICK	—	DRY	6-7
5		2				RED/ BROWN		SILT with some COARSE-FINE GRAVEL, COBBLES STRATIFIED	SM GW		
10		3									
		4								MOIST	
15		5								WET@18'	
20								END OF BORING AT 20'		SAMPLE TAKEN AT 16'-17' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02
BORING NO.: GP#51

URSF-129B/1 OF1/GL/GCM

URS Greiner, Inc.

GEOPROBE LOG

BORING NO.: GP# 52

PROJECT: 93 MAIN STREET - BINGHAMTON NY

SHEET: 1 OF 1

CLIENT: NYSDEC

JOB NO.: 35598.02

BORING CONTRACTOR: GEOLOGIC NY INC.

BORING LOCATION: SEE SITE PLAN

GROUNDWATER:					CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE			Plastic Sleeve	
				DIA.			1½" ID	
				WT.			Percussion	
				FALL			N/A	
				* POCKET PENETROMETER READING				

GROUND ELEVATION:

DATE STARTED: 11-6-98

DATE FINISHED: 11-6-98

DRILLER: JUDSON POWELL

GEOLOGIST: BRIAN DEMME

REVIEWED BY: DMS

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS MOISTURE	PID PPM
								ASPHALT 0.4'			
		1				BLACK/GRAY		FILL: CINDERS & ASH, CONCRETE FRAGS	—	DRY-MOIST	5-7
5		2				RED/BROWN		SILT AND COBBLES	SM GW	DRY	
10		3						C-F GRAVEL STRATIFIED			
15		4									
		5									
20								END OF BORING AT 20'		SAMPLE TAKEN AT 16'-17' FOR ANALYSIS.	
25											
30											
35											
40											

