REPORT

MCP INTERIM PHASE II REPORT FOR THE NEWELL STREET SITE

VOLUME II OF IV

General Electric Company

Pittsfield, Massachusetts

February 1992

BLASLAND & BOUCK ENGINEERS, P.C.
BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

MCP INTERIM PHASE II REPORT FOR THE NEWELL STREET SITE

VOLUME II OF IV

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

FEBRUARY 1992

BLASLAND & BOUCK ENGINEERS, P.C.
6723 TOWPATH ROAD, BOX 66
SYRACUSE, NEW YORK 13214

MCP INTERIM PHASE II REPORT FOR
THE NEWELL STREET SITE

TABLE OF CONTENTS

Volume II of IV

APPENDICES

APPENDIX A

SCOPE OF WORK

SUPPLEMENTAL SCOPE OF WORK

GENERAL ELECTRIC
MCP PHASE II

PITTSFIELD, MASSACHUSETTS
NEWELL STREET

JUNE 1990

BLASLAND & BOUCK ENGINEERS, P.C.
6723 TOWPATH ROAD
SYRACUSE, NEW YORK 13214

GE PITTSFIELD NEWELL STREET
MCP SUPPLEMENTAL PHASE II SCOPE OF WORK

GE PITTSFIELD NEWELL STREET
MCP SUPPLEMENTAL PHASE II SCOPE OF WORK
(Continued)

ACKNOWLEDGEMENT

This Scope of Work document has been prepared by Blasland & Bouck Engineers, P.C., with the assistance of ChemRisk, a division of McLaren Environmental Engineering. Specifically, ChemRisk assisted in preparation of the materials regarding human health and environmental risk assessment.

SECTION 1 - INTRODUCTION

1.1 General

This document identifies a plan of action to allow the General Electric Company (GE) to proceed with ongoing investigation and remediation activities at the Newell Street location in accordance with the guidelines of the Massachusetts Contingency Plan (MCP).

The Newell Street location is currently defined by the Massachusetts Department of Environmental Protection (DEP) as being in Phase II - Comprehensive Site Assessment, of the MCP process. Previously, environmental concerns at Newell Street have been subject to investigation, evaluation, and remediation activities in response to a number of GE, state, and federal guidelines and orders (References 1 through 5). Therefore, a number of MCP Phase II requirements have previously been completed. This Scope of Work will document existing site information and Phase II activities that have been completed or are in progress, and will define a plan of action to fill the remaining data gaps in order to achieve compliance with the MCP.

1.2 Format of Document

This Scope of Work first presents, in Section 2, existing site information and identification of data gaps, including physical site characteristics; source and extent of releases; oil and hazardous material characterization; exposure point locations and concentrations; background levels of hazardous materials; and characterization of risk of harm to human health, safety, public welfare, and the environment. Following this, a plan of action to fill the data gaps previously identified is described in Section 3. Section 4 presents a

schedule for implementation of the Newell Street Supplemental Phase II - Comprehensive Site Assessment. A Sampling and Analysis Plan specific to the activities proposed in Section 3 of this document is presented under separate cover. The accompanying Sampling and Analysis Plan presents sample collection and handling protocols as well as analytical methods to be used specific to all sample media. Also included within the Sampling and Analysis Plan is a Quality Assurance/Quality Control Plan which provides for the quality and accuracy of data to be collected. The accompanying Health and Safety Plan, also presented under separate cover, contains safety information, instructions, and procedures which together provide a means of reducing potential harm to workers on site as well as to the surrounding community.

In addition, a summary of pertinent data related to this site is presented in a separately bound document entitled "Newell Street MCP Phase II Supplemental Data Summary" (Supplemental Data Summary).

1.3 Background Information

During the Housatonic River rechannelization project of the 1940s, an area between the river and Newell Street was filled. Elevated levels of polychlorinated biphenyls (PCBs) in fill materials at the Newell Street site were detected during an environmental assessment of one of the commercial properties during 1987. The assessment was conducted by O'Brien and Gere, Inc., for Quality Printing, which is located along Newell Street in Pittsfield, Massachusetts. Based on this initial assessment, further sampling and analysis of fill materials and ground water was conducted for the purpose of site characterization.

A Phase I investigation of the Newell Street Site was conducted by Geraghty & Miller, Inc. in 1987. The purpose of the investigation was to identify areas of fill material, and to verify the presence of soils containing PCBs and volatile organic compounds (VOCs). The findings of this investigation were summarized in Geraghty & Miller's report titled "Investigation of Soil Conditions in the Vicinity of Newell Street - Interim Report" (Reference 1). This report was submitted to the Massachusetts DEP for review in July of 1987.

The DEP reviewed the Geraghty & Miller report and, as a result, requested that additional investigative work be done in order to determine the quality of surficial soils and ground water at the site and to further define the extent and quality of subsurface soils. On March 14, 1988, GE submitted a work plan prepared by Geraghty & Miller to perform a Phase II investigation in response to the DEP's comments. This work plan was approved by the DEP in April 1988 and subsequently implemented by Geraghty & Miller.

In July 1988, Geraghty & Miller submitted a report summarizing the results of the Phase II investigation. The report titled "Investigation of Soil and Ground-Water Conditions at the Newell Street Site" (Reference 2) was submitted to the DEP for review.

In September 1988, Blasland & Bouck prepared a Feasibility Study report for the Newell Street Site based on Geraghty & Miller's Phase I and Phase II investigative work. The report titled "Newell Street Site, Analysis of Potential Remedial Measures" (Reference 3) was submitted to the DEP for review. The DEP reviewed both Geraghty & Miller's Phase II report and Blasland & Bouck's Feasibility Study report, and submitted its comments to GE in a December 14, 1988 letter. The letter stated that additional

information would be necessary to complete a Phase II Comprehensive Site Assessment and that an evaluation of remedial alternatives would not be possible until the Phase II work was completed.

In response to the DEP's December 14, 1988 letter, GE submitted a proposal to the DEP on January 16, 1989, outlining additional field activities at the Newell Street Site. The proposal described a three-task field program, consisting of soil borings, ground-water sampling, and surficial soil sampling. These activities were performed in February and March of 1989. The results of the soil boring and ground-water analyses were summarized in the Supplemental Investigation of Soil and Ground-Water Conditions at the Newell Street Site (Reference 4). The surficial soil sampling results were described in a May 1, 1989, letter from GE to the DEP. The results of the 1989 field activities were incorporated in a Newell Street Risk Assessment, submitted to the DEP in May 1989 (Reference 5).

During August 1989, Geraghty & Miller, Inc., drilled four soil borings along the northern edge of the Newell Street - GE Parking Lot (Reference 10). Soil samples from these borings were analyzed for PCBs, VOCs, and base/neutral organics. One boring (NS-1) was completed as a monitoring well; the ground water from this well was analyzed for dissolved PCBs, VOCs, and base/neutral organics.

During October 1989, Geraghty & Miller, Inc., drilled four additional soil borings at the Newell Street Site, two on Quality Printing property and two on F.W. Webb Company property. The soil samples from these borings were analyzed for priority pollutant metals.

The DEP provided GE with its comments regarding the Newell Street Risk Assessment in a December 27, 1989 memorandum. In order to comply with

the DEP's recommendations for additional field work in support of the Risk Assessment, the present Supplemental Phase II Scope of Work has been prepared.

SECTION 2 - EXISTING SITE INFORMATION AND IDENTIFICATION OF DATA GAPS

2.1 General

Phase II - Comprehensive Site Assessment activities, as defined in 310 CMR 40.545(3), include an investigation of physical site characteristics; identification of source(s) and extent of release(s); characterization of oil and hazardous materials; identification of exposure points and determination of exposure point concentrations; identification of background levels of oil and hazardous materials; and characterization of risk of harm to human health and risk of harm to safety, public welfare, and the environment. Prior remedial investigations/activities at the Newell Street Site (Newell Street) have produced much of this information. In this section, information that currently exists will be documented in accordance with the MCP, while Phase II data gaps will be identified.

2.2 Physical Site Characteristics

This section of the Newell Street Supplemental Phase II Scope of Work will describe physical site characteristics such as site mapping, topography, surface drainage, vegetation, surface water locations, flooding potential, wetlands and critical habitats, overburden materials, bedrock, ground water, land use, meteorological conditions, air dispersion parameters, and site utilities. The Supplemental Data Summary for this site contains additional information regarding site characteristics.

2.2.1 Site Mapping

Site and locus maps of Newell Street have been previously prepared as part of a number of technical reports such as the Newell Street

Phase I and Phase II Remedial Investigation Reports (References 1, 2, 4). An example of a facility site plan detailing scale, buildings, and other pertinent features; property boundaries; and selected areas of the site currently being addressed under the MCP is shown in Figure 1. Numerous other figures are available for use as needed. Appropriate site mapping will be presented in the Phase II Report.

2.2.2 Topography, Surface Drainage, and Vegetation

The topography of Newell Street is characterized by gently sloping land from the south toward the Housatonic River on the northern border of the site.

The surface drainage of Newell Street is generally perpendicular to the surface contours. However, due to the presence of buildings, paved areas, and associated subsurface drainage systems occupying the site, this general rule is not always applicable.

The vegetation of Newell Street can be characterized as being comprised of a combination of lawns, shrubs, and trees. Figure 2 in the Supplemental Data Summary details the Newell Street area vegetation in terms of grass, trees, pavement, bare soil, and sand piles.

2.2.3 Surface Water Locations

Surface water locations within Newell Street are limited to the Housatonic River. The Housatonic River, bordering Newell Street on its northern edge, has been the subject of numerous investigations. The Housatonic River Study performed by Stewart Laboratories, Inc., in 1980 and 1982 (Reference 9) is an example of the technical studies that have yielded detailed information on the Housatonic River. In addition, the river itself is the subject of an MCP Phase II Comprehensive Site Assessment.

2.2.4 Flooding Potential

The flooding potential of Newell Street has been documented in several technical reports and studies. The Housatonic River's 100-year floodplain has been determined from the National Flood Insurance Program (NFIP) Flood Insurance Rate Map (1978).

2.2.5 Wetlands and Critical Habitats

There are no known critical habitats within Newell Street. The sections of the site that border the Housatonic River are not likely to be considered wetlands.

2.2.6 Overburden Material

Detailed subsurface investigations have been completed at the Newell Street Site. The site, which was once an oxbow on the Housatonic River, is located between Newell Street and the Housatonic River as illustrated in Figure 1. The site has been identified as a former fill area. Overburden or unconsolidated sediments consist of several feet of artificial fill material overlying natural river bank deposits.

Soil boring programs conducted at the site have determined the presence of fill material ranging in thickness from 2 to 18 feet below land surface. The fill material has been described as sandy soils with varying amounts of glass, brick, wood, metal, and ceramic fragments.

In addition, "clean" fill was identified in numerous locations at the site. The clean fill is composed of sand and gravel with no artificial objects, odors, or staining. This indicates that a large portion of the fill material originated from non-industrial sources.

Natural marsh deposits have been reported underlying the fill material. Natural deposits consist of organic rich silts and sands (peat).

2.2.7 Bedrock Description

Based on existing geologic logs in the vicinity of the site, bedrock depth has been estimated at approximately 50 to 100 feet below land surface. Bedrock has been described as a calcite marble belonging to the Stockbridge Formation.

The Stockbridge Formation in this area is described as being a coarsely crystalline, white to light gray, blue-gray, and white-mottled, bluish-gray, and white-layered or massive white calcitic marble (Reference 6). The Stockbridge Limestone is reported to vary in ground-water yield from less than 1 gallon per minute (gpm) to as much as 1,600 gpm (Reference 8). This unit is reported to vary in thickness from 500 to 800 feet and have a porosity of 1.38 percent (Reference 8).

2.2.8 Ground Water

Ground-water investigations have been conducted at the site. A total of nine monitoring wells have been located at the site to ascertain ground-water quality. These wells are shown on Figure 2.

Ground-water flow has been shown to flow in a northerly direction, toward the Housatonic River. The water table at site is found at approximately 10 to 12 feet below land surface, generally at the base of the fill material.

Monitoring wells at Newell Street have been sampled on three occasions. In May 1988, ground-water samples were collected from wells GE-3, IA-9, SZ-1, SZ-3, and FW-16 and analyzed for PCBs and priority pollutant volatile organic compounds (VOCs). Trace levels of volatiles and PCBs were detected.

In February 1989, ground-water samples were collected from the eight wells in existence at that time (MW-1, MW-2, MW-3, FW-16, GE-3,

IA-9, SZ-1, and SZ-3) and analyzed for priority pollutant VOCs, PCBs, and chlorinated hydrocarbons. Trace levels of chlorobenzene (1.7 ppb) were detected in this sampling round.

In August 1989, a ground-water sample was collected from Well NS-1 and analyzed for priority pollutant VOCs, base/neutral organics, and dissolved (i.e., filtered) PCBs. Elevated levels of these constituents were detected. Additional field activities are proposed in Section 3 to address this area.

2.2.9 Land Use

The land comprising the Newell Street Area has historically been used as a commercial area following the river rechannelization project of the 1940s. For the foreseeable future, land use conditions are not anticipated to change. Nevertheless, the Phase II Risk Assessment will consider other possible future land use, such as residential site use, in the Exposure Assessment Section, as described in Section 3.4.

2.2.10 Meteorological and Air Dispersion Parameters

Meteorological and air dispersion parameters have been measured for the Newell Street area through an air monitoring program conducted during a demolition project (the 20s Complex Demolition Project) at the nearby East Street Area 2 in 1988. A meteorological station was constructed in an open field south of the 20s Complex and East Street. The station was used to collect and record data on wind speed, wind direction, temperature, relative humidity, and rainfall. Thus, recent relevant meteorological and air dispersion data are available.

2.2.11 Site Utilities

A plan identifying all site utilities in the Newell Street Area is not currently available, but will be developed during the Supplemental Phase

II activities, provided to the DEP at that time, and included in the Supplemental Phase II Report.

2.3 Identification of Source and Extent of Release

The Newell Street Site has been the subject of a number of remedial activities/investigations. Through these activities, sources of contamination to the Newell Street area have been identified. This section of the Newell Street Supplemental Phase II Scope of Work will identify the source of the contamination and the known extent of the releases. This will be accomplished by establishing the source(s) of all release(s) of oil and hazardous materials; the extent of oil or hazardous materials; estimated volumes of contaminated media; migration pathways; existence and migration of plumes; and existing and potential air emissions. Any sources of contamination identified through a systematic search as part of the Supplemental Phase II field activities will be described in a similar manner.

2.3.1 Source of Releases

The Geraghty & Miller remedial investigations indicate that fill material was placed in a former marshy area between the present banks of the Housatonic River and Newell Street. Filling occurred during a river re-channelization project conducted during the 1940s. The fill material varies widely in composition, consisting of sand, gravel, silt, decayed vegetation, and general industrial fill, including fragments of brick, glass, steel, copper and assorted metal debris, cinders, ceramic, paper, and concrete. After filling of this marshy area, the land immediately to the south was commercially developed.

2.3.2 Extent of Hazardous Materials

The extent of hazardous materials at the Newell Street Site is generally defined by the occurrence of industrial fill in the former oxbow area. Seventy-five soil borings have been drilled at Newell Street and soil samples analyzed for PCBs. These boring locations are shown on Figure 2. Of these 75 borings, approximately half encountered "clean," non-industrial fill. In addition to these 75 borings, four borings were drilled in August 1989, with soil samples analyzed for PCBs, VOCs, and base/neutral organics. Four additional borings were drilled in October 1989, with soil samples analyzed for priority pollutant metals. The extent of the fill material can be described by its horizontal and vertical limits, its influence on surficial soil quality, and its influence on ground-water quality beneath the fill material. These topics are described in the following subsections.

Horizontal Extent of Fill Material

The western boundary of the fill material was not determined during the Geraghty & Miller remedial investigations. Additional work will be necessary to define the western border of the fill material in the vicinity of the GE - Newell Street Parking Lot, as described in Section 3.

The northern boundary of the fill material could not be determined with drilling equipment due to that area's lack of accessibility. However, analyses of soil samples collected in 1988 at four locations on the riverbank of the Housatonic River (RB-1 through RB-4 on Figure 2) indicated that PCB concentrations were lower at locations RB-2 and RB-3 (ranging from 4.3 ppm to 39 ppm) and higher at locations RB-1 and RB-4, (ranging from 4.1 ppm to

160 ppm), as illustrated in Figure 6 of the Supplemental Data Summary. These results indicate that the northern boundary of the Newell Street Site is the Housatonic River's bank. Soil samples will be collected at three additional locations along the riverbank during Phase II field activities as described in Section 3.

The eastern boundary of the Newell Street Site has been well defined through the soil boring and surficial soil sampling programs. Analysis of the PCB data collected from the three soil borings (LA-1, LA-2, and LA-3) drilled up to twelve feet deep on the Allegroni Construction Company, Inc., property reveals that PCBs were present at concentrations equal to or below 1.3 ppm, as illustrated in Figure 5 of the Supplemental Data Summary. Six of the nine samples had non-detectable concentrations of PCBs.

Eleven surficial soil samples have been collected on the Hibbard Playground on the extreme eastern edge of the investigation area, as illustrated in Figure 2. Sample PK-11 had a PCB concentration of 1.4 ppm. No other location had a concentration over 1.0 ppm. An evaluation of this data demonstrates that the eastern border of the Newell Street Site has been adequately defined for PCBs. However, additional surficial soil samples will be collected in this area, as described in Section 3, to investigate metals levels in surficial soils.

The southern boundary of the Newell Street investigation area has traditionally been defined as the northern edge of Newell Street. This description is substantiated by examining the sampling data collected in proximity to Newell Street. Surficial soil samples IA-19, SZ-16, SZ-17, PK-8, and PK-5 all exhibit low levels of PCBs,

as illustrated in Figure 6 of the Supplemental Data Summary. The highest concentration of PCBs, in the vicinity of Newell Street itself was in Sample IA-19, which had a PCB concentration of 3 ppm. Soil samples from borings SZ-1 and LA-3 had PCB concentrations ranging from 0.08 ppm to non-detect. These sampling results demonstrate that elevated levels of PCBs do not approach the southern boundary of the Newell Street Site. To further substantiate this conclusion, additional surficial soil samples will be collected in this area, as described in Section 3.

Vertical Extent of Fill Material

Clean fill was identified in portions of nearly one-half of the soil borings drilled during the Phase I and II investigations. This type of fill does not contain the man-made objects that were identified in the other soil borings. This indicates that a large portion of the fill area was filled with non-industrial waste.

The 1988 Phase II drilling locations on the Quality Printing and the Italian-American Club properties confirmed the Phase I work in that an area containing elevated levels of PCBs exists in the subsurface. Its vertical extent is limited to the approximate base of the fill. The highest concentrations are located in an area which includes QP-6, QP-9, and IA-8 (Figure 2). The highest PCB concentrations detected at the other Phase I and Phase II borings in this area are two to three orders of magnitude lower than the highest concentrations found in borings QP-6, QP-9, and IA-8 (Figure 2).

The soil boring program conducted in 1988 on the F.W. Webb property indicated that only in a small portion of the northwestern

corner of the site, elevated PCB levels extend vertically to a depth of eight to ten feet. Part of the proposed extension to F.W. Webb's existing facility is included within this area. These results generally agree with the Phase I findings for this property.

The seven soil borings that were drilled as part of the three-task 1989 field program reinforced the 1988 Phase II results concerning the vertical extent of the fill material. At borings GE-4 through GE-7 (Figure 2), the highest PCB concentration was 250 ppm at GE-5 (2-4 feet below land surface), while the next highest sample was dramatically lower (8.9 ppm at GE-4, 2 to 4 feet below land surface). The three borings installed on the Ravin Auto Body property, RV-1, RV-2, and RV-3, confirmed results obtained during Phase II activities. All samples collected from 2 to 12 feet below land surface in boring RV-1 had elevated PCB concentrations, while only one sample (6-8 feet) in Boring RV-2 had PCBs greater than 3 ppm. All samples from RV-3 had PCB concentrations less than 1 ppm except for the four to six foot sample, which showed 16 ppm.

In August 1989, four soil borings (NS-1 through NS-4) were drilled along the northern edge of the GE - Newell Street Parking Lot (Reference 10). Boring NS-1 was finished as a monitoring well. A total of 12 soil samples were collected from the four borings and submitted for laboratory analysis of PCBs, VOCs, and base/neutral organics. PCBs were detected at elevated levels in samples from borings NS-1 and NS-2. Several organic constituents were also detected. This data is described in more detail in Table 9 of the Supplemental Data Summary. The soil boring logs for NS-1 through

NS-4 are submitted herewith in the Supplemental Data Summary. Additional field activities will be conducted in this area as described in Section 3.

In October 1989, four soil borings were drilled and 12 soil samples collected for laboratory analysis of priority pollutant metals. Two of these soil borings are located on the property of the F.W. Webb Company, and the other two are on the property of Quality Printing. As indicated in Table 7 of the Supplemental Data Summary, the soil samples collected from borings QP-22 and QP-23 contained detectable levels of antimony, arsenic, cadmium, chromium, copper, lead, and mercury, and trace levels of beryllium, nickel, and zinc. In Boring FW-20, antimony, arsenic, chromium, copper, lead, mercury, nickel, and zinc were detected. These values decreased by an order of magnitude in the deepest sample collected (eight to ten feet) from this boring. At Boring FW-21, arsenic, chromium, copper, lead, mercury, nickel, and zinc were detected.

While the source of these metals is not clear, and may not include GE, this Scope of Work provides for supplemental sampling to expand the current data regarding the metals content of site soils.

Surficial Soil Analysis

As indicated, surficial soil sampling for PCBs was conducted at 41 locations in 1988. Twenty-four additional surficial soil samples were collected in 1989 to further define PCB concentrations on properties at the Newell Street Site. In general, the highest PCB concentrations were found at the Quality Printing property (QP-18 through QP-21) and the Italian American Club (IA-20), in locations

where elevated PCB levels had been found in the subsurface. The area surrounding sample location IA-20 was remediated by soil excavation and replacement with clean fill. Two other elevated samples were found on the Marchetto Contractors property (MO-3 and MO-5).

By contrast, PCB concentrations were substantially lower in other areas of the site. The highest surficial PCB concentration was 6.5 ppm on the F.W. Webb Company property (FW-15R), 14 ppm on Vincent J. Stracuzzi property (SZ-9), 2.8 ppm at Allegroni Construction Company (LA-4), and 4.0 on the Moldmaster property (MM-4). Exposed soil was sampled at 11 locations in the Hibbard Playground, as illustrated in Figure 2. Only one sample (PK-11) exceeded 1 ppm of PCBs, and its replicate sample had a concentration of 0.85 ppm of PCBs (Reference 1).

This Scope of Work provides for additional surficial soil sampling to expand the current data regarding surficial site soils.

Ground-Water Analysis

With the exception of ground water from Well NS-1, the concentrations of PCBs, polychlorinated hydrocarbons, and VOCs in the ground water, which underlies most of the subsurface fill material, are very low. Ground-water data for the Newell Street site are set forth in Table 8 of the Supplemental Data Summary. In 1988, ground water was sampled from five monitoring wells at the site, FW-16, GE-3, IA-9, SZ-1, and SZ-3, and then analyzed for PCBs and VOCs. PCBs detected in the 1988 sampling round did not exceed 5.2 ppb, and only one VOC (chlorobenzene) was found above detection limits in one well (Well IA-9 at 11 ppb).

In February 1989, a round of ground-water samples was collected from eight monitoring wells, MW-1, MW-2, MW-3, FW-16, IA-9, SZ-1, and SZ-3, and analyzed for VOCs, PCBs, and chlorinated hydrocarbons. Well SZ-3 was the only sample that yielded results for any of these constituents above the detection limit. Chlorobenzene was detected in Well SZ-3 at 1.7 ppb, while the replicate sample had a concentration of 1.3 ppb.

In August 1989, a ground-water sample was collected from Well NS-1 and analyzed for priority pollutant VOCs, base/neutral organics, and PCBs (Figure 2). Detectable levels of PCBs, benzene, chlorobenzene, trans-1,2,-dichloroethene, vinyl chloride, 1,3- and 1,4-dichlorobenzene, and 1,2,4-trichlorobenzene were found. Field activities are proposed to further investigate this area as described in Section 3.

2.3.3 Estimated Volumes of Contaminated Material

Estimated volumes of contaminated soil within the Newell Street area are described in the Geraghty & Miller Phase II Remedial Investigation Report (Reference 2).

Soils containing PCBs are present at the ground surface at levels of less than 1 ppm to 290 ppm, with an average of 33 ppm. The majority of the subsurface materials in the fill area contains PCBs at a level below 300 ppm. Two small areas of the site have significantly higher PCB levels. The first area, located on a portion of the Quality Printing and Italian-American properties, has significantly higher levels of PCBs ranging up to 290,000 ppm (500-1,500 cy). The second area, on the northern edge of the GE - Newell Street Parking Lot, will be better

defined during Phase II activities. In the eastern area, the highest PCB levels are located at a depth of four to six feet below grade.

2.3.4 Migration Pathways

The only available surface water migration pathway in the Newell Street area is the Housatonic River. While ground water from Newell Street does generally flow northward towards the river, PCBs in site soils, excluding several borings in the GE - Newell Street Parking Lot, have been shown to be located well above the ground-water table.

The soil and air migration pathway has largely been eliminated by pavement and the excavation and replacement of soil from areas with highly elevated levels of PCBs.

Any food chain pathways resulting from PCBs entering the Housatonic River are currently being addressed under the separate Housatonic River Comprehensive Site Assessment. Other food chain pathways in the Newell Street area do not currently exist due to the commercial nature of the Newell Street area. Although the commercial character of the site is unlikely to change in the foreseeable future, the Newell Street Risk Assessment will nevertheless address other possible future land uses for the site, such as residential use, as described in more detail in Section 3.4

2.3.5 Existence and Migration of Plumes

As discussed above, prior investigations have identified the presence of PCBs within fill material at the site. PCBs were found at levels from non-detect to a level as high as 290,000 ppm; however, PCBs were generally not found to exceed 1 ppm in the natural deposits underlying the fill. No free oils or stained soils have been reported during field

investigations with the exception of Boring NS-1, where an oil sheen was observed on several soil samples.

During the 1988 ground-water sampling, only trace levels of PCBs and VOCs were detected in the ground water, which underlies most of the fill material. In 1988, PCBs did not exceed 5.2 ppb and only one VOC (Chlorobenzene) was found above detection limits in one well (Well IA-9 at 11 ppb). The 1988 PCB samples were not filtered prior to analysis. It was hypothesized that the results were due to detection of PCBs that were adsorbed onto sediment contained in the unfiltered water samples. This hypothesis was confirmed by the 1989 ground-water sampling of these wells, which showed that PCBs were not detected in filtered ground water.

However, during the August 1989 ground-water sampling of Well NS-1, additional constituents were detected at that location. PCBs were detected at a concentration of 17 ppb, and several VOCs and base/neutral organics were also detected at elevated concentrations. Additional field work is being proposed in Section 3 to further assess the ground-water quality in the vicinity of Well NS-1.

2.3.6 Existing and Potential Air Emissions

The magnitude of existing and potential air emissions including vapors and particulates is well documented for East Street Area 2, across the Housatonic River from Newell Street. The 1988 20s-Complex air monitoring program collected air emissions data during building demolition (when particulates would normally have been very high).

2.4 Characterization of Oil and Hazardous Materials

2.4.1 Physical and Chemical Characteristics

The physical and chemical characteristics of VOCs, PCBs, and metals found at this site have been well documented in the literature. PCBs have low water solubilities and high octanol water partition coefficients (Kow) which result in a strong tendency to adsorb to soil. More detailed information on the physical and chemical characteristics of PCBs is described in the 1989 Newell Street Risk Assessment by Geraghty & Miller, Inc. (Reference 5).

2.4.2 Fate and Transport Characteristics

Sufficient data are available to describe, in general, the fate and transport of PCBs, VOCs, and metals at the Newell Street Site. PCBs are generally found in association with soil organic matter. Transport via wind uplift of surficial soils, though minimal, is expected to be the primary transport route. Significant loss of PCBs and metals through volatilization, leaching, runoff, or degradation is not expected. More detailed information on the fate and transport characteristics of PCBs is contained in the 1989 Newell Street Risk Assessment (Reference 5).

2.5 Exposure Point Locations and Concentrations

The exposure point locations and concentrations at the Newell Street Site were estimated in the 1989 Newell Street Risk Assessment (Reference 5). The DEP evaluated the risk assessment for completeness, accuracy, and consistency with the requirements of the MCP, and provided comments to GE in a memorandum dated December 27, 1989. The DEP did not address the exposure point locations and concentrations as described in the risk

assessment. Therefore, the exposure scenarios will not be modified in the Supplemental Risk Assessment.

2.6 Identification of Background Levels of Hazardous Materials

Background levels of hazardous materials have been determined from samples collected from areas that are not influenced by the site.

2.7 Characterization of Risk of Harm to Human Health

The risk of harm to human health was characterized in the 1989 Newell Street Risk Assessment (Reference 5). Specific DEP comments on the human health characterization, provided to GE in a December 27, 1989 memorandum, will be addressed in Section 3.4.

2.8 Characterization of Risk of Harm to Safety, Public Welfare, and the Environment

The risk of harm to safety, public welfare, and the environment were characterized in the 1989 Geraghty & Miller, Inc., Newell Street Risk Assessment (Reference 5). Specific DEP comments on this topic, provided to GE in a December 27, 1989 memorandum, will be addressed in Section 3.4.

2.9 Summary of Data Gaps

Presented as Table 2-1 is a summary of existing data gaps related to the Newell Street MCP site. This table has been developed to compare existing site data (as previously discussed) with the Phase II requirements of the MCP.

SECTION 3 - SITE ASSESSMENT ACTIVITIES

3.1 General

The purposes of the Supplemental Phase II Comprehensive Site Assessment activities proposed herein are to: 1) further define the extent of metals, VOCs, and PCBs in the surficial soils; 2) define the western boundary of the site in more detail; 3) further define ground-water quality; and 4) determine the extent and impacts (if any) of contaminants at the site on human health and the environment. The following section details the proposed activities, and Table 3-1 provides a summary.

3.2 Field Services and Analytical Testing

3.2.1 Soil Borings and Monitoring Well Installation in GE Parking Lot

In August 1989, Geraghty & Miller, Inc., drilled four soil borings along the northern boundary of the GE - Newell Street Parking Lot located on the western edge of the site (Figure 1). One of the soil borings (NS-1) was completed as a monitoring well, and a ground-water sample was collected and analyzed for VOCs, PCBs, and base/neutral organic compounds. All of the soil borings encountered fill material consisting of sand and gravel, glass, metal, bricks, paper, and ceramic fragments. The deepest fill deposits were encountered at NS-1, where the thickness of the fill is greater than 18 feet. Soil samples collected during the soil boring program were analyzed for VOCs, PCBs, and base/neutral organics.

The results of the soil sampling program indicated that PCBs are present at elevated concentrations in borings NS-1, NS-2, and NS-3. Soil samples collected in Boring NS-4 contained PCBs at substantially

lower concentrations. Base/neutral organics and VOCs were also detected in several of the soil samples. The ground-water sample collected from monitoring Well NS-1 was found to contain elevated levels of PCBs, base/neutral organics, and VOCs in particular, vinyl chloride measured at 2,000 ppb. Further information on sampling and analysis activities in the vicinity of the GE - Newell Street Parking Lot is described in the Supplemental Data Summary.

As a result of these findings, a soil sampling and monitoring well installation program has been proposed for this area for the purpose of better defining the horizontal and vertical extent of fill material and soils contamination, and to determine the source of the PCBs, base/neutral organics, and VOCs in Well NS-1. To accomplish these goals, a total of two shallow and 12 deep soil borings will be drilled in this area, as shown on Figure 1. Also, three of the soil borings will be completed as monitoring wells (Figure 1).

3.2.1.1 Shallow Soil Borings

In order to further define the extent of soils contamination along the northern boundary of the parking lot, two hand-augered borings will be completed to a depth of four feet below grade along the river bank (RB-6 and RB-7). Soil samples collected from these borings will be composited into two-foot intervals (0-2' and 2-4'), resulting in two soil samples per boring.

Upon collection, the samples will be logged in detail for lithology and the presence of contamination (color, odor, texture, staining). A portion of each sample will be screened in the field with a portable photoionization detector (PID) for the presence of VOCs. Immediately upon collection, each composite sample will be

placed in pre-cleaned, laboratory-supplied, EPA-approved sample jars, labeled in detail and placed on ice. All samples will be delivered to the laboratory within 24 hours of collection and a strict chain-of-custody maintained. The soil samples will be analyzed for the Appendix IX constituents summarized in Table 3-2.

3.2.1.2 Deep Soil Borings

In order to define the horizontal and vertical extent of fill material and contaminated soils in this area, a total of 12 deep soil borings will be drilled by using a hollow stem auger rig. Two of the soil borings (NS-1A and NS-2A) will be drilled to a depth of 24 feet below land surface. Split-spoon core barrel samples will be collected every two feet in Boring NS-1A from 18 to 24 feet and from 12 to 24 feet in Boring NS-2A. The purpose of these two borings is to define the vertical extent of contaminated soils at both locations, and to define the base of the fill unit. If the base of the fill is not encountered within a depth of 24 feet in either boring, the boring will be continued until a minimum of four feet of natural sediments are encountered.

The remaining ten borings will be drilled to a minimum of four feet below the fill material, where encountered, or eight feet below the water table, whichever is deeper. In all soil borings, split-spoon core barrel samples will be collected continuously (every two feet) from land surface to the bottom of the boring. Upon collection, the samples will be logged in detail for lithology and evidence of contamination (color, odor, texture, staining). A portion of each sample will be screened in the field for VOCs using the PID.

At each boring, soil samples will be composited for every four-foot interval, placed in pre-cleaned EPA-approved, laboratory-supplied sample jars, labeled in detail, placed on ice, and delivered to the laboratory for analysis of Appendix IX constituents (Table 3-2). Sample collection, chain-of-custody, and decontamination procedures will be followed as described in the Sampling and Analysis Plan.

To avoid cross-contamination, all sampling and drilling equipment will be decontaminated between each use as described in the Sampling and Analysis Plan.

3.2.1.3 Monitoring Well Installation and Sampling

Three of the boreholes will be completed as monitoring wells (NS-9, NS-10, NS-11). These locations were chosen, together with Well NS-1, to provide an upgradient ground-water monitoring location and several downgradient locations. The historical location of the former pond area was also utilized in selecting the well locations.

When the borehole has been completed, a four-inch diameter schedule 40 PVC casing with ten feet of .010 slotted screen will be installed at a depth specific to the intent of the well (i.e., shallow or deep). This annular space between the screen and borehole will be packed with a suitable size-graded sand. The annular space will then be grouted with a cement/bentonite mixture. The well will be finished flush with grade, and a protective curb box will be cemented over the well.

Each well will be developed with a surge block and centrifugal pump. Development will continue until there is a good hydraulic connection between the aquifer and the well, and relatively sediment-free water is obtained from the pump discharge.

Upon completion, all new monitoring wells will be surveyed to an existing benchmark located on site and accurately located on the base map. All development water and soil cuttings brought up during drilling will be contained in 55-gallon drums, properly labeled, and disposed of in accordance with appropriate procedures.

One week after the newly-installed wells have been developed, ground-water samples will be collected for laboratory analysis of Appendix IX constituents.

In addition, Well NS-1 will be resampled and analyzed for Appendix IX constituents to confirm the results of the previous sampling. Well MW-3 will also be sampled and analyzed for Appendix IX metals. Sampling, decontamination, and chain-of-custody procedures will be followed as described in the Sampling and Analysis Plan.

The purpose of the ground-water sampling is to confirm previous results and to determine the source and extent of ground-water quality impacts in this area.

3.2.2 Wooded Area - Soil Boring Installation and Sampling

The purpose of this soil boring program is to assist in defining the horizontal and vertical extent of the western boundary of the fill and natural soils containing hazardous constituents, if any. To achieve this goal, four soil borings will be drilled on the western side of Moldmaster as illustrated in Figure 1 (GE-9 through GE-12). Due to the anticipated lack of accessibility for drilling equipment in this area, hand augers, power augers, or other suitable alternatives will be used.