COMMENTS: Macro-Core advanced with Geoprobe GH-40 Direct Push Rig

PROJECT NO.: 35598.02

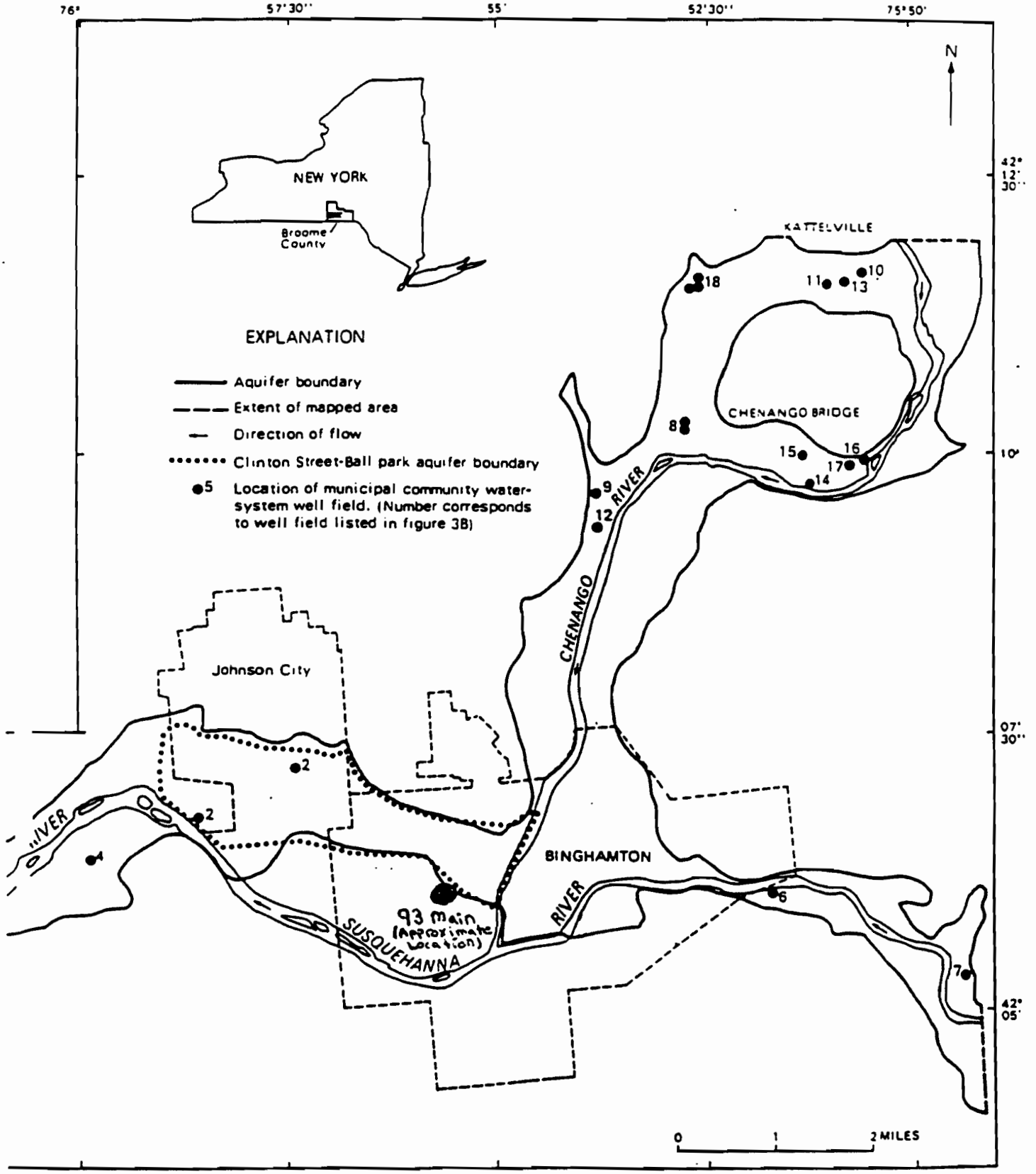
BORING NO.: GP# 52

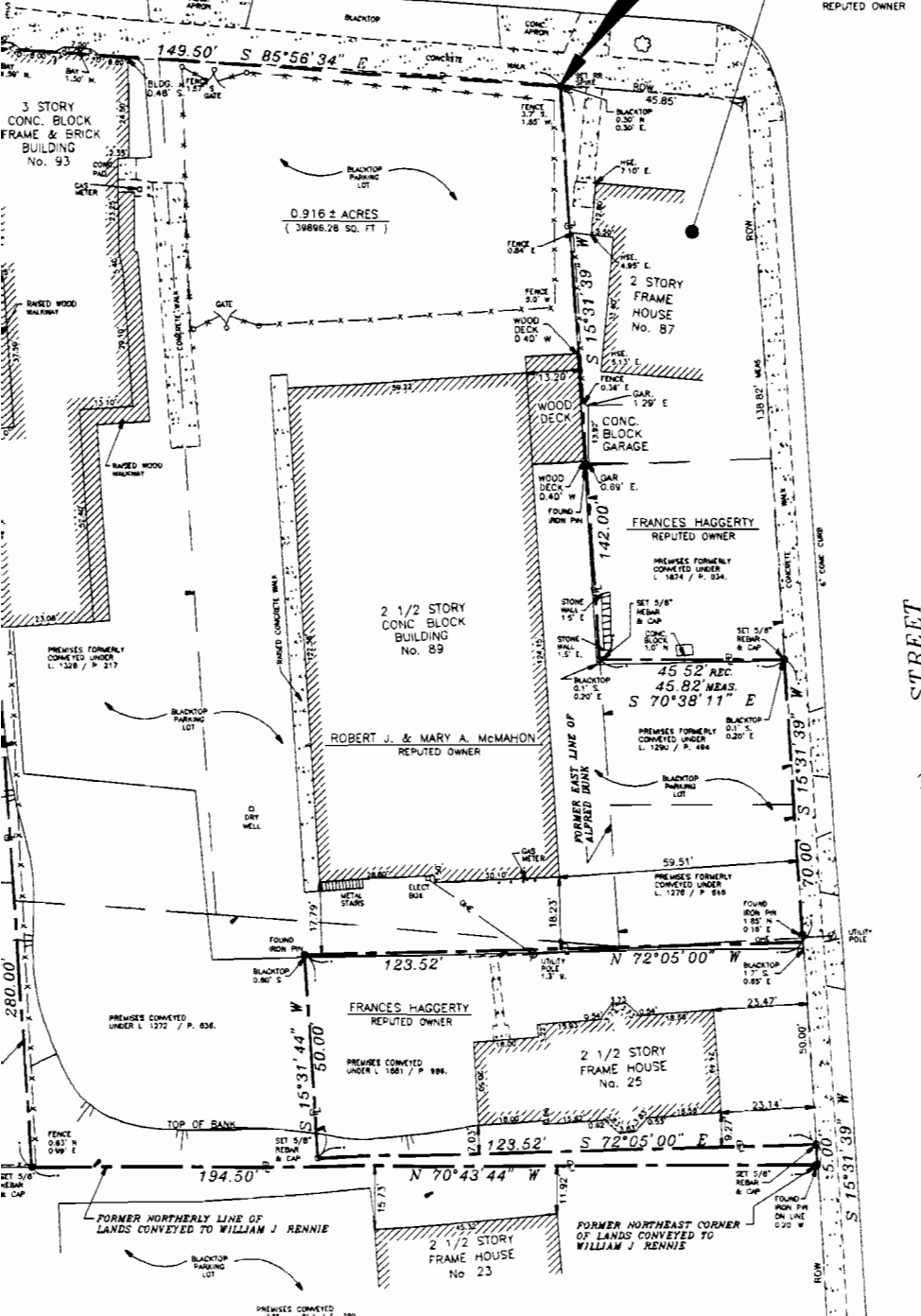
URSF-129B/1 OF1/GL/GCM

Appendix D

Aquifer Boundaries

FIGURE 3A ENDICOTT-JOHNSON CITY AREA
Location and major geographic tea es





ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Binghamton, County of Broome and State of New York, more particularly bounded and described as follows :

BEGINNING at a point on the southerly line of Main Street, said point being North 85°56'34" West, 45.85 feet from the intersection of the southerly line of Main Street and the westerly line of Arthur Street;

Thence along a portion of the easterly line of lands formerly conveyed to Alfred Dunk, South 15°31'39" West, 142.00 feet to a point,

Thence South 70°38'11" East, 45.82 feet to a point on the westerly line of Arthur Street, said point being 138.82 feet southerly of the first mention intersection point,

Thence southerly along the westerly line of Arthur Street, South 15°31'39" West, 70.00 feet to a point;

Thence North 72°05'00" West, 123.52 feet to a point;

Thence South 15°31'44" West, 50.00 feet to a point;

Thence South 72°05'00" East, 123.52 feet to a point on the westerly line of Arthur Street,

Thence southerly along the westerly line of Arthur Street, South 15°31'39" West, 5.00 feet to a point, said point being the northeast corner of lands formerly conveyed to William J Rennie,

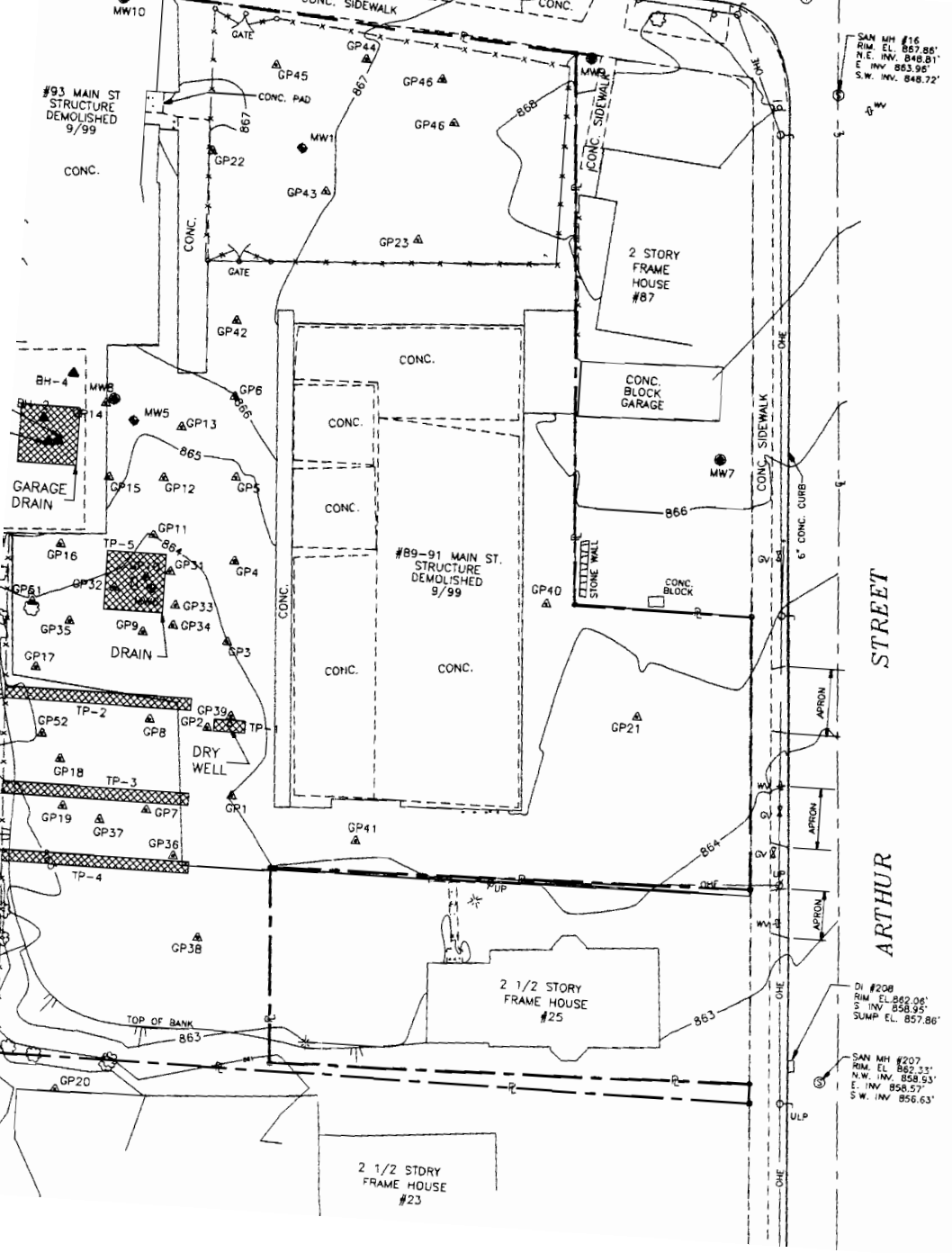
Thence westerly along the northerly line of lands formerly conveyed to William J. Rennie North 70°43'44" West, 194.50 feet to a point;