During the soil investigation, samples will be collected continuously at two-foot intervals. A geologist will visually inspect each sample for

evidence of contamination. Each two-foot sample will be equally split. One half of the sample will be placed in an appropriate sampling container, pending analysis for Appendix IX constituents, while the other half will be screened for volatile organic compounds with a portable photoionization detector (PID) in accordance with the Sampling and Analysis Plan. If any sample exhibits a headspace analysis reading greater than 10 measurement units on the PID, the sample will be submitted to the laboratory for Appendix IX VOC analysis using EPA Method 8240.

An attempt will be made to drill each boring at least six inches into natural soils below the fill material or to the water table, whichever occurs first. At the completion of each boring, the borehole will be grouted to land surface with a cement/bentonite slurry in order to prevent the migration of any surface contaminants to the ground water. Sampling equipment will be decontaminated following procedures described in the Sampling and Analysis Plan.

The soil sample exhibiting the highest PID reading from each of the four soil boring locations will be analyzed by the laboratory for Appendix IX constituents in accordance with the procedures described in the Sampling and Analysis Plan. Soil samples collected for laboratory analysis will be immediately placed in properly labeled, pre-cleaned EPA-approved sampling jars and placed on ice to maintain a temperature of 4°C. Samples will be delivered to the laboratory within 24 hours of collection and a chain-of-custody maintained at all times.

3.2.3 Surficial Soil Sampling for Metals

Four soil borings were drilled in October 1989, and soil samples were analyzed for priority pollutant metals. These analyses raised the

question that the extent of metals in the fill material was not fully understood. In order to better delineate the extent of the metals at the Newell Street Site, a surficial soil sampling program has been developed. Nineteen surficial soil samples will be collected at the locations illustrated in Figure 1. These include four sampling locations on the Hibbard Playground. The samples will be collected in accordance with the DEP's January 22, 1988, letter to GE which stated that each sample will be obtained by compositing the surficial soil in a three foot by three foot by four-inch deep area. Samples collected in grassy areas will be composited from the soil within the grass or sod, but not the grass itself or the soil beneath the sod. All samples will be screened in the field with a photoionization detector and delivered to the laboratory within 24 hours of collection. Samples will then be analyzed for Appendix IX metals. If any sample exhibits a headspace analysis reading greater than 10 measurement units on the PID, it will also be analyzed for VOCs using EPA method 8240. Chain-of-custody procedures and decontamination procedures will be followed as described in the Sampling and Analysis Plan.

3.2.4 Surficial Soil Sampling for PCBs

In order to better delineate the extent of the PCBs in surficial soils at the Newell Street Site, a surficial soil sampling program has been developed. Ten surficial soil samples will be collected at the locations illustrated in Figure 1. These locations are as follows: 1) on the river bank east of the RB-4 sampling location (RB-5); 2) on the front, southeast portion of the Stracuzzi property (SZ-21, SZ-22, SZ-26), and at the nearest unpaved location to the front, southeast portion of the Marchetto Property (SZ-25); 3) the front of the Ravin Auto Body property

(RV-7); 4) the front of and adjacent to Newell Street on the Italian American Club property (IA-22, IA-23); and 5) the front of the Moldmaster property (MM-10, MM-11).

The samples will be collected in accordance with the DEP's January 22, 1988, letter to GE which stated that each sample will be obtained by compositing the surficial soil in a three-foot by three- foot by four-inch deep area. Samples collected in grassy areas will be composited from the soil within the grass or sod, but not the grass itself or the soil beneath the sod. All samples will be screened in the field with a photoionization detector, delivered to the laboratory within 24 hours of collection, and analyzed for PCBs. Any sample exhibiting a headspace analysis reading greater than 10 measurement units on the PID will also be analyzed for VOCs using EPA Method 8240. Chain-of-custody procedures and decontamination procedures will be followed as described in the Sampling and Analysis Plan.

3.2.5 Air Monitoring

At the present time, there is limited evidence available to document that air quality has been impacted at the site by either vapor emissions or particulate-matter. Since GE has removed and replaced select surface-contaminated soils over the years, air does not appear to be a migration pathway to on-site and off-site receptors.

Surficial soil, soil at depth, and ground water samples collected and analyzed as part of the ongoing site investigation will provide a dataset sufficient to model air dispersion of vapors and particulates from the site. Screen-level calculations will be made according to EPA guidelines, (Reference 11) to estimate potential impacts on on-site and off-site receptors.

3.3 Data Reduction and Compilation

All data obtained during the Supplemental Phase II Investigation, along with any pertinent data from previous investigations, will be compiled, analyzed, interpreted, and presented in an interim report. This report will, at a minimum, include:

- o A summary of findings and conclusions;
- o Supplemental Phase II Scope of Work;
- o Physical site characteristics;
- o Sources(s) and extent of release(s);
- o Characterization of oil or hazardous materials;
- o Identification of exposure points and determination of exposure point concentrations;
- o Identification of background levels of oil or hazardous materials;
- o Conclusions;
- o Recommendations for future actions; and
- o Appendices containing:
    1. raw data and summary of data; and
    2. documentation of any revisions to the scope of work.

These activities will be performed pursuant to the project schedule described in Section 4.

3.4 Risk Assessment

A risk assessment report for the Newell Street area was prepared previously by Geraghty & Miller, Inc., in 1989 (Reference 5). The risk assessment activities proposed in this section are designed to supplement

that report, and specifically to address DEP comments contained in a December 27, 1989 memorandum.

First, DEP commented that "inhalation of volatilized PCBs as an additional exposure pathway should be evaluated quantitatively." Supplemental exposure assessment work will therefore be performed to address the issue of potential PCB volatilization from soils. This work will involve a desktop (modeling) approach to estimate PCB emissions from soils. Should the screening-level calculations of air dispersion (Reference 11) and subsequent receptor exposure estimates indicate that a potential health risk exists for any receptor population, a more detailed air dispersion analysis using appropriate computer modeling will be conducted to more accurately define exposure levels. These exposure levels will then be used to evaluate risks associated with inhalation of PCB vapors.

The DEP also requested that the risk assessment address the issue of potential bioaccumulation and food chain exposure. The most likely food chain exposure pathway involves bioaccumulation by Housatonic River fishes. This pathway will be addressed as part of the Housatonic River Phase II Risk Assessment. Erosion of site materials into the Housatonic River will, however, be addressed in the Newell Street Risk Assessment with respect to human and environmental receptors.

DEP also commented that exposure scenarios and receptors for alternative future uses of the site should be considered. In the Exposure Assessment Section, residential site use will therefore be considered. Receptors under future use conditions would be adults and children potentially exposed to PCBs via soil ingestion, dermal contact with soil, and inhalation of both fugitive dust and PCB vapors.

As DEP's memorandum also requested, in the Risk Characterization section, the potential non-carcinogenic effects of PCBs will be addressed in addition to carcinogenic effects. The EPA oral reference dose (RfD) for Aroclor 1016 will be used to evaluate all PCBs for the soil ingestion and dermal contact routes of exposure. Since an inhalation RfD has not yet been developed by the EPA, the Allowable Threshold Concentration (ATC) developed by the DEP will be used for the purpose of evaluating the potential non-carcinogenic effects associated with the inhalation of PCBs. In addition, to the extent that surficial metals are detected during the supplemental study activities, the risk assessment will incorporate potential concerns associated with these parameters.

The risk assessment by Geraghty & Miller (1989) included calculations of exposure associated with the two hot spots identified at the site. The risks associated with exposure to the hot spots were reported separately from the total site risks. Revised calculations of exposure at the site will include the averaged soil concentrations from the hot spots.

A discussion of potential environmental risks will be prepared to supplement the existing risk characterization section. This discussion will be qualitative and descriptive in nature. The discussion of potential environmental risks will also address the local on-site flora and fauna. The Housatonic River represents the primary concern with regard to potential off-site environmental impacts of the Newell Street Site, and thus the discussion of these issues is more appropriately included in the Housatonic River Phase II Risk Assessment. The Newell Street Risk Assessment will, however, address the potential environmental risks associated with the migration of site materials into the Housatonic River.

3.5 Phase II Reporting

All data obtained during the Phase II Investigation, along with any pertinent data from previous investigations, will be compiled, analyzed, interpreted, and presented in a final Phase II Report. This report will also include:

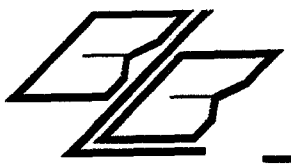
- o Characterization of risk of harm to human health;
- o Characterization of risk of harm to safety, public welfare, and the environment;

These activities will be performed pursuant to the project schedule described in Section 4.

SECTION 4 - SCHEDULE

4.1 Project Schedule

Following the approval of this MCP Supplemental Phase II SOW document by the DEP, GE will initiate efforts to perform the proposed Supplemental Phase II SOW activities discussed previously in Section 3 of this document and provide the DEP with a Supplemental Phase II Report. We have presented a proposed schedule in Table 4-1. This schedule will be part of the master schedule for all MCP activities relating to the GE investigations.



Tables

TABLE 2-1

NEWELL STREET MCP PHASE II SUPPLEMENTAL SCOPE OF WORK
EXISTING INFORMATION AND DATA OR INFORMATION GAPS

MCP Phase II Activity	Existing Information	Data or Information Gap
A. Physical Site Characteristics		
1. Site Mapping	X	
2. Topography, Surface Drainage, and Vegetation	X	
3. Surface Water Locations	X	
4. Flooding Potential	X	
5. Wetlands and Critical Habitats	X	
6. Overburden Material	X	
7. Bedrock Description	X	
8. Ground Water	X	
9. Land Use	X	
10. Meteorological and Air Dispersion Parameters	X	
11. Site Utilities		X
B. Identification of Source and Extent of Release		
1. Source of Release	X	
2. Extent of Hazardous Materials	X	X
3. Estimated Volumes of Contaminated Material	X	X
4. Migration Pathways	X	
5. Existence and Migration of Plumes	X	
6. Existing and Potential Air Emissions	X	
C. Characterization of Oil and Hazardous Materials		
1. Physical and Chemical Characteristics	X	
2. Fate and Transport Characteristics	X	
D. Exposure Point Locations and Concentrations		
1. Human and Environmental Receptors	X	
2. Identification of Exposure Points	X	
3. Routes of Exposure	X	
4. Exposure Point Concentrations	X	
E. Identification of Background Levels of Hazardous Materials	X	
F. Characterization of Risk of Harm to Human Health	X	X
G. Characterization of Risk to Harm to Safety, Public Welfare, and the Environment	X	X

TABLE 3-1

NEWELL STREET MCP SUPPLEMENTAL PHASE II SCOPE OF WORK
PROPOSED STUDY ACTIVITIES

Study Activity	Quantity	Sample Media	Type of Analysis[1]
1. Soil Boring Installation	18 (2 shallow, 16 deep)	Soil	PID-VOC, by depth
2. Soil Boring Sampling	2 shallow (near river)	Soil	Appendix IX
	12 deep (in parking lot)	Soil	Appendix IX
	4 deep (in wooded area)	Soil	Appendix IX
3. Surficial Soil Sampling	19	Soil	PID-VOC[2], Appendix IX metals
	10	Soil	PID-VOC[2], PCBs
4. Ground-Water Sampling	4 (in GE parking lot)	Ground water	Appendix IX
	1 (MW-3)	Ground water	Appendix IX metals
5. Air Dispersion Modeling (if needed)	--	Air	Per Section 3
6. Characterization of Risk of Harm to Safety, Public Welfare, and the Environment	--	--	Per Section 3
7. Characterization of Risk of Harm to Human Health	--	--	Per Section 3
8. Short-Term Measures	--	--	As Needed

Notes:

[1]Abbreviations used in this table are as follows:

PID = Photoionization Detector
VOC = Volatile Organic Compound
PCBs = Polychlorinated Biphenyl
Appendix IX = EPA Appendix IX constituents (See Table 3-2)

[2]Soil samples exhibiting a headspace analysis reading greater than 10 measurement units on the PID will be analyzed for volatile organic compounds.

TABLE 3-2

NEWELL STREET - MCP SUPPLEMENTAL PHASE II SCOPE OF WORK

SUMMARY OF APPENDIX IX CONSTITUENTS

Volatile Compounds

Acetone
Acetonitrile
Acrolein
Acrylonitrile
Allyl chloride
Benzene
Bromodichloromethane
Bromoform
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloroprene
Dibromochloromethane
1,2-Dibromo-3-chloropropane
1,2-Dibromoethane
Trans-1,4-Dichloro-2-butene
Dichlordifluoromethane
1,1-Dichloroethene
1,2-Dichloroethane
1,1-Dichloroethane
trans-1,2-Dichloroethene
1,2-Dichloropropane
cis-1,3-Dichloropropene
trans-1,3-Dichloropropene
1,4-Dioxane
Ethylbenzene
Ethyl methacrylate
2-Hexanone
Isobutyl alcohol
Methacrylonitrile
Methyl bromide
Methyl chloride
Methylene bromide
Methylene chloride
Methyl ethyl ketone
Methyl iodide
Methyl methacrylate
4-Methyl-2-pentanone
Pentachloroethane
Propionitrile
Pyridine
Styrene
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethene
Toluene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride
Xylene

Semivolatile Compounds

Acenaphthene
Acenaphthylene
Acetophenone
2-Acetylaminofluorene
4-Aminobiphenyl
Aniline
Anthracene
Aramite
Benzo(a)anthracene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(ghi)perylene
Benzo(a)pyrene
Benzyl alcohol
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloro-1-methylethyl)ether
Bis(2-ethylhexyl)phthalate
4-Bromophenyl phenyl ether
Butyl benzyl phthalate
p-Chloroaniline
Chlorobenzilate
p-Chloro-m-cresol
2-Chloronaphthalene
2-Chlorophenol
4-Chlorophenyl phenyl ether
Chrysene
o-Cresol
m-Cresol
p-Cresol
Diallate
2,6-Dichlorophenol
Diethyl phthalate
O,O-diethyl-O-2-pyrazinyl phosphorothioate
Dimethoate
p-(Dimethylamino)azobenzene
7,12-Dimethylbenz(a)anthracene
3,3'-Dimethylbenzidine
a,a-Dimethylphenethylamine
2,4-Dimethylphenol
Dimethyl phthalate
m-Dinitrobenzene
4,6-Dinitro-o-cresol
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
Diphenylamine
Ethyl methanesulfonate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachlorophene
Hexachloropropene
Indeno(1,2,3-cd)pyrene
Isodrin
Isophorone
Isosafrole
Methapyrilene
m-Nitroaniline
p-Nitroaniline
Nitrobenzene
o-Nitrophenol
p-Nitrophenol
4-Nitroquinoline-1-oxide
n-Nitrosodi-n-butylamine
n-Nitrosodiethylamine
n-Nitrosodimethylamine
n-Nitrosodiphenylamine
n-Nitrosodipropylamine
n-Nitrosomethylethylamine
n-Nitrosomorpholine
n-Nitrosopiperidine
n-Nitrosopyrrolidine
5-Nitro-o-toluidine
Pentachlorobenzene
Pentachloronitrobenzene
Pentachlorophenol
Phenacetin
Phenanthrene
Phenol
p-Phenylenediamine
2-Picoline
Pronamide
Pyrene
Safrole
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
Tetraethyl dithiopyrophosphate
o-toluidine

TABLE 3-2
(Continued)

NEWELL STREET - MCP SUPPLEMENTAL PHASE II SCOPE OF WORK

SUMMARY OF APPENDIX IX CONSTITUENTS

Semivolatile Compounds (Continued)

Dibenzofuran	3-Methylcholanthrene	1,2,4-Trichlorobenzene
Di-n-butyl phthalate	Methyl methanesulfonate	2,4,5-Trichlorophenol
Dibenz(a,h)anthracene	2-Methylnaphthalene	2,4,6-Trichlorophenol
o-Dichlorobenzene	Naphthalene	O,O,O-Triethyl phosphorothioate
m-Dichlorobenzene	1,4-Naphthoquinone	sym-Trinitrobenzene
p-Dichlorobenzene	1-Naphthylamine	
3,3-Dichlorobenzidine	2-Naphthylamine	
2,4-Dichlorophenol	o-Nitroaniline	

Organochlorine Compounds

Aldrin	4,4'-DDE	Endrin aldehyde
alpha-BHC	4,4'-DDD	Heptachlor
beta-BHC	Dieldrin	Heptachlor epoxide
delta-BHC	Endosulfan I	Kepone
Lindane	Endosulfan II	Methoxychlor
Chlordane	Endosulfan sulfate	PCBs (all aroclors)
4,4'-DDT	Endrin	Toxaphene

Herbicide Compounds

2,4-D	Dinoseb	2.4.5-TP	2,4,5-T

Organophosphate Compounds

Disulfoton	Methyl parathion	Parathion	Famphur	Phorate

Inorganic Compounds

Antimony	Cobalt	Thallium
Arsenic	Copper	Tin
Barium	Lead	Vanadium
Beryllium	Mercury	Zinc
Cadmium	Nickel	Cyanide
Chromium	Selenium	Sulfide
	Silver	

Dioxin Compounds

Polychlorinated dibenzo-p-dioxins(PCDD's)
Polychlorinated dibenzofurans (PCDFs)
2,3,7,8 TCDD

Notes:

1. This list summarizes the compounds by fraction which are analyzed in accordance with Appendix IX regulations, published in the Federal Register, Vol. 52, No. 131, Thursday, July 9, 1987.

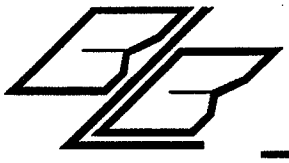
TABLE 4-1
NEWELL STREET – SUPPLEMENTAL PHASE II SCOPE OF WORK SCHEDULE

WORK ACTIVITY	SCHEDULE (In months) (1)											
	1	2	3	4	5	6	7	8	9	10	11	12
1. SOIL BORINGS AND GROUND-WATER MONITORING												
A. WELL INSTALLATIONS AND SOIL BORINGS	X	X										
B. SAMPLING OF WELLS			X									
C. LABORATORY ANALYSIS				X	X							
D. DATA INTERPRETATION					X	X						
2. SURFICIAL SOIL SAMPLING												
A. SAMPLING		X										
B. LABORATORY ANALYSIS			X									
C. DATA INTERPRETATION				X								
3. SUPPLEMENTAL SOIL BORING AND GROUND-WATER MONITORING (IF NEEDED)							X	X				
4. SUPPLEMENTAL SURFICIAL SOIL SAMPLING AND ANALYSIS (IF NEEDED)					X	X						
5. PREPARATION OF SUPPLEMENTAL RISK ASSESSMENT									X	X		
6. PREPARATION OF FINAL REPORT (INCLUDING RISK ASSESSMENT)											X	X

(1) THIS SCHEDULE DOES NOT INCLUDE DEP REVIEW AND APPROVAL PROCESS, AND IS SUBJECT TO MODIFICATION AFTER PREPARATION OF MASTER SCHEDULE FOR ALL MCP INVESTIGATIONS.

(2) IF ITEMS 3 AND/OR 4 ARE NOT NEEDED, THE SCHEDULE WILL BE ADVANCED ACCORDINGLY.

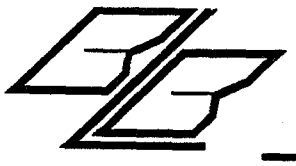
8/90 TWD



References

REFERENCES

Reference Number	
1	Investigation of Soil Conditions in the Vicinity of Newell Street, Interim Report Geraghty & Miller, July 1987.
2	Investigation of Soil and Ground-Water Conditions at the Newell Street Site, Geraghty & Miller, July 1988.
3	Analysis of Potential Remedial Measures (Feasibility Study) at the Newell Street Site, Blasland & Bouck, September 1988.
4	Supplemental Investigation of Soil and Ground-Water Conditions at the Newell Street Site, Geraghty & Miller, April 1989.
5	Risk Assessment for the Newell Street Site, Geraghty & Miller, May 1989.
6	Preliminary Bedrock Geologic Map of the Pittsfield East Quadrangle, Massachusetts USGS Open File Map 78-952.
7	Massachusetts Basic Data Report No. 9, Ground-Water Series, Housatonic River Basin, Norvitch, R.F. and Lamb, E.S., 1966.
8	Preliminary Report on the Water Supplies of the General Electric Company, Pittsfield, Massachusetts, Bagg, R.M., November 1929.
9	Housatonic River Study - 1980 and 1982 Investigations, Volume I and II, Stewart Laboratories, Inc., December 1982.
10	Data Provided to the DEP with a Cover Letter Dated October 27, 1989.
11	A Workbook of Screening Techniques for Assessing Impacts of Toxic Air Pollutants. EPA-450/4-88-009, 1988.



Figures

BLDG. 62
BLDG. 63X
BLDG. 63
BLDG. 67
BLDG. 61R
BLDG. 68
BLDG. 60A
TANK FARM
BLDG. 6-B
BLDG. 60
OWS 64W
Housatonic River
BRIDGE
RB-7
RB-6
NS-2A
NS-1
NS-1A
NS-7
NS-6
G.E. PARKING LOT
NS-5
NS-9
NS-14
NS-8
NS-13
NS-11
NS-12
NS-10
GE-11
GE-8
GE-10
GE-12
GE-9
MM-9
QP-26
QP-25
MW-3
IA-25
IA-24
RV-8
SZ-24
MW-12
FW-22
LA-6
RB-5
PK-15
HIBBARD PLAYGROUND
MW-13
PK-13
PK-14
PK-12
FW-23
SZ-23
RAVIN AUTO BODY
VINCENT J. STRACUZZI
PITTSFIELD TRANSMISSION COMPANY, INC.
ALLEGRONI CONSTRUCTION COMPANY, INC.
ANTHONY MARCHETTO CONTRACTORS
F.W. WEBB COMPANY
SZ-26
SZ-21
SZ-23
SZ-25
QP-24
ITALIAN AMERICAN CLUB
MOLDMASTER
QUALITY PRINTING
IA-23
IA-22
MM-11
MM-10
RV-7
ONTARIO STREET
NEWELL STREET
HURON STREET
MICHIGAN STREET
DORCHESTER ST.
LONGFELLOW STREET
EDISON AVENUE

LEGEND

- EXISTING MONITORING WELL
- PROPOSED SOIL BORING LOCATION
- PROPOSED MONITORING WELL LOCATION
- PROPOSED SURFACE SOIL SAMPLING LOCATION (WITH APPENDIX METALS IX METALS ANALYSIS)
- PROPOSED SURFACE SOIL SAMPLING LOCATION (WITH PCB ANALYSIS)

B-D:\101654C\10196001

APPROX. SCALE:
1" = 60'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init

In charge of _____
Designed by _____
Drawn by RLP
Checked by _____

BLASLAND & BOUCK ENGINEERS, P.C.
Syracuse, New York
White Plains, New York

GENERAL ELECTRIC COMPANY • PITTSFIELD, MA

MCP PHASE II – NEWELL STREET SITE

PROPOSED FIELD ACTIVITIES

File Number 101.96.54
Date JUNE, 1990

1

BLDG. 63X

BLDG. 63

BLDG. 67

BLDG. 61R

BLDG. 68

BLDG. 60A

TANK FARM

BLDG. 6-B

BLDG. 60

OWS 64W

Housatonic River

BRIDGE

G.E. PARKING LOT

HIBBARD PLAYGROUND

PITTSFIELD TRANSMISSION COMPANY, INC.

ALLEGRONI CONSTRUCTION COMPANY, INC.

ANTHONY MARCHETTO CONTRACTORS

F.W. WEBB COMPANY

VINCENT J. STRACUZZI

RAVIN AUTO BODY

ITALIAN AMERICAN CLUB

QUALITY PRINTING

MOLDMASTER

ONTARIO STREET

NEWELL STREET

HURON STREET

MICHIGAN STREET

DORCHESTER ST.

LONGFELLOW STREET

EDISON AVENUE

LEGEND

- WELL LOCATION AND DESIGNATION
- SOIL BORING LOCATION AND DESIGNATION
- SURFACE SOIL SAMPLE LOCATION AND DESIGNATION
- RIVER BANK SAMPLE LOCATION AND DESIGNATION

B-D:\101965AC\10196004

APPROX. SCALE: 1" = 60'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init

In charge of _ _ _ _ _ _ _ _

Designed by _ _ _ _ _ _ _ _

Drawn by RLP _ _ _ _ _ _

Checked by _ _ _ _ _ _ _ _

BLASLAND & BOUCK ENGINEERS, P.C.
Syracuse, New York
White Plains, New York

GENERAL ELECTRIC COMPANY • PITTSFIELD, MA

MCP PHASE II – NEWELL STREET SITE
PREVIOUS SAMPLING LOCATIONS

File Number 101.96.54

Date JUNE, 1990

2

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Quality Engineering
Western Region
436 Dwight Street, Springfield, Mass. 01103
413-784-1100

DANIEL S. GREENBAUM
Commissioner

JOHN J. HIGGINS
Regional Director

August 24, 1990

RECEIVED
AUG 27 1990
ENVIRONMENTAL PROGRAMS

General Electric Company
Area Environmental and Facility Programs
100 Woodlawn Avenue
Pittsfield, MA 01201

Attn. Ronald Desgroseilliers

Re: Pittsfield 1-0151P-90531
GE Newell Street
Supplementary Phase II
Scope of Work

REVIEW OF SCOPE OF WORK

Dear Mr. Desgroseilliers:

The Department of Environmental Protection (the Department) has reviewed a Supplemental Phase II Scope of Work for the Newell Street site (SOW), dated June 1990, which was prepared on behalf of the General Electric Company (GE) by Blasland and Bouck Engineers, P.C. of Syracuse, New York, and submitted to the Department on June 26, 1990. Along with the SOW, the Department received: a supplemental data summary; a Sampling and Analysis Plan; a Health and Safety Plan; and a Preliminary Draft Master Schedule. A Draft Master Schedule was subsequently submitted to the Department on August 6, 1990. The SOW was submitted to the Department in response to the Department's comments on the Supplemental Phase II Scope of Work dated April 1990 and conditionally approved by the Department by letter dated May 7, 1990.

This letter is a conditional approval of the SOW and is intended to approve some portions of the SOW, while requiring the conduct of additional Phase II work as a condition of the approval granted herein. The Department does not consider the supplemental data summary which GE submitted along with the SOW as a component of the SOW. For this reason, the conditional approval of the SOW contained herein does not extend to that summary.

Since the Sampling and Analysis Plan applies to all of the GE sites being investigated under the Massachusetts Contingency Plan, a review of these documents will be provided in a separate letter.

Original Printed on 100% Recycled Paper

I. Descriptive Summary

The following is a brief summary of the activities which GE has proposed to implement under the SOW for Newell Street to fulfill the requirements for a Phase II Scope of Work under 310 CMR 40.545(2). GE has revised its Scope of Work and its Supplementary Data Summary dated April 1990 in order to address the conditions specified in the Department's letter to GE dated May 7, 1990.

Phase II activities proposed are: the collection of subsurface soil samples at the western end of the site; installation and sampling of three monitoring wells, located at the western end of the site; sampling of well MW-3 for metals listed in Appendix IX; collection of surface soil samples along the river bank and southern portion of the site for PCB analysis; collection of surface soil samples throughout the site to be analyzed for metals listed in Appendix IX.

Soil Sampling Studies

In order to define the extent of soil contamination at the western end of the site and to determine the western boundary of the site, GE has proposed to install a total of 14 soil borings. Two soil boring locations are proposed for along the river bank along the north end of the parking lot (Borings RB-6 and RB-7). The borings proposed for these two locations would be installed using a hand auger. Twelve soil borings are proposed within the GE Newell Street parking lot (Borings NS-1A, NS-2A, and NS-5 through NS-14). Borings proposed for these locations would be installed using a drill rig with hollow stem augers.

At each of the boring locations RB-6 and RB-7, GE proposes to hand auger to a depth of four feet and collect split spoon soil samples at two foot intervals--one sample would be collected from a depth interval of 0 to 2 feet and one would be collected from a depth interval of 2 to 4 feet. A portion of the split spoon samples would be screened for volatile organic compounds (VOCs) with a photoionization detector (PID) and soil from each split spoon would be analyzed for all compounds listed in Appendix IX of Part 264, 40 CFR ch. 1 (Appendix IX).

In order to define the depth of the fill material and the vertical extent of soil contamination in the GE parking lot, GE has proposed to install 12 deep soil borings. Two of the proposed boring locations NS-1A and NS-2A are located adjacent to NS-1 and NS-2, respectively. Borings NS-1 and NS-2 were installed in August 1989 and the maximum depth of the fill was not determined at these boring locations. GE installed a monitoring well in boring NS-1 at this time. Boring NS-1 was installed to a depth of 18 feet and boring NS-2 was installed to a depth of 12 feet. In order to determine the maximum depth of the fill and the presence of any contaminants near these boring locations, GE has proposed to drill

at boring locations NS-1A and NS-2A to a depth of 24 feet. The proposal states that if the base of the fill unit is not found within 24 feet at these boring locations, GE would drill deeper until a maximum of four feet into natural material. Split spoon soil samples would be obtained at every two feet from 18 to 24 feet deep at boring NS-1A and from 12 to 24 feet deep at boring NS-2A. At each boring, soil from four foot intervals would be combined and analyzed for Appendix IX constituents. GE has also proposed to install ten borings located within the parking lot (borings NS-5 to NS-14. These borings would be drilled to a depth of four feet below the fill material or eight feet below the water table, whichever is deeper. Split spoon samples would be collected every two feet from ground surface to the bottom of the boring. Soil from every four foot interval would be combined and analyzed for Appendix IX constituents. The proposal states that a portion of all split spoon samples would be screened for the presence of VOCs using a PID.

In order to determine the extent of any contaminated soil in the woodland located east of the GE parking lot, GE has proposed to collect soil samples from four borings (GE-9 through GE-12). The borings would be installed using a hand auger or power auger. The proposal states that GE would attempt to install the borings to a depth of six inches into natural material. Soil samples would be collected every two feet. Each sample would be equally split--one half would be screened for VOCs by conducting a headspace analysis, using a PID, the other half would be "placed in an appropriate sampling container, pending analysis for Appendix IX constituents". The proposal states that if a headspace analysis indicates a PID reading greater than 10 units for any sample, the sample would be analyzed for VOCs listed in Appendix IX, using EPA Method 8240. The soil sample exhibiting the highest PID reading at each boring would be analyzed for all Appendix IX constituents.

GE states that the borings will be sealed with a bentonite/cement slurry grout after the completion of borings and sample collection, to prevent any possible migration of surface contaminants to ground water.

Analytical results for soil samples previously collected from two borings (Borings QP-22 and QP-23) located on the former Quality Printing property indicated the presence of lead, copper and zinc at above background concentrations--up to 6,950, 4,840 and 8,430 parts per million (ppm) respectively. GE has proposed to collect a total of 19 surficial soil samples from locations throughout the site, in order to determine the extent of metal contamination at this site. Four of the proposed sample locations are located on Hibbard Playground. At each location, soil samples would consist of surficial soil in a three foot by three foot by four inch deep area. Soil samples collected in grass covered areas, would consist of the soil within the sod. Samples would be analyzed for metals listed in Appendix IX.

As stated in the Department's letter dated May 7, 1990, GE must collect additional surface samples to be analyzed for PCBs at several locations along the front of the Newell Street site. GE has proposed to collect surficial soil samples from ten locations. Samples from the locations listed as follows would be analyzed for PCBs. One location is on the riverbank (RB-5); three are at the front, southeast portion of the Stracuzzi property (SZ-21, SZ-22, SZ-26); one is the unpaved location in the front southeast portion of the Marchetto Property (SZ-25); one is at the front of the Ravin Auto Body property (RV-7); two are at the front of the Italian American Club property (IA-22, IA-23); and two are at the front of the Moldmaster property (MM-10 and MM-11). These samples would be collected using the same procedures as the surficial samples collected for metals analysis, as described above.

GE states that surface soil samples will be screened for volatile organic compounds (VOCs), by conducting a headspace analysis using a PID, If a PID reading greater than 10 units is obtained for any sample, the sample would be analyzed for VOCs using EPA Method 8240.

The proposal also states that all sampling and drilling equipment will be decontaminated between each use as described in the Sampling and Analysis Plan.

Groundwater Sampling Studies

The Department's May 7, 1990, letter also required GE to determine the extent of groundwater contamination found in the GE parking lot in a sample collected from well NS-1. In response to this requirement, GE proposes to install three additional monitoring wells within the GE parking lot in borings NS-9, NS-10, and NS-11. GE states that the well locations were chosen to provide an upgradient and several downgradient groundwater monitoring locations. Additionally, the proposal states that the "historical location" of the former pond area was utilized in selecting the well locations. GE proposes to use a 10 foot long screen "installed at a depth specific to the intent of the well". GE states that groundwater samples would be collected from newly installed wells within one week after the well is developed. Samples would be collected from existing well NS-1 and newly installed wells NS-9, NS-10 and NS-11 and analyzed for Appendix IX constituents. Monitoring wells would be surveyed after completion.

The SOW refers to the Sampling and Analysis Plan for descriptions of sample collection, decontamination, and chain-of-custody procedures.

Air Monitoring

The SOW states that since GE has removed and replaced select

surficial contaminated soils in certain areas of the site, airborne contaminated dust potentially resulting from wind disturbances of these areas does not appear to be a migration pathway. GE proposes, however, to complete "screen level" calculations of toxins in air according to EPA's "Workbook of Screening Techniques for Assessing Impacts of Toxic Air Pollutants". The calculations would be based on data for on-site soils and groundwater.

Supplemental Phase II Reporting

The SOW states that data obtained during supplemental Phase II investigations and any pertinent data from previous investigations would be compiled, analyzed, interpreted and presented in an interim report.

Risk Assessment

The Department's May 7, 1990 letter stated that GE must submit a proposal for completion of a risk characterization which adequately addresses the comments contained in the Department's Office of Research and Standards memorandum reviewing the risk assessment for this site completed by Geraghty and Miller for GE in 1989. In response to these comments GE has proposed: "desktop" modeling to estimate PCB concentrations resulting from volatilization from contaminated soils; additional detailed air dispersion analysis, using computer modeling, if modeling calculations indicate "a potential health risk exists for any receptor population"; evaluation of the potential for bioaccumulation of contaminants in the food chain be completed in the Risk Assessment for the Housatonic River; evaluation of the site's potential to contribute to contamination of the food chain, flora or fauna via erosion of site materials into the Housatonic River; consideration of the site for use as a future residential area when assessing exposure scenarios and receptors; evaluation of the non-carcinogenic effects of PCBs, using the EPA Oral Reference Dose for Aroclor 1016; use of an average PCB concentration in soil to calculate exposure point concentrations; and a discussion of potential environmental risks. The SOW states that the Housatonic River is the primary concern regarding off-site environmental impacts. Data obtained from supplemental Phase II activities would be incorporated in the supplemental risk assessment.

Final Phase II Reporting

The final Phase II report would summarize all data obtained during Phase II activities, relevant data from previous investigations and a risk characterization.

Schedule

Upon approval of the Supplemental Phase II SOW dated June 1990, GE

has proposed to complete Phase II field work within 6 to 9 months, with completion of a final Phase II report and Risk Assessment within 20 months according to the Master Schedule.

Quality Assurance/Quality Control

GE has submitted a "Sampling and Analysis Plan", which states their proposals for quality assurance/quality control, sample collection and analysis procedures, and decontamination procedures to be used for this site and the other GE Facility and Housatonic River sites. A review of the Sampling and Analysis Plan for use with the Newell Street site Phase II activities is provided by separate letter.

Terms and Conditions of Approval

The Department's May 7, 1990 letter required GE to complete activities which define the extent of soil and groundwater contamination found at the western end of the site within the GE parking lot. The Phase II activities as proposed are not sufficient to accomplish this. GE has not proposed to install any soil borings or monitoring wells west of the GE parking lot. Results for soil samples collected from boring NS-1, which is located near the western end of the parking lot, indicate the presence of PCBs at concentrations up to 12,000 ppm. Results for a groundwater sample collected from well NS-1 indicate the presence of VOCs at concentrations up to 2,000 ppb for vinyl chloride. Given the proximity of the boring and well location NS-1 to the western end of the parking lot, it is reasonable to assume that contaminated soil and groundwater exist beyond the western end of the parking lot, off GE property. The Department has been informed that GE is currently negotiating for access to the abutting property. Consequently, after completion of initial Phase II activities as proposed and conditionally approved below, GE shall submit to the Department for the Department's review and approval a proposal to accomplish the items numbered 1 and 2 as listed below. In order to expedite completion of Phase II activities, GE must submit this proposal along with the Phase II interim report. Although no submittal date is proposed for this interim report, the Department will consider the Phase II interim report and the supplemental Phase II proposal to be due one month after completion of initial Phase II activities (within seven months of the date of this letter).