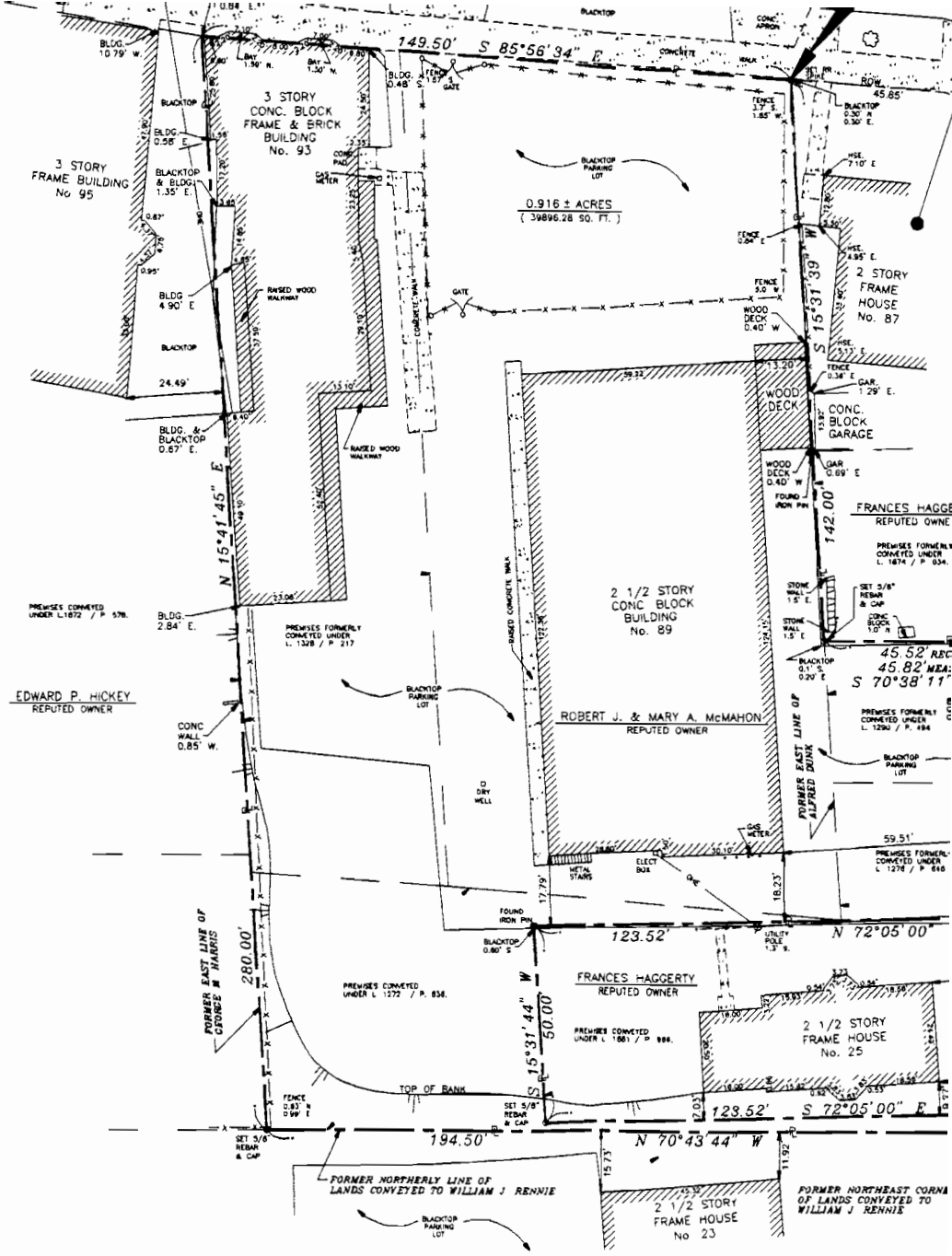
Thence northerly along the easterly line of lands formerly conveyed to George M. Harris and along the easterly line of lands conveyed to Edward P. Hickey, North 15°41'45" East, 280.00 feet to a point on the southerly line of Main Street, said point being the northeasterly corner of lands conveyed to Edward P. Hickey by Deed recorded in Liber 1872 of Deeds at page 578;