1. At least two additional soil borings must be installed to the west of the GE parking lot. Split spoon and soil samples must be collected in the same manner as proposed for the borings within the parking lot. Borings locations must be chosen in order to define the western extent of contaminated soil. Borings must be installed to a depth sufficient to determine the vertical extent of any contaminated soil at these locations. Soil samples collected from four foot intervals must be analyzed for Appendix IX + 3 constituents.

2. Additional monitoring wells must be installed west of the GE parking lot. At a minimum, GE must propose installation of at least two wells screened at the water table. Groundwater samples must be collected from these wells and analyzed for Appendix IX + 3 constituents.

In addition to the above requirements, the SOW is expressly conditioned as follows:

1. All samples proposed for Appendix IX analysis must also be analyzed for the compounds 2-chloroethyl vinyl ether, benzidine, and 1,2-diphenylhydrazine (Appendix IX + 3);

2. If headspace analysis yields a PID reading above background for any surface soil sample, the sample must be analyzed for VOCs, using EPA Method 8240;

3. Hand augered borings proposed for the river bank along the north end of the GE parking lot (Boring locations RB-6 and RB-7) must be installed at least six inches into natural material;

4. In addition to screening with a PID and laboratory analysis as proposed, all soil samples collected from proposed borings in the woodland must be analyzed for a minimum of PCBs, unless that same sample is analyzed for Appendix IX + 3 constituents.

5. The location for proposed monitoring well NS-9 must be revised in order to more accurately determine the lateral extent of groundwater contamination and to provide an additional monitoring point along the Housatonic River. Well NS-9 must be installed in the GE parking lot, near the river and adjacent to the east side of the entrance to the foot bridge leading from the GE parking lot to East Street Area 2;

6. Well screens for all proposed wells must be installed to bridge the water table, using at least 10 feet of well screen. The wells must be gauged for the presence of free oil prior to sampling. Pending the results of the groundwater samples from the wells as proposed in the SOW, the Department reserves the right to require the installation of wells screened at deeper intervals;

7. The disposal history of the "former pond" area as referred to in the Scope of Work and the "disposal area" as referred to on Figure 2 in a letter dated October 27, 1989 from GE to the Department, must be discussed within the Phase II Report. If GE has any record of materials disposed of in this area, the records and a description of the materials must be included in the Phase II report;

8. The presence of PCBs at concentrations up to 91 ppm in surficial soil on the Marchetto property and up to 290 ppm on the former Quality Printing property constitutes an imminent hazard as defined in 310 CMR 40.542. Pursuant to 310 CMR 40.542, a short term measure must be completed to abate the imminent hazard. Consequently, a Short Term Measure proposal to remove or treat the surficial soil containing elevated levels of PCBs in select areas of the site must be submitted to the Department within 60 days of the date of this letter. GE should continue to evaluate the need for a short term measure for the site throughout the MCP process;

9. The terms and conditions outlined in the Department's review of the Sampling and Analysis Plan shall be considered a part of this approval;

10. In addition to the foregoing requirements as described above, the Department explicitly reserves the right to require additional investigatory work, based upon review of information which becomes available to the Department, to establish the horizontal and vertical extent and concentrations of oil or hazardous materials in all media and the existence of plumes of oil or hazardous materials in the groundwater and the potential migration of these plumes. Without limitation, the Department reserves the right to require any necessary additional studies characterizing depth to bedrock and bedrock characteristics.

11. The Department hereby approves the schedule as proposed in the Draft Master Schedule, submitted to the Department on August 6, 1990, and considers the proposed deadline of 20 months from the date of this letter for the submittal of the Final Phase II Report Risk Assessment and the deadline for the submittal of the interim report and supplemental Phase II proposal to be interim deadlines as defined in 310 CMR 40.534 (5).

In accordance with the terms of the previous conditional approval letter from the Department to GE dated May 7, 1990, GE was required to delay implementation of the SOW until GE had submitted and the Department had approved several documents. Although this letter does not approve all of the documents called for in the previous letter, GE should immediately commence implementation of the SOW as set forth herein and in the May 7, 1990 letter.

As required in the Consent Order, the Department expects notification five days in advance of sample collection activity.

If you have any questions regarding this matter, please contact Anthony Kurpaska of this office.

Very truly yours,

Stephen F. Joyce
Regional Engineer
Bureau of Waste Site Cleanup

SFJ:AFK:afk
wp:newell2
cc: Stephen Richmond, Esq., counsel for DEP
Pittsfield Board of Health
Pittsfield Conservation Commission
Mayor Anne Wojtkowski, City of Pittsfield
Mary Garren, EPA I
Gary Gosbee, EPA I
State Representative Christopher J. Hodgkins
State Representative Daniel E. Bosley
State Representative Sherwood Guernsey
State Representative Robert F. Jakubowicz
State Senator Peter C. Webber
Public Information Repository
Lee Bishop, Esq., counsel for GE
G. Grant Bowman (GE)
Robert Goldman, Blasland and Bouck

...Programs
...Pittsfield, MA 01201

September 12, 1990

Mr. Stephen F. Joyce
Regional Environmental Engineer
Bureau of Waste Cleanup
Department of Environmental Protection
436 Dwight Street
Springfield, MA 01103

Re: Newell Street Phase II SOW Approval - GE Comments

Dear Mr. Joyce:

We have received and reviewed your letter of August 24, 1990 setting forth the Department of Environmental Protection's (DEP's) conditional approval of the revised Newell Street Supplemental Phase II Scope of Work (SOW) submitted on behalf of General Electric Company (GE) on June 26, 1990. GE agrees to comply with the conditions imposed by the DEP in that letter except as set forth below. On the following points, GE disagrees with the DEP's conditions or believes that modifications to them are appropriate. With respect to these points, please consider this letter as an effort to resolve the disputes informally, pursuant to Article XV of the Administrative Consent Order governing the Housatonic River. As such we would be glad to discuss the issues with you further, and we anticipate that the DEP will consider our position and notify us of its decision, including any amendment to the conditional approval letter. In the event that the DEP does not agree with our position on any such issue, GE reserves the right to invoke the final dispute resolution procedure in accordance with Article XV of the Consent Order.

1. The terms and conditions related to the scheduling of the Newell Street Phase II activities are generally acceptable, although GE would like to reiterate, as stated on the MCP Master Schedule, that a number of work tasks are either weather, temperature, flow and/or access dependent. While GE will make every effort to conduct each task according to

the Master Schedule, it is possible, due to the factors detailed above, that certain tasks will not be completed in their original timeframe. In addition, the scheduling of the facility air monitoring program, which addresses Newell Street as well as the facility sites, impacts the completion of the Supplemental Phase II investigation. If delays occur in the implementation of the facility air monitoring program due to the regulatory review and approval process, the delivery of the Supplemental Phase II Report will be subsequently impacted.

2. The DEP letter of August 24 requests that if a headspace analysis of a surficial soil sample yields a photoionization detector (PID) reading above background, the sample must be analyzed for VOCs using EPA Method 8240. GE maintains that a PID trigger level of background is much too low. GE continues to maintain that a PID trigger level of 10 PID units is more appropriate.

3. The DEP letter of August 24 specifies that hand-augered borings RB-6 and RB-7 should be installed at least six inches into natural material. To be consistent with good field practices, GE proposes that hand-augured borings RB-6 and RB-7 be installed at least six inches into the natural material or to the water table, whichever occurs first.

4. The August 24 letter states that the disposal history of the "former pond" area must be discussed in the Supplemental Phase II Report, and that, if GE has any record of materials disposed of in this area, the records and a description of the materials must be included in the Supplemental Phase II Report. GE agrees to provide this information in the Supplemental Phase II Report to the extent that they are available.

5. The DEP letter of August 24, 1990, states that the presence of PCBs in the surficial soil on the properties at the site in concentrations up to 91 ppm and 290 ppm, respectively, constitutes an imminent hazard under the Massachusetts Contingency Plan (MCP). Hence, it directs GE to submit, within 60 days of the letter, a Short Term Measure (STM) proposal to "remove or treat" the surficial soil containing elevated PCB levels. GE does not agree that the presence of

PCBs at the specific concentrations in the surficial soil at these locations constitutes an imminent hazard within the meaning of the MCP, but it is willing to submit an STM proposal within 60 days to address those areas. It is possible, however, that this proposal will not call for removal or treatment of this surficial soil. Instead, it may propose other types of STMs (e.g., institutional controls) to reduce whatever risk may exist at these areas. If so, it will support such a proposal with pertinent information and analysis. GE does not believe that it is appropriate at this time to specify what type of STM must be proposed. Such a determination should be based on review of the STM proposal itself, as well as the information provided in support of it. Accordingly, GE proposes that the DEP amend its letter to specify only that the STM proposal "address" the surficial soil in the described areas.

GE is currently beginning to implement the Newell Street Supplemental Phase II investigation. Accordingly, if DEP would like to discuss the points presented above, please contact me as soon as possible, as part of the informal dispute resolution process so that we can finalize the Phase II activities.

Yours truly,

Grant Bowman

G. Grant Bowman
Manager - Environmental Engineering

/ljr

cc: J.R. Bieke
L.L. Bishop
R.W. Frantz
M.E. Garren
R.K. Goldman
S.M. Richmond
M.C. Phillips
ECL- I&II-R

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Quality Engineering
Western Region
436 Dwight Street, Springfield, Mass. 01103
413-784-1100

DANIEL S. GREENBAUM
Commissioner

JOHN J. HIGGINS
Regional Director

September 24, 1990

RECEIVED
SEP 26 1990
ENVIRONMENTAL PROGRAMS

G. Grant Bowman
Manager - Environmental Engineering
Area Environmental & Facility Programs
General Electric Company
100 Woodlawn Avenue
Pittsfield, MA 01201

Re: Pittsfield 1-0151P
Newell Street Scope of Work Approval
GE Comments

Dear Mr. Bowman:

I am writing in response to your letter dated September 12, 1990, relative to the above-referenced disposal site. In that letter, you agreed on behalf of the General Electric Company (GE) to implement the Supplemental Phase II Scope of Work which GE previously submitted to the Department, as altered by the Department's conditional approval letter of August 24, 1990 (the Conditional Approval). However, you raised five issues relating to the Conditional Approval and asked that the Department modify its approval terms with regard to each issue.

We have reviewed each of the five issues that you raised in your September 12 letter and hereby determine as follows:

1) Scheduling. We understand that scheduling of assessment activities is, in several specific instances, dependent upon weather, temperature, flow and access. These issues were thoroughly discussed during the negotiation of the consent order governing the conduct of these activities and GE has received the protections provided in the force majeure language of Article XIX of that document. We ask you to review the language contained in that article, for we do not believe that additional clarification is necessary.

2) PID Trigger Level. You have requested that the Department adopt a trigger level of 10 PID units for any headspace analysis of a surficial soil sample before GE is required to analyze for VOCs using EPA Method 8240. As we have discussed with you several times, the Department is not willing to adopt a 10 PID unit threshold at this time. Thus, as is stated in the Conditional Approval, if

Original Printed on 100% Recycled Paper

headspace analysis yields a PID reading above background for any surface soil sample, the sample must be analyzed for VOCs, using EPA Method 8240. We will be willing to review this standard after sufficient data is collected to permit us to draw conclusions about contaminant distribution at the site.

3) Hand-Augured Borings. GE originally proposed, and the Department approved, the installation of hand-augured borings RB-6 and RB-7 at least six inches into natural material. You have requested that hand-augured borings RB-6 and RB-7 should be installed at least six inches into natural material or to the water table, whichever comes first. We agree with this modification to the Conditional Approval.

4) Disposal History of Former Pond Area. You have requested that GE provide records and a description of materials which GE disposed of in this area, "to the extent that they are available". We agree to this modification to the Conditional Approval.

5) Short Term Measure. You have requested that GE be allowed to propose short term measures that reduce risks existing at particular areas of the site but which may not call for removal or treatment of surficial soil. We agree that the short term measures which GE proposes need not necessarily involve removal or treatment of surficial soil, provided that the proposals will address the elimination of the hazards posed by surficial contamination.

We trust that these modifications to the Conditional Approval address the concerns you raised in your September 12 letter. Should you have any questions regarding this matter, please contact Anthony Kurpaska of this office.

Very truly yours,

Stephen F. Joyce
Regional Engineer

SFJ/SMR/
Newell.ltr
cc: Ronald Degroseilliers
Lee Bishop
Pittsfield Board of Health
Pittsfield Conservation Commission
Mayor Anne Wojtkowski
Mary Garren
Public Information Repositories
Stephen Richmond

APPENDIX B

SUPPLEMENTAL DATA SUMMARY

NEWELL STREET - MCP PHASE II
SUPPLEMENTAL DATA SUMMARY

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

JUNE 1990

BLASLAND & BOUCK ENGINEERS, P.C.
6723 TOWPATH ROAD
SYRACUSE, NEW YORK 13214

GE PITTSFIELD - NEWELL STREET
MCP PHASE II SUPPLEMENTAL SCOPE OF WORK
SUPPLEMENTAL DATA SUMMARY

TABLE OF CONTENTS

GE PITTSFIELD - NEWELL STREET
MCP PHASE II SUPPLEMENTAL SCOPE OF WORK
SUPPLEMENTAL DATA SUMMARY

TABLE OF CONTENTS
(Cont'd)

SECTION 1 - INTRODUCTION

1.1 General

This document has been prepared to complement the Newell Street MCP Supplemental Phase II Scope of Work.

The Newell Street location is currently defined by the Massachusetts Department of Environmental Protection (DEP) as being in Phase II - Comprehensive Site Assessment, of the MCP process. Previously, environmental concerns at Newell Street have been subject to investigation, evaluation, and remediation activities in response to a number of General Electric Company (GE), state, and federal guidelines and orders (References 1 through 5). Therefore, a number of MCP Phase II requirements have previously been completed. This Supplemental Data Summary will present existing site information in a concise and organized manner in order to facilitate the understanding of previous site activities.

1.2 Format of Document

This Supplemental Data Summary first presents in Section 2, methods of investigation, including soil boring installation, soil sampling techniques, monitoring well installation, and ground-water sampling. Following this, site hydrogeology and ground-water characteristics are described in Section 3. Section 4 presents air quality information collected in the vicinity of Newell Street. Geologic boring logs and well completion forms are presented in Appendix A.

1.3 Background Information

During the Housatonic River rechannelization project of the 1940s, an area between the river and Newell Street was filled. In 1987, elevated levels of polychlorinated biphenyls (PCBs) in fill materials used at the Newell Street Site were detected during an environmental assessment of one of the area's commercial properties. The assessment was conducted by O'Brien & Gere Engineers for Quality Printing, which is located along Newell Street in Pittsfield, Massachusetts. Based on this initial assessment, further sampling and analysis of fill materials and ground water was conducted for the purpose of site characterization.

A Phase I investigation of the Newell Street Site was conducted by Geraghty & Miller, Inc., in 1987. The purpose of the investigation was to identify areas of fill material, and to verify the presence of soils containing PCBs and volatile organic compounds (VOCs). The findings of this investigation were summarized in Geraghty & Miller's report titled "Investigation of Soil Conditions in the Vicinity of Newell Street - Interim Report" (Reference 1). This report was submitted to the Massachusetts DEP for review in July 1987.

The DEP reviewed the report and, as a result, requested that additional investigative work be done in order to determine the quality of surficial soils and ground water at the site, and also to further define the extent and quality of subsurface soils. On March 14, 1988, GE submitted a work plan prepared by Geraghty & Miller to perform a Phase II investigation in response to the DEP's comments. This work plan was approved by the DEP in April 1988 and subsequently implemented by Geraghty & Miller.

In July 1988, Geraghty & Miller submitted a report summarizing the results of the Phase II investigation. The report titled "Investigation of Soil

and Ground-Water Conditions at the Newell Street Site" (Reference 2) was submitted to the DEP for review.

In September 1988, Blasland & Bouck prepared a Feasibility Study report for the Newell Street Site based on Geraghty & Miller's Phase I and Phase II investigative work. The report titled "Newell Street Site, Analysis of Potential Remedial Measures" (Reference 3) was submitted to the DEP for review. The DEP reviewed both Geraghty & Miller's Phase II report and Blasland & Bouck's Feasibility Study report, and submitted its comments to GE in a December 14, 1988 letter. The letter stated that additional information would be necessary to complete a Phase II Comprehensive Site Assessment and that an evaluation of remedial alternatives would not be possible until the Phase II work was completed.

In response to the DEP's December 14, 1988 letter, GE submitted a proposal to the DEP on January 16, 1989, outlining additional field activities at the Newell Street Site. The proposal described a three-task field program, consisting of soil borings, ground-water sampling, and surficial soil sampling. These activities were performed in February and March of 1989. The results of the soil boring and ground-water analyses were summarized in the Supplemental Investigation of Soil and Ground-Water Conditions at the Newell Street Site (Reference 4). The surficial soil sampling results were described in a May 1, 1989, letter from GE to the DEP. The results of the 1989 field activities were incorporated in a Newell Street Risk Assessment, submitted to the DEP in May 1989 (Reference 5).

In August 1989, Geraghty & Miller, Inc., drilled four borings along the northern edge of the GE - Newell Street Parking Lot. One of the borings was finished as a monitoring well. VOC, PCB, and base/neutral organic

analyses were conducted on a ground-water sample and on soil samples from each boring (Reference 7).

During October 1989, Geraghty & Miller, Inc., drilled four additional soil borings at the Newell Street Site, two on Quality Printing property and two on F.W. Webb Company property. The soil samples from these borings were analyzed for priority pollutant metals.

The DEP provided GE with its comments regarding the Newell Street Risk Assessment in a December 27, 1989 memorandum.

SECTION 2 - METHODS OF INVESTIGATION

2.1 General

As part of the Newell Street Site investigations, soil sampling (surface and subsurface) and ground-water sampling have been performed. The objectives of the sampling investigation were to:

1. Define the local geology;
2. Define the thickness and extent of fill material that was placed as part of the Housatonic River rechannelization project; and
3. Determine if select hazardous constituents are present in the soil and/or ground water and, if present, to define the vertical and horizontal extent of these constituents.

To fulfill these objectives, a total of 67 surficial soil samples, 261 subsurface soil samples (from 83 boreholes), and 17 ground-water samples (from 9 wells) were collected in May 1988, February 1989, and August 1989 (Figure 1). The surficial and subsurface soil samples were analyzed for PCBs, with the exception of 12 samples which were analyzed for priority pollutant metals, and an additional 12 samples which were analyzed for VOCs and base/neutral organics. The ground-water samples were analyzed for PCBs, VOCs, and chlorinated hydrocarbons in February 1989, and for base/neutral organics in August 1989.

The above field investigations were performed in several phases, and Table 1 summarizes the boring, surface soil, and monitoring well sampling locations by time and property. The procedures used during sample collection are described in the following subsections.

2.2 Soil Boring Installation

Soil borings at the Newell Street Site range in depth from 4 to 18 feet below ground surface. The borings which were deeper than four feet were drilled using a hollow-stem auger rig. A split-barrel sampler was advanced through the augers, and continuous soil samples were collected at two-foot intervals. For borings which were terminated at four feet, the split-barrel sampler was driven into the soil, but the augers were not used. The termination depths of the borings were determined in the field based on visual evidence of staining and the presence/absence of fill material. At boring locations in which fill material was encountered, the boring was advanced until several feet of natural underlying sediments were encountered (Table 2).

Once the sampler was retrieved, the lithology of the sample was described in detail, with particular attention to any evidence of contamination (staining, odor, texture, and color). The geologic boring logs have been included in Appendix A of this report. The soil sample was then wrapped in aluminum foil and stored in zip-lock™ plastic bags. The samples were later screened with a TIP photoionization detector (PID) and then shipped in chilled coolers, via overnight Federal Express, to IT Analytical Services, Inc., of Knoxville, Tennessee, for analysis with proper chain-of-custody. The available PID screening data on soil samples are summarized in Table 3.

In order to minimize the potential for cross-contamination, all soil sampling equipment was thoroughly scrubbed with a non-phosphate, laboratory-grade detergent (Micro™) and distilled water between the collection of each soil sample. The drilling rig, equipment, and associated tools were steam-

cleaned prior to arrival on site, between the drilling of each borehole, and after completion of the program.

2.3 Surficial Soil Sampling

Surface soil samples were generally collected from areas where there is potential human exposure due to bare soil (i.e., unvegetated or unpaved). Locations are shown in Figure 1, and collection results are illustrated in Figure 6. The samples were obtained by compositing the soils from a three-foot by three-foot by four-inch deep area. Twigs, stones, pebbles, and any other foreign objects were removed. The initial plan of sampling, based on grid spacing (as requested by the Massachusetts Department of Environmental Protection (DEP)), was modified during field operations due to the presence of paved parking lots, grassy areas, and buildings (Figure 2). The deviation from the sampling grid was approved by the DEP.

The surface soil samples were handled in the same manner as those collected from the soil borings, except that the surface samples were not screened for VOCs.

2.4 Monitoring Well Installation

Six of the nine ground-water monitoring wells installed during the Newell Street investigations were under the direction of Geraghty & Miller. The other three wells (MW-1, MW-2, and MW-3) were installed under the direction of O'Brien & Gere Engineers. Well completion data for the Geraghty & Miller wells are summarized in Table 4, and the completion logs are included in Appendix A of this report. Data for the O'Brien & Gere wells were not available at the time this report was written. The procedure for ground-water

monitoring well installation used by Geraghty & Miller is described below. All well locations are shown in Figure 1.

At each Geraghty & Miller well location, an eight-inch diameter borehole was drilled with hollow-stem augers to approximately eight feet below the water table (15.5 to 19.5 feet below grade). The boreholes were advanced by collecting continuous split-barrel samples at two-foot intervals. The soil samples were logged in detail for lithology and visual evidence of contamination (odor, staining, color, and texture), and then stored in glass jars (geologic boring logs are included in Appendix A).

Two-inch inside diameter (ID), 10-slot (0.010-inch) PVC well screen and unslotted PVC riser were installed through the auger string. A gravel pack was then placed in the annular space between the well screen and the formation prior to extraction of the augers. The gravel pack was placed so as to extend two feet above the top of the well screen. A bentonite/cement slurry was placed in the remaining annular space to within two feet of ground surface. Pre-mixed cement was then poured, and a steel protective casing with a locking cap was placed over the well and seated into the cement. The wells were then developed by bailing until they yielded relatively sediment-free water.

All drilling equipment and tools were steam-cleaned prior to arrival on site, between drilling sites, and prior to leaving the site to prevent cross-contamination of the wells. At each drilling site, all cuttings and purge water were drummed and removed from the site for disposal by GE.

The top of each well casing was surveyed to determine the elevation to the nearest 0.01-foot and referenced to mean sea level (msl). The three wells installed by O'Brien & Gere on the Quality Printing property were also surveyed. Water level measurements were made with a stainless steel tape

and chalk to determine the depth of water in each well. Water level elevation data collected on July 8, 1987, are summarized in Table 5.

2.5 Ground-Water Sampling

Five wells installed by Geraghty & Miller (GE-3, IA-9, SZ-1, SZ-3, and FW-16) were sampled in May 1988 and February 1989, whereas the three O'Brien & Gere wells (MW-1, MW-2, and MW-3) were sampled once, in February 1989. The water samples were analyzed for priority pollutant VOCs in both sampling rounds and for chlorinated hydrocarbons in 1989. In addition, Well NS-1 was sampled for VOCs, PCBs, and base/neutrals in August 1989. The specific conductance, pH, and temperature of the ground water were measured in the field, at each location, at the time of sample collection.

Prior to sample collection, the ground-water monitoring wells were evacuated using a Teflon™ bailer. The equivalent of three casing volumes of ground water was removed from each well. The ground-water sample from each well was collected with a Teflon™ bailer which had been cleaned with a laboratory-grade detergent (Micro™) and a distilled water rinse prior to and after each use.

The samples were stored, preserved, and shipped in accordance with United States Environmental Protection Agency (USEPA) protocols and instructions provided by IT Analytical Services, Knoxville, Tennessee. Samples were delivered via Federal Express to the laboratory within 24 hours of collection, following Geraghty & Miller's daily sampling activities.

SECTION 3 - SITE HYDROGEOLOGY AND GROUND-WATER CHARACTERISTICS

3.1 General

As previously described, the purposes of the Newell Street investigations were to characterize the site-specific geology, to define the extent of filled areas, and to determine whether hazardous constituents of interest are present in the soil and/or ground water. This section presents data collected during several phases of work at the site and an evaluation of this data.

3.2 Geology

Due to the site's proximity to the Housatonic River Valley, the geology under the site is comprised of both alluvial and glacial sediments. Anthropomorphically-filled areas are also present due to the rechannelization of the river in the 1940s. Bedrock was not encountered in any of the borings or wells. The focus of the investigations was on the filled areas and the impact of the fill material on the underlying, naturally-occurring soils and ground water.

3.2.1 Soil/Fill Description

The extent of the filled area was defined based on visual observations of soil samples collected during the installation of borings and wells. The fill material, with the exception of that in the GE-Newell Street Parking Lot area, ranged in depth from non-existent to a maximum of 14 feet below ground surface, as indicated in Table 2 and shown in the cross-sections of Figures 3 and 4. Based on its visual descriptions (Appendix A), the fill consists mostly of sand and gravel. Varying percentages of glass, cinders, wood, bricks, vegetation, concrete, ceramic fragments, foil, paper, and wire are mentioned on the

boring logs as having been encountered. No free oil or oil-stained soils were observed, with the exception of Boring NS-1, where an oil sheen was visible on several samples. At some of the boring locations, a black peat or silt with abundant organic matter was found to be present at the bottom of the fill. Ground water was not encountered in the fill, with the exception of in the GE-Newell Street Parking Lot area; however, it was encountered in the peat (where present) or in the natural soils.

At some locations, a thin layer of peat and/or silt, rich in decomposing organic matter was encountered below the fill. This layer varied in thickness from 0 to 3 feet. In places where it was not encountered, the layer had probably been artificially removed. Underlying the layer, which represents an old marsh deposit, is a heterogeneous assemblage of gravel, sand, silt, and clay.

The boring logs indicate the percentage of each fill/soil component to be variable from boring to boring and depth to depth, a finding consistent with the historical tendency of soils deposited in an alluvial (river) environment. Currents of varying velocity in the river channel itself as well as in flood waters cause the deposition of different soil types in different portions of the floodplain. Sands and gravels are generally deposited near the channel itself and may form local ridges known as natural levees. Fine sands and silts are deposited on the floodplain during flooding episodes. Finally, clay can be deposited in low areas where standing water remains after a flood. This whole scenario is complicated by the fact that the river has migrated and meandered across its floodplain through recent geologic time.

Ground water was encountered during drilling in the alluvial deposits. The permeability or hydraulic conductivity of these deposits is variable. The coarser, well-sorted sands and gravels will transmit ground water at a faster rate than the silty sediments and poorly-sorted mixtures of sand, silt, and clay. The boring logs indicate these alluvial sediments occur in layers; therefore, the horizontal hydraulic conductivity will vary from layer to layer depending on the size, sorting, and packing of the soil grains.

3.2.2 Soil Chemistry

At approximately half of the boring locations, in the eastern portion of the site, a representative portion of each two-foot soil sample was retained and analyzed for PCBs. At the remaining boring locations, composite samples were collected and analyzed. Generally, two composite samples were collected at the remaining locations, one being a composite of fill material and the other being a composite of the naturally-occurring soils. All of the soil analyses for PCBs from soil borings and surficial samples are summarized in Table 6, and illustrated in Figures 5 and 6. In addition, four borings were sampled in October 1989, and resulting samples were analyzed for priority pollutant metals. These results are presented in Table 7.

The soil from the four borings drilled along the northern edge of the GE-Newell Street Parking Lot were composited into four-foot increments and analyzed for VOCs, PCBs, and base/neutral organics.

The range in total PCB concentrations was from non-detectable (<0.05 ug/gm) to a maximum of 290,000 ug/gm (ppm) (at QP-9 from four to six feet below grade).

3.2.2.1 Subsurface Soils

A total of 83 soil borings have been drilled at the site, and 237 subsurface soil samples have been collected for laboratory analysis of PCBs. In addition, 12 samples were collected and analyzed for priority pollutant metals, while another 12 samples were analyzed for VOCs, PCBs, and base/neutral organics. Of all these samples, 65 were collected as composites of individual samples collected from the fill and individual samples collected from the natural soil deposits underlying the fill. The remaining 172 samples were collected at two-foot intervals.

The results of the laboratory analyses have indicated that soils in 35 of the borings contain PCB levels in excess of 50 parts per million (ppm). A total of 84 of the 249 samples analyzed for PCBs contained PCB levels above 50 ppm (Table 6). These borings are located on the northern portion of the site and extend from the GE parking lot on the west to the F.W. Webb Company on the east (Figure 1).

Seventy-seven of the soil samples containing PCB levels above 50 ppm were collected from fill deposits; four samples were collected from the natural soils/sediments along the river bank; two samples were collected from natural soils/sediments in the GE-Newell Street Parking Lot area; and one sample was taken from the natural soils underlying the fill at Boring FW-16. PCBs in the latter sample were detected at 2,300 ppm; the sample collected immediately below contained PCBs at 0.39 ppm (Table 6). The highest PCB concentrations are found in samples

collected on the property of Quality Printing, with levels ranging from <50 ppm to 290,000 ppm at Boring QP-9 (Figure 5).

The remainder of the samples, with the exception of two borings on the property of the Italian-American Club (IA-5 and IA-8), one on the GE-Newell Street Parking Lot area (NS-1), and one on the F.W. Webb Company property (FW-16), contained concentrations between <50 to 550 ppm. The 4- to 6- and 6- to 8-foot samples at FW-16 contained PCB levels of 920 and 2,300 ppm, respectively. The 0- to 10-foot composite at IA-5 and the 4- to 6- and 6- to 8-foot samples at IA-8 contained PCB levels of 1,300, 1,400, and 23,000 ppm, respectively. The 0 to 4-foot and 4- to 8-foot composite at Boring NS-1 contained PCBs at 8,500 and 12,000 ppm, respectively.

In October 1989, four soil borings were drilled and 12 soil samples collected for laboratory analysis of priority pollutant metals. Two of these soil borings are located on the F.W. Webb Company property, and the other two are on the property of Quality Printing (Figure 5). Soil samples collected from borings QP-22 and QP-23 contained detectable levels of antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc and trace levels of beryllium, as described in Table 7. Metals detected in Boring FW-20 are antimony, arsenic, chromium, copper, lead, mercury, nickel, and zinc. The metals content decreased by an order of magnitude in the deepest sample collected (8 to 10 feet) from the boring. At Boring FW-21, arsenic, chromium, copper, lead, mercury, nickel, and zinc were detected. A

complete summary of the laboratory analysis for these samples is provided in Table 7.

3.2.2.2 Surface Soils

A total of 67 surface soil samples were collected at the site for laboratory analysis by Geraghty & Miller in May 1988 and March 1989. The results of the analyses indicated that seven of the samples contained PCBs at concentrations above 50 ppm (Figure 6). Four of these samples (QP-18, QP-19, QP-20, and QP-21) are located on the property of Quality Printing, two (MO-3 and MO-5) are on Moldmaster, Inc., property; and one (IA-20) is on the Italian-American Club property.

The PCB levels found in the surface samples collected on the Quality Printing property ranged from 94 ppm (QP-21) to 290 ppm (QP-18). Levels found on Moldmaster, Inc., property were 65 ppm (MO-5) and 91 ppm (MO-3). The highest concentration was found on the Italian-American Club property at IA-20; the PCB level in the surface soil at this location was 1,500 ppm.

3.3 Ground-Water Characteristics

3.3.1 Ground-Water Flow Direction

One complete set of ground-water elevation data was collected on June 7, 1988, from the eight wells in the Newell Street area that existed at that time. This data is presented in Table 8. From the data, a ground-water contour map was prepared (Figure 7). The ground-water elevations indicate that the ground-water flow direction is generally toward the Housatonic River (from the south to the north).

As described in Section 3.2, ground water occurs between 7 to 13 feet below grade.

Well SZ-1 is an upgradient well, though the remaining wells are downgradient of the site. The ground-water gradient under the site ranges from 0.037 on the west side of the site (based on ground-water elevation data for wells MW-1 and MW-2) to 0.012 on the east side of the site (based on ground-water elevation data for wells SZ-1 and SZ-3).

3.3.2 Ground-Water Chemistry

Ground-water samples were collected from wells MW-1, MW-2, and MW-3 in February 1989 and from wells FW-16, GE-3, IA-9, SZ-1, and SZ-3 in May 1988 and February 1989. Samples collected in 1989 were analyzed for priority pollutant VOCs, chlorinated hydrocarbons, and PCBs. The 1988 samples were analyzed for PCBs and VOCs only. A duplicate sample (SZ-R) from Well SZ-3 was analyzed, and trip and field blanks were analyzed as well. The ground-water quality data from these wells are presented in Table 8.

Elevated levels of several VOCs and base/neutral organics were detected in the ground water from Well NS-1, while the only VOCs detected in ground water from the remaining wells were low levels of chlorobenzene and methylene chloride. Methylene chloride was detected in March 1988 at Well FW-16 at a concentration less than the detection limit of 5 ug/l. This compound is a common laboratory contaminant and its detection was a one-time occurrence below the method detection limit. Chlorobenzene was detected in Well IA-9 in May 1988 at 11 ug/l, and in Well SZ-3 at <5 ug/l (May 1988), and at 1.7 ug/l

(February 1989). The occurrence of chlorobenzene at Well IA-9 in May 1988 was not reconfirmed in the February 1989 sampling of that well.

The ground-water samples collected in May 1988 for PCB analyses were unfiltered. The range of PCBs in May 1988 was between <0.4 ug/l and 5.2 ug/l. No detectable concentrations of PCBs were reported in the subsequently filtered ground-water samples collected in February 1989. Dissolved PCB concentrations were not detected in the ground water beneath the fill area above the method detection limit of 0.5 ug/l (Reference 2).

SECTION 4 - AIR QUALITY

4.1 General

At the request of the DEQE (now DEP), ambient air monitoring was conducted at two locations within the GE Facility in Pittsfield, Massachusetts, to measure the concentration of PCBs in the air. Four air samplers were placed in the southeastern corner of GE's Lyman Street Parking Lot ("Lyman") and in GE's Environmental Park near Newell Street ("Newell"). These locations were approximately 1,575 feet southwest and 1,050 feet northeast of the Thermal Oxidizer and approximately 1,250 feet northeast and 1,500 feet northwest of Newell Street, respectively. The air samplers were operated on November 30 and December 1, 2, 3, and 9, 1981. During the December 1, 2, and 3 testing, the air sampling coincided with a Test Burn of PCB oils in GE's Thermal Oxidizer.

The procedures for air sampling and for the PCB analysis were submitted to the DEP, and an approval of the air monitoring procedures was given by the Department on November 30, 1981. Analyses were performed using standard methods which have been used in the past by USEPA Region I and OSHA. During the actual air sampling, a DEP official visited a monitoring site and observed the operation of the testing equipment.

4.2 Results of Ambient Air Sampling

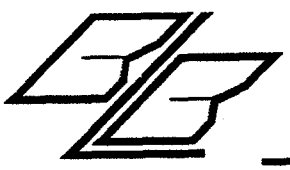
In 11 of the 12 ambient air sampling tests conducted with the higher-volume, first method, PCBs were detected in ambient air. Before any incineration of PCBs in the Oxidizer, the PCB concentration in the air at the "Lyman" location was 26.7 nanograms per cubic meter (26.7 ng/m^3) and at the "Newell" location was 54.4 ng/m^3. The ambient concentrations on another

day, after the Trial Burn when no PCB incineration was taking place, were below the detectable limit at the "Lyman" location and 1.4 ng/m^3 at the "Newell" location.