Thence easterly along the southerly line of Main Street, South 85°56'34" East, 149.50 feet to the point or place of beginning.

Containing 39,896.28 Sq. Ft. or 0.92 acres of land more or less.

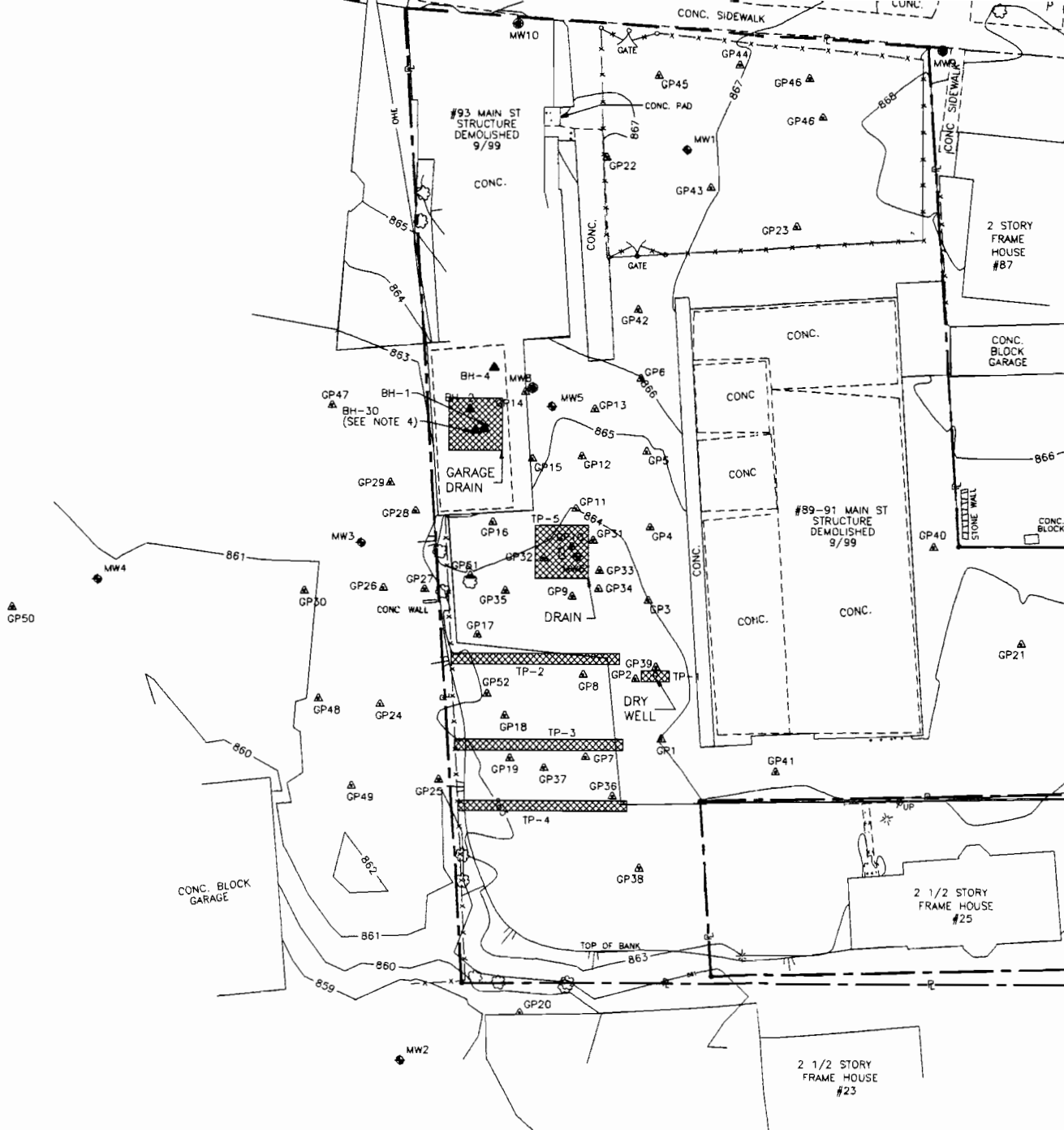
Being the same premises conveyed to Robert J and Mary A. McMahon by Deeds recorded in the Broome County Clerk's Office in Liber 1272 of Deeds at page 836, Liber 1328 of Deeds at page 217, Liber 1276 of Deeds at page 646 and Liber 1290 of Deeds at page 494 and others instruments