The average PCB concentrations in the ambient air on the two days when no incineration of PCBs was taking place were 13.4 ng/m^3 at the "Lyman" location and 27.8 ng/m^3 at the "Newell" location.

During the Trial Burn runs (December 1, 2, and 3, 1981), the overall average PCB concentration observed was 4.3 ng/m^3, and the overall maximum PCB concentration was 7.3 ng/m^3. At the "Lyman" location, the average ambient concentration was 4.3 ng/m^3 and the maximum concentration was 7.1 ng/m^3, while at the "Newell" location, the average and the maximum ambient PCB concentrations were 4.4 ng/m^3 and 7.3 ng/m^3, respectively. A summary of results is contained in Table 10.

The PCB concentrations measured at the two GE sites are lower than the values typically found in offices and laboratories. The values are significantly lower than the values found indoors in private dwellings, where no sources of PCBs were suspected (39 ng/m^3 to 620 ng/m^3 in four towns in North Carolina and up to 150 ng/m^3 in Pittsfield, Massachusetts). The EPA believed that the PCB levels in air that were found in the Pittsfield study did not pose a health threat to the occupants of the homes (Reference 6). For reference purposes, the 1986 NIOSH criteria for the workplace is 500,000 ng/m^3 for PCBs.



Tables

TABLE 1

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SAMPLING LOCATION SUMMARY

Site Location	--Phase I - Newell Street-- (May/July 1987)			--Phase II - Newell Street-- (April/May 1988)			--Additional Sampling-- (Feb./Mar./Aug./Oct. 1989)		
	Wells	Borings	Surface Samples	Wells	Borings	Surface Samples	Wells	Borings	Surface Samples
General Electric Co.	--	QP-10	--	GE-3	GE-1	--	NS-1	GE-4	--
	--	QP-11	--	--	GE-2	--	--	GE-5	--
	--	--	--	--	--	--	--	GE-6	--
	--	--	--	--	--	--	--	GE-7	--
								NS-2	
								NS-3	
								NS-4	
Quality Printing	MW-1*	QP-1	--	--	QP-12	QP-16	--	QP-22	--
	MW-2*	QP-2	--	--	QP-13	QP-17	--	QP-23	--
	MW-3*	QP-3	--	--	QP-14	QP-18	--	--	--
	--	QP-4	--	--	QP-15	QP-19	--	--	--
	--	QP-5	--	--	--	QP-20	--	--	--
	--	QP-6	--	--	--	QP-21	--	--	--
	--	QP-7	--	--	--	--	--	--	--
	--	QP-8	--	--	--	--	--	--	--
	--	QP-9	--	--	--	--	--	--	--
Moldmaster	--	--	--	--	MM-1	MM-4	--	--	MM-8
	--	--	--	--	MM-2	MM-5	--	--	--
	--	--	--	--	MM-3	MM-6	--	--	--
	--	--	--	--	--	MM-7	--	--	--

(see notes on Page 5)

TABLE 1
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SAMPLING LOCATION SUMMARY

Site Location	--Phase I - Newell Street-- (May/July 1987)			--Phase II - Newell Street-- (April/May 1988)			--Additional Sampling-- (Feb./Mar./Aug./Oct. 1989)		
	Wells	Borings	Surface Samples	Wells	Borings	Surface Samples	Wells	Borings	Surface Samples
Italian-American Club	--	IA-1	--	IA-9	IA-7	IA-10	--	--	IA-13
	--	IA-2	--	--	IA-8	IA-11	--	--	IA-14
	--	IA-3	--	--	--	IA-12	--	--	IA-15
	--	IA-4	--	--	--	--	--	--	IA-16
	--	IA-5	--	--	--	--	--	--	IA-17
	--	IA-6	--	--	--	--	--	--	IA-18
	--	--	--	--	--	--	--	--	IA-19
	--	--	--	--	--	--	--	--	IA-20
	--	--	--	--	--	--	--	--	IA-21
Vincent J. Stracuzzi	--	SZ-1	--	SZ-1	--	SZ-8	--	--	SZ-19
	--	SZ-2	--	SZ-3	--	SZ-9	--	--	SZ-20
	--	SZ-3	--	--	--	SZ-10	--	--	--
	--	SZ-4	--	--	--	SZ-11	--	--	--
	--	SZ-5	--	--	--	SZ-12	--	--	--
	--	SZ-6	--	--	--	SZ-13	--	--	--
	--	SZ-7	--	--	--	SZ-14	--	--	--
	--	--	--	--	--	SZ-15	--	--	--
	--	--	--	--	--	SZ-16	--	--	--
	--	--	--	--	--	SZ-17	--	--	--
	--	--	--	--	--	SZ-18	--	--	--

(see notes on Page 5)

TABLE 1
(Cont'd.)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SAMPLING LOCATION SUMMARY

Site Location	--Phase I - Newell Street-- (May/July 1987) Wells	Borings	Surface Samples	--Phase II - Newell Street-- (April/May 1988) Wells	Borings	Surface Samples	--Additional Sampling-- (Feb./Mar./Aug./Oct. 1989) Wells	Borings	Surface Samples
Anthony	--	MO-1	--	--	--	MO-3	--	--	MO-6
Marchetto	--	MO-2	--	--	--	MO-4	--	--	MO-7
Contractors	--	--	--	--	--	MO-5	--	--	MO-8
	--	--	--	--	--	--	--	--	MO-9
	--	--	--	--	--	--	--	--	MO-10
	--	--	--	--	--	--	--	--	MO-11
F.W. Webb	--	FW-1	--	FW-16	FW-7	FW-15	--	--	--
Company	--	FW-2	--	--	FW-8	FW-15R	--	--	--
	--	FW-3	--	--	FW-9	FW-17	--	--	--
	--	FW-4	--	--	FW-10	--	--	--	--
	--	FW-5	--	--	FW-11	--	--	--	--
	--	--	--	--	FW-12	--	--	--	--
	--	--	--	--	FW-13	--	--	--	--
	--	--	--	--	FW-14	--	--	--	--
Pittsfield	--	FW-6	--	--	--	--	--	FW-20	FW-18
Transmission	--	--	--	--	--	--	--	FW-21	FW-19
Company									

(see notes on Page 5)

TABLE 1
(Cont'd.)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SAMPLING LOCATION SUMMARY

Site Location	--Phase I - Newell Street-- (May/July 1987)			--Phase II - Newell Street-- (April/May 1988)			--Additional Sampling-- (Feb./Mar./Aug./Oct. 1989)		
	Wells	Borings	Surface Samples	Wells	Borings	Surface Samples	Wells	Borings	Surface Samples
Allegroni	--	LA-1	--	--	--	LA-4	--	--	LA-5
Construction	--	LA-2	--	--	--	--	--	--	--
Company	--	LA-3	--	--	--	--	--	--	--
Hibbard	--	--	--	--	--	PK-1	--	--	--
Playground	--	--	--	--	--	PK-2	--	--	--
	--	--	--	--	--	PK-3	--	--	--
	--	--	--	--	--	PK-4	--	--	--
	--	--	--	--	--	PK-5	--	--	--
	--	--	--	--	--	PK-6	--	--	--
	--	--	--	--	--	PK-7	--	--	--
	--	--	--	--	--	PK-8	--	--	--
	--	--	--	--	--	PK-9	--	--	--
	--	--	--	--	--	PK-10	--	--	--
	--	--	--	--	--	PK-11	--	--	--
	--	--	--	--	--	PK-11R	--	--	--
Ravin Auto	--	--	--	--	--	--	--	RV-1	RV-4
Body	--	--	--	--	--	--	--	RV-2	RV-5
	--	--	--	--	--	--	--	RV-3	RV-6

(see notes on Page 5)

TABLE 1
(Cont'd.)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SAMPLING LOCATION SUMMARY

Site Location	--Phase I - Newell Street-- (May/July 1987)			--Phase II - Newell Street-- (April/May 1988)			--Additional Sampling-- (Feb./Mar./Aug./Oct. 1989)		
	Wells	Borings	Surface Samples	Wells	Borings	Surface Samples	Wells	Borings	Surface Samples
Housatonic River Bank	--	--	--	--	RB-1-3	--	--	--	--
	--	--	--	--	RB-1-6	--	--	--	--
	--	--	--	--	RB-1-9	--	--	--	--
	--	--	--	--	RB-2-3	--	--	--	--
	--	--	--	--	RB-2-6	--	--	--	--
	--	--	--	--	RB-2-9	--	--	--	--
	--	--	--	--	RB-3-3	--	--	--	--
	--	--	--	--	RB-3-6	--	--	--	--
	--	--	--	--	RB-3-9	--	--	--	--
	--	--	--	--	RB-4-3	--	--	--	--
	--	--	--	--	RB-4-6	--	--	--	--
	--	--	--	--	RB-4-9	--	--	--	--

Note:

* Wells installed under the direction of O'Brien & Gere Engineers. All other wells, borings, and surface samples were performed under the direction of Geraghty & Miller, Inc.

TABLE 2

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

THICKNESS OF FILL MATERIAL

Site	Boring Designation	Thickness of Clean Fill (in feet below land surface)[a]	Thickness of Industrial Fill (in feet below land surface)
Quality Printing	QP-1	0-2	2-9.5
	QP-2	0	0-11.5
	QP-3	0	0-9.5
	QP-4	0-13	0-13
	QP-5	0-2	2-10
	QP-6	0	0-9
	QP-7	0	0-8
	QP-8	0	0-2
	QP-9	0	0-11
	QP-12	0	0-10
	QP-13	0	8-10[b]
	QP-14	0	0-10
	QP-15	0	0-8
General Electric Company	QP-10	0	0-8
	QP-11	0-2	0
	GE-1	0-3	0
	GE-2	0-4	0
	GE-3	0-7	0
	GE-4	0-3	0
	GE-5	0-3.5	0
	GE-6	0-1.5	0
	GE-7	0-1	0
	NS-1	0-2	2-18
	NS-2	4-12	2-4
	NS-3	8-12	0-8
	NS-4	4-12	0-4
Italian-American Club	IA-1	0	0-8
	IA-2	0	0-11.5
	IA-3	0	0
	IA-4	0-2	0-4.5
	IA-5	0	0-9
	IA-6	0	0-9
	IA-7	0	8-12[b]
	IA-8	0	0-12
	IA-9	0	0-6

(see notes on Page 3)

TABLE 2
(Cont'd.)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

THICKNESS OF FILL MATERIAL

Site	Boring Designation	Thickness of Clean Fill (in feet below land surface)[a]	Thickness of Industrial Fill (in feet below land surface)
Vincent J. Stracuzzi	SZ-1	0	0-2.5
	SZ-2	0-2	2-6
	SZ-3	0	0-8
	SZ-4	0	0-12
	SZ-5	0	0-5
	SZ-6	0-2	2-10
	SZ-7	0-4	4-12
Anthony Marchetto Contractors	MO-1	0	0-6
	MO-2	0-2	2-6
F.W. Webb Company	FW-1	0	0-14
	FW-2	0	0-6
	FW-3	0	0-4.5
	FW-4	0	0-3
	FW-5	0-2.5	0
	FW-7	0-4	---[c]
	FW-8	0-4	---[c]
	FW-9	0-2	0
	FW-10	0-4	---[c]
	FW-11	0-4	---[c]
	FW-12	0-4	---[c]
	FW-13	0-4	---[c]
	FW-14	0-2	---[c]
	FW-16	0-4	0
Pittsfield Transmission Company	FW-6	0	0-11
Allegroni Construction Co., Inc.	LA-1	0	0
	LA-2	0	0-4
	LA-3	0	0
Moldmaster	MM-1	0	0-8
	MM-2	0-2	2-11
	MM-3	0-6(8)	6-8[b]

(see notes on Page 3)

TABLE 2
(Cont'd.)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

THICKNESS OF FILL MATERIAL

Site	Boring Designation	Thickness of Clean Fill (in feet below land surface)[a]	Thickness of Industrial Fill (in feet below land surface)
Housatonic River Bank	RB-1-3	0	0
	RB-1-6	0	0
	RB-1-9	0	0
	RB-2-3	0	0
	RB-2-6	0	0
	RB-2-9	0	0
	RB-3-3	0	0
	RB-3-6	0	0
	RB-3-9	0	0
	RB-4-3	0	0
	RB-4-6	0	0
	RB-4-9	0	0
Ravin Auto Body	RV-1	0	0-9.5
	RV-2	0	0-9
	RV-3	0	0-8

Notes:

[a] Clean fill was determined in the field based on visual observation of the material and not laboratory results for soil samples.

[b] Ranges are given for borings in which the exact thickness of fill material was not determined due to poor sample recovery.

[c] Boring did not reach the bottom of the fill material.

TABLE 3

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

VOC SCREENING OF SOILS[1]

Sample Interval (feet)	Boring Number and TIP Results (ppm)												
	GE-1	GE-2	GE-3	IA-7	IA-8	IA-9	MM-1	MM-2	MM-3	QP-12	QP-13	QP-14	QP-15
0 - 2	<1	<1	<1	<1	1.0	2.7	3.4	4.6	4.2	9.1	7.8	3.4	8.5
2 - 4	<1	<1	<1	4.6	1.7	1.6	3.4	4.0	3.8	13.3	7.0	11.1	10.8
4 - 6	<1	<1	<1	2.3	1.6	1.7	3.2	7.5	3.3	9.1	7.3	10.3	13.4
6 - 8	--	<1	<1	1.6	1.2	2.0	3.3	21.4	NR	14.8	7.6	16.1	23.6
8 - 10	--	<1	2.0	NR	4.2	1.9	2.9	27.1	3.5	23.7	NR	24.3	9.2
10 - 12	--	--	<1	NR	8.4	2.0	1.5	8.2	<1	8.4	5.1	7.9	3.5
12 - 14	--	--	<1	1.3	<1	1.7	1.6	2.9	--	3.6	3.9	2.4	--
14 - 16	--	--	1.2	--	--	1.8	<1	--	--	--	--	--	--
16 - 18	--	--	<1	--	--	--	--	--	--	--	--	--	--
18 - 20	--	--	<1	--	--	--	--	--	--	--	--	--	--

(see notes on Page 4)

TABLE 3
(Cont'd.)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

VOC SCREENING OF SOILS[1]

Sample Interval (feet)	Boring Number and TIP Results (ppm)												
	IA-1	IA-2	IA-3	IA-4	IA-5	IA-6	SZ-1	SZ-2	SZ-3	SZ-4	SZ-5	SZ-6	SZ-7
0 - 2	2.6	1.3	0.6	0.9	1.1	0.7	2.5	2.4	2.0	4.6	1.4	1.5	0.9
2 - 4	1.9	1.4	0.7	1.2	1.1	0.7	3.6	2.5	5.2	4.7	1.5	1.8	3.6
4 - 6	1.5	1.4	1.0	0.6	1.3	NR	3.5	3.2	63.8	10.6	1.2	3.5	24.1
6 - 8	30.4	28.1	1.0	0.7	3.3	1.9	2.1	1.2	48.4	12.3	1.5	7.5	11.8
8 - 10	2.5	30.1	--	--	2.1	25.6	4.5	1.6	25.2	NR	--	3.6	30.1
10 - 12	1.4	22.8	--	--	1.6	1.2	--	1.9	3.6	122	--	25.9	35.3
12 - 14	1.0	1.6	--	--	0.9	0.7	--	--	--	13.5	--	7.1	3.9
14 - 16	--	--	--	--	1.1	--	--	--	--	--	--	--	5.8

(see notes on Page 4)

TABLE 3
(Cont'd.)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

VOC SCREENING OF SOILS[1]

Sample Interval (feet)	Boring Number and TIP Results (ppm)													
	MO-1	MO-2	FW-1	FW-2	FW-3	FW-4	FW-5	FW-6	LA-1	LA-2	LA-3	MW-1*	MW-2*	MW-3*
0 - 2	7.1	2.9	4.2	0.5	1.6	0.3	0.9	1.8	1.4	NR	0.5	0	0	0
2 - 4	18.4	1.1	6.6	0.5	1.2	0.8	1.2	6.8	1.4	0.4	0.2	0	0	0
4 - 6	15.2	1.3	7.3	1.5	1.6	0.9	1.3	13.2	0.9	0.5	0.2	0	0	0
6 - 8	6.5	2.5	4.4	0.2	1.6	1.1	1.4	7.9	0.8	0.4	0.1	0	0	0
8 - 10	5.3	2.3	4.1	0.6	1.5	0.6	1.0	5.0	0.6	0.4	0.2	0	0	0
10 - 12	5.2	--	3.1	1.3	--	1.1	--	10.2	0.5	0.4	--	0	0	0
12 - 14	--	--	1.5	--	--	--	--	3.3	--	--	--	0	0	0
14 - 16	--	--	2.9	--	--	--	--	5.4	--	--	--	0	0	0
16 - 18	--	--	3.1	--	--	--	--	--	--	--	--	--	0	0
18 - 20	--	--	--	--	--	--	--	--	--	--	--	--	0	0
20 - 22	--	--	--	--	--	--	--	--	--	--	--	--	0	0

(see notes on Page 4)

TABLE 3
(Cont'd.)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

VOC SCREENING OF SOILS[1]

Sample Interval Feet	Boring Number and TIP Results (ppm) NS-1	NS-2	NS-3	NS-4
0-4	4	0	1	1
4-8	4	0	1	1
8-12	4	0	1	1
12-16	3	--	--	--

Notes:

1	These values are qualitative only and do not represent the absolute concentrations of any volatile organic compound in the soil core, whether the compound is natural or manmade. Concentrations in ppm.
*	Soil samples were analyzed by O'Brien & Gere Engineers personnel using an HNU photoionization instrument.
--	No sample collected.
NR	No recovery of sample.
ppm	Parts per million.