#93 MAIN ST STRUCTURE DEMOLISHED 9/99
#89-91 MAIN ST. STRUCTURE DEMOLISHED 9/99
2 STORY FRAME HOUSE #87
CONC. BLOCK GARAGE
2 1/2 STORY FRAME HOUSE #25
2 1/2 STORY FRAME HOUSE #23
GARAGE DRAIN
DRAIN
DRY WELL
STONE WALL
CONC. BLOCK
6" CONC. CURB
CONC. SIDEWALK
APRON
TOP OF BANK
ARTHUR STREET
SAN MH #16 RIM. EL. 867.86' N.E. INV. 846.81' E. INV 863.96' S.W. INV. 848.72'
DI #208 RIM EL.862.06' S. INV 858.95' SUMP EL. 857.86'
SAN MH #207 RIM. EL. 862.33' N.W. INV. 858.93' E. INV 858.57' S.W. INV 856.63'
SANITARY SEWER MANHOLE
STORM SEWER MANHOLE
TELEPHONE MANHOLE
HYDRANT
SIGN
LIGHT & UTILITY POLE
LIGHT POLE
WATER VALVE
GAS VALVE
UTILITY POLE
TREE
PINE TREE
GROUND CONTOUR
OVERHEAD ELECTRIC LINE
CHAIN INK FENCE
PROPERTY LINE
BLACKTOP



NOTES

- HORIZONTAL CONTROL IS BASED UPON THE NEW YORK STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, 1983 ADJUSTMENT NAD 83 (1986)
- THIS MAP IS VOID UNLESS EMBOSSED WITH NYS LICENSED LAND SURVEYOR LIC NO 49531
- THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS SUBJECT TO ANY



NOTES:

1. HORIZONTAL CONTROL IS BASED UPON THE NEW YORK STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, 1983 ADJUSTMENT; ELEVATIONS ARE BASED UPON NORTH AMERICAN VERTICAL DATUM, 1988.

2. THE PURPOSES OF THIS MAP IS TO SHOW TOPOGRAPHICAL FEATURES. A BOUNDARY MAP WAS DEVELOPED (DRAWING NO. 1) AND SHOWS ALL BOUNDARY INFORMATION

3. THE LOCATION OF ANY UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN PRIOR TO ANY CONSTRUCTION ACTIVITIES, ALL UTILITY COMPANIES SHOULD BE NOTIFIED IN ORDER TO VERIFY OR AMEND THEIR LOCATIONS AND/OR EXISTENCE. FOR ASSISTANCE