TABLE 4

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

WELL CONSTRUCTION DETAILS

Well Designation	Date Completed	Well Diameter (inches)	Total Depth (feet below land surface)	Screen Setting (feet below land surface)	Interval Sand Packed (feet below land surface)	Sealed with Bentonite (feet below land surface)	Sealed with Grout (feet below land surface)	Elevation of Measuring Point (feet above mean sea level)
FW-16	4/29/88	2	15.5	5 - 15	3 - 15.5	2 - 3	0 - 2	983.29
GE-3	5/05/88	2	19.5	9.5 - 19.5	7 - 19.5	6 - 7	0 - 6	984.26
IA-9	5/06/88	2	17.0	7 - 17	5 - 17.0	4 - 5	0 - 4	984.20
SZ-1	5/09/88	2	16.5	6 - 16	4 - 16.5	3 - 4	0 - 3	984.87
SZ-3	5/09/88	2	19.0	4 - 19	2 - 19.0	1 - 2	0 - 1	986.40
NS-1	8/30/89	2	17.5	7.5 - 17.5	5 - 17.5	3 - 5	0 - 3	---

TABLE 5

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

GROUND-WATER ELEVATIONS - JUNE 7, 1988

Well Designation	Measuring Point (feet above mean sea level)	Depth to Water (feet below measuring point)	Elev. of Water (feet above mean sea level)
GE-3	984.96	11.30	973.66
MW-1*	987.37	11.52	975.85
MW-2*	986.45	13.57	972.88
MW-3*	985.94	11.36	974.58
IA-9	984.20	11.45	972.75
SZ-1	984.87	7.77	977.10
SZ-3	986.40	13.37	973.03
FW-16	983.29	10.91	972.38

Note:

* These monitoring wells were installed by O'Brien & Gere Engineers at this site prior to work performed by Geraghty & Miller, Inc. Geraghty & Miller installed the remaining wells.

TABLE 6

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
Quality Printing						
QP-1	5/7/87	0 - 10	<0.8	30.	5.9	36
		10 - 14	<0.05	<0.05	<0.05	<0.05
QP-2	5/7/87	0 - 12	<0.3	13	2.8	16
		12 - 20	<0.05	0.47	0.13	0.60
QP-3	5/7/87	0 - 2	<4	310	69	380
		2 - 4	<1	84	21	110
		4 - 6	<4	150	17	170
		6 - 8	<2	77	7.3	84
		8 - 10	<2	77	54	130
		10 - 12	<0.1	5.7	0.75	6.5
		12 - 14	<0.05	0.05	<0.05	0.05
		14 - 16	<0.05	0.29	<0.05	0.29
QP-4	5/7/87	0 - 14	<0.05	0.10	0.10	0.20
		14 - 18	<0.05	<0.05	<0.05	<0.05
QP-5	5/7/87	0 - 2	<0.05	<0.05	<0.05	<0.05
		2 - 4	<0.05	0.06	<0.05	0.06
		4 - 6	<3	330	80.	410
		6 - 8	<4	200	41	240
		8 - 10	<2	42	13	55
		10 - 12	<0.05	0.07	<0.05	0.07
		12 - 14	<0.05	<0.05	<0.05	<0.05
QP-6	5/7/87	0 - 10	<100	17,000	<600	17,000
		10 - 14	<0.05	0.66	<0.06	0.66
QP-7	5/7/87	0 - 8	<0.7	53	8.5	62
		8 - 14	<0.5	0.28	<0.05	0.28
QP-8	5/8/87	0 - 4	<0.05	0.43	0.22	0.65
		4 - 8	<0.05	0.13	<0.05	0.13

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
QP-9	5/8/87	0 - 2	<7	850	<20	850
		2 - 4	<1,000	120,000	<5,000	120,000
		4 - 6	<2,000	290,000	<9,000	290,000
		6 - 8	<1	52	9.0	61
		8 - 10	<1	33	<2	33
		10 - 12	<1	60.	<5	60.
		12 - 14	<0.05	0.34	<0.5	0.34
QP-12	5/4/88	0 - 2	<2.2***	300	52	350
		2 - 4	<6.1***	100	4.5	100
		4 - 6	<0.69***	72	23	95
		6 - 8	<11***	350**	<55***	350
		8 - 10	<2.2***	120	25	140
		10 - 12	<4.6***	140	31	170
		12 - 14	<0.05	0.23	0.05**	0.28
QP-13	5/4/88	0 - 2	<0.05	1.4**	1.5**	2.9
		2 - 4	<0.05	1.6**	0.77**	2.4
		4 - 6	<0.17***	12	9.3**	21
		6 - 8	<9.4***	<80***	210**	210
		10 - 12	<0.05	1.2	0.23	1.4
		12 - 14	<0.05	0.15	0.08**	0.23
QP-14	5/4/88	0 - 2	<0.18***	20	16	36
		2 - 4	<1.7***	270	60**	330
		4 - 6	<1.4***	200	59**	260
		6 - 8	<7.3***	310	65	380
		8 - 10	<9.1***	430	92	520
		10 - 12	<5.8***	250	33	280
		12 - 14	<0.21***	10	1.8	12
QP-15	5/4/88	0 - 2	<0.43***	63	17**	80
		2 - 4	<1.7***	220	74**	290
		4 - 6	<0.78***	120	34	150
		6 - 8	<80***	580**	110	690
		8 - 10	<1.9***	90**	20**	110
		10 - 12	<0.11***	0.69**	0.19	0.88

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
QP-16	5/4/88	Surface Sample	<0.05	1.5	0.49	2.0
QP-17	5/4/88	Surface Sample	<0.05	3.4	1.2	4.6
QP-18	5/4/88	Surface Sample	<1.7***	230	58	290
QP-19	5/4/88	Surface Sample	<0.69***	94	20	110
QP-20	5/4/88	Surface Sample	<1.7***	250	28	280
QP-21	5/4/88	Surface Sample	<0.69	80	14	94
General Electric Company						
QP-10	5/8/87	0 - 8	<1	71	23	94
		8 - 12	<0.05	0.06	<0.05	0.06
QP-11	5/8/87	0 - 2	<0.05	0.95	0.78	1.7
		2 - 12	<0.05	<0.05	<0.05	<0.05
GE-1	5/4/88	0 - 2	<0.11***	3.6	5.1**	8.7
		2 - 4	<0.18***	18	4.2	22
		4 - 6	<0.05	0.05	<0.05	0.05
GE-2	5/4/88	0 - 4	<1.8***	120	24**	140
		4 - 8	<3.3***	150	19	170
GE-4	2/6/89	0 - 2	<0.05	0.11	0.06	0.17
		2 - 4	<0.05	5.2	3.7	8.9
		4 - 6	<0.05	5.7	2.2	7.9
		6 - 8	<0.05	<0.05	<0.05	<0.05
GE-5	2/6/89	0 - 2	<0.05	0.4	0.17	0.57
		2 - 4	<2.4	240	13	250
		4 - 6	<0.05	<0.05	<0.05	<0.05
		6 - 8	<0.05	<0.05	<0.05	<0.05
GE-6	2/6/89	0 - 2	<0.05	6.3	1.1	7.4
		2 - 4	<0.05	<0.05	<0.05	<0.05
		4 - 6	<0.05	<0.05	<0.05	<0.05

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
GE-7	2/6/89	0 - 2	<0.05	1.1	0.26	1.7
		2 - 4	<0.05	<0.05	<0.05	<0.05
		4 - 6	<0.05	<0.05	<0.05	<0.05
NS-1	8/29/89	0 - 4	<100	8,500	<400	8,500
		4 - 8	<200	12,000	<400	12,000
		8 - 12	<4	310	<10	310
NS-2	8/29/89	0 - 4	<2	220	<7	220
		4 - 8	<2	200	<10	200
		8 - 12	<3	260	<10	260
NS-3	8/29/89	0 - 4	<2	240	<10	240
		4 - 8	<0.1	16	4.4	20
		8 - 12	<0.05	1.1	0.2	1.3
NS-4	8/29/89	0 - 4	<0.2	29	1.7	31
		4 - 8	<0.05	0.55	0.05	0.6
		8 - 12	<0.05	1.5	0.13	1.6
Italian-American Club						
IA-1	7/1/87	0 - 10	<6	160	42	200
		10 - 14	<0.05	0.06	0.41	0.47
IA-2	7/1/87	0 - 2	<1	150	<5	150
		2 - 4	<1	84	<5	84
		4 - 6	<0.7	57	<6	57
		6 - 8	<8	20.	8.0	28
		8 - 10	<2	39	<2	39
		10 - 12	<4	59	11	70.
		12 - 14	<0.2	2.0	0.23	2.2
IA-3	7/1/87	0 - 2	<0.05	0.40	0.23	0.63
		2 - 8	<0.05	<0.05	<0.05	<0.05
IA-4	7/1/87	0 - 4	<0.1	11	8.1	19
		4 - 8	<0.05	0.16	0.16	0.32

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
IA-5	7/2/87	0 - 10	<20	78	1,200	1,300
		10 - 16	<0.05	0.41	0.25	0.66
IA-6	7/2/87	0 - 10	<4	330	<10	330
		10 - 14	<0.05	0.14	<0.05	0.14
IA-7	5/6/88	0 - 2	<0.68***	9.8	100	110
		2 - 4	<0.05	0.38	0.28	0.66
		4 - 6	<0.05	1.6	3.0	4.6
		6 - 8	<14	<125***	300**	300
		12 - 14	<0.12***	6.7**	2.2	8.9
IA-8	5/6/88	0 - 2	<6.8***	430	120	550
		2 - 4	<16***	170	110	280
		4 - 6	<10***	1,200	200	1,400
		6 - 8	<350***	23,000	<1,700***	23,000
		8 - 10	<0.62***	440	230	670
		10 - 12	<12***	550	39	590
		12 - 14	<0.05	1.4	0.20	1.6
IA-9	5/6/88	0 - 2	<0.26***	34	8.0	42
		2 - 4	<0.42***	52	11**	63
		4 - 6	<0.07***	5.0	2.9**	7.9
		6 - 8	<1.7***	270	53**	320
		8 - 10	<0.05	0.28	<0.05	0.28
		10 - 12	<0.05	0.28	<0.05	0.28
		12 - 14	<0.05	0.58	0.07	0.65
		14 - 16	<0.05	0.17	<0.05	0.17
IA-10	5/6/88	Surface Sample	<0.17***	18	7.2	25
IA-11	5/6/88	Surface Sample	<0.05	2.4	2.6**	5.0
IA-12	5/6/88	Surface Sample	<0.05	0.12	0.16	0.28
IA-13	3/17/89	Surface Sample	<0.05	4.3**	3.6	7.9
IA-14	3/17/89	Surface Sample	<0.05	5.4**	5.8	11
IA-15	3/17/89	Surface Sample	<0.05	1.0**	1.9	2.9
IA-16	3/17/89	Surface Sample	<0.05	2.9**	3.3	6.2
IA-17	3/17/89	Surface Sample	<0.05	1.0**	1.4	2.4

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
IA-18	3/17/89	Surface Sample	<0.05	1.1**	1.5	2.6
IA-19	3/17/89	Surface Sample	<0.05	1.3**	1.7*	3
IA-20	3/17/89	Surface Sample	<16	1,500	<130	1,500
IA-21	3/17/89	Surface Sample	<0.05	0.24**	0.22	0.46
Vincent J. Stracuzzi						
SZ-1	7/8/87	0 - 4	<0.05	<0.05	0.08	0.08
		4 - 10	<0.05	<0.05	<0.05	<0.05
SZ-2	7/8/87	0 - 6	<0.6	85	76	160
		6 - 12	<0.06	3.5	3.1	6.0
SZ-3	7/10/87	0 - 8	<3	230	120	350
		8 - 12	<0.05	0.24	0.09	0.33
SZ-4	7/10/87	0 - 2	<0.05	0.68	0.38	1.1
		2 - 4	<0.6	4.5	2.0	6.5
		4 - 6	<2	150	170	320
		6 - 8	<0.1	0.9	20	21
		10 - 12	<4	350	75	430
		12 - 14	<0.2	16	4.4	20
SZ-5	7/10/87	0 - 6	<0.05	5.8	4.5	10
		6 - 8	<0.05	<0.05	<0.05	<0.05
SZ-6	7/14/87	0 - 12	<0.1	1.6	9.1	11
		12 - 14	<0.05	<0.05	<0.06	<0.06
SZ-7	7/14/87	0 - 12	<0.2	20	4.2	24
		12 - 16	<0.05	<0.05	<0.05	<0.05
SZ-8	5/9/88	Surface Sample	<0.05	0.42**	0.45**	0.87
SZ-9	5/9/88	Surface Sample	<0.17***	9.6	4.8	14
SZ-10	5/9/88	Surface Sample	<0.05	1.8	0.61	2.4
SZ-11	5/9/88	Surface Sample	<0.05	<0.05	0.10	0.10

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
SZ-12	5/9/88	Surface Sample	<0.05	<0.23***	0.16	0.16
SZ-13	5/9/88	Surface Sample	<0.05	<0.22***	0.44**	0.44
SZ-14	5/9/88	Surface Sample	<0.05	<0.13***	0.28**	0.28
SZ-15	5/9/88	Surface Sample	0.32	1.4	2.6	4.3
SZ-16	5/9/88	Surface Sample	<0.05	0.39	0.27	0.66
SZ-17	5/9/88	Surface Sample	<0.05	0.80	0.26	1.1
SZ-18	5/9/88	Surface Sample	<0.05	0.33	0.11	0.44
SZ-19	3/16/89	Surface Sample	<0.05	0.25**	0.30*	0.55
SZ-20	3/16/89	Surface Sample	<0.05	0.18**	0.31*	0.49
Anthony Marchetto Contractors						
MO-1	7/9/87	0 - 2	<0.6	64	76	140
		2 - 4	<0.2	21	16	37
		4 - 6	<2	230	150	380
		6 - 8	<0.5	0.26	0.22	0.48
		8 - 10	<0.4	18	5.1	23
		10 - 12	0.05	2.5	0.79	3.3
MO-2	7/10/87	0 - 6	<0.05	8.1	0.77	8.9
		6 - 12	<0.05	0.29	<0.05	0.29
MO-3	5/10/88	Surface Sample	<0.68***	81	10	91
MO-4	5/10/88	Surface Sample	<0.17***	8.9	14	23
MO-5	5/10/88	Surface Sample	<0.34***	26	39	65
MO-6	3/16/89	Surface Sample	<0.37	35	9.0	44
MO-7	3/16/89	Surface Sample	<0.18	10**	17	27
MO-8	3/16/89	Surface Sample	<0.05	1.5**	2.1	3.6
MO-9	3/16/89	Surface Sample	<0.07	6.8**	7.4	14
MO-10	3/16/89	Surface Sample	<0.05	5.8**	1.6	7.4
MO-11	3/16/89	Surface Sample	<0.07	7.8**	4.0	12

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
F.W. Webb Company						
FW-1	7/7/87	0 - 2	<0.1	13	3.6	17
		2 - 4	<1	130	76	210
		4 - 6	<0.7	42	6.8	49
		6 - 8	<1	44	17	61
		8 - 10	<0.8	38	28	66
		10 - 12	<0.05	2.3	0.86	3.2
		12 - 14	<0.05	0.69	0.16	0.85
		14 - 16	<0.05	<0.05	<0.05	<0.05
		16 - 18	<0.05	<0.05	<0.05	<0.05
FW-2	7/7/87	0 - 6	<0.2	17	5.4	22
		6 - 12	<0.05	0.05	<0.05	0.05
FW-3	7/7/87	0 - 6	<0.05	0.06	<0.05	0.06
		6 - 10	<0.05	<0.05	<0.05	<0.05
FW-4	7/7/87	0 - 4	<0.1	<0.5	5.5	5.5
		6 - 12	<0.05	0.28	0.36	0.64
FW-5	7/7/87	0 - 4	<0.05	0.26	0.13	0.39
		4 - 10	<0.05	<0.05	<0.05	<0.05
FW-7	4/27/88	0 - 4	<3.5***	360	44	400
FW-8	4/27/88	0 - 4	<0.05	3.7**	3.1**	6.8
FW-9	4/27/88	0 - 4	<0.05	1.5**	0.76**	2.3
FW-10	4/27/88	0 - 4	<0.05	1.2	0.49	1.7
FW-11	4/27/88	0 - 4	<0.18***	16	4.9	21
FW-12	4/27/88	0 - 4	<0.07***	9.2	4.6**	14
FW-13	4/27/88	0 - 4	<0.05	0.45**	0.18**	0.63
FW-14	4/27/88	0 - 4	<0.18***	11	14**	25
FW-15	4/27/88	Surface Sample	<0.05	2.5	2.9**	5.4
FW-15R	4/27/88	Surface Sample	<0.6	4.1	2.4	6.5

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
FW-16	4/29/88	0 - 2	<0.68***	94	33	130
		2 - 4	<0.34***	46	16	62
		4 - 6	<10***	830	95	920
		6 - 8	<34***	2,200	76	2,300
		8 - 10	<0.05	0.33	0.06	0.39
		10 - 12	<0.05	0.76	0.29	1.0
		12 - 14	<0.05	0.19	0.08	0.27
FW-17	5/5/88	Surface Sample	<0.37***	0.31	0.16	0.47
Pittsfield Transmission Co.						
FW-6	7/7/87	0 - 10	<0.05	2.5	2.7	5.2
		10 - 16	<0.05	0.70	0.44	1.1
FW-18	3/16/89	Surface Sample	<0.05	1.2**	1.2	2.4
FW-19	3/16/89	Surface Sample	<0.05	1.0**	0.62	1.6
Allegroni Construction Company						
LA-1	7/8/87	0 - 2	<0.05	0.29	0.13	0.42
		2 - 4	<0.05	<0.05	<0.05	<0.05
		4 - 6	<0.05	<0.05	<0.05	<0.05
		6 - 8	<0.05	0.07	0.06	0.13
		8 - 10	<0.05	<0.05	<0.05	<0.05
		10 - 12	<0.05	<0.05	<0.05	<0.05
LA-2	7/8/87	2 - 6	<0.05	<0.05	1.3	1.3
		6 - 12	<0.05	<0.05	<0.05	<0.05
LA-3	7/9/87	0 - 10	<0.05	<0.05	<0.05	<0.05
LA-4	5/5/88	Surface Sample	<0.5	1.6	1.2	2.8
LA-5	3/16/89	Surface Sample	<0.05	0.16**	0.33	0.49

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
Moldmaster						
MM-1	5/4/88	0 - 8	<0.17***	18	7.3**	25
		8 - 16	<0.05	0.05	0.05	0.10
MM-2	5/4/88	0 - 12	<0.10***	5.6**	1.4	7.0
		12 - 14	<0.05	0.81	0.11	0.92
MM-3	5/4/88	0 - 2	<0.05	0.18	0.06	0.24
		2 - 4	<0.05	0.28	0.08	0.36
		4 - 6	<0.05	<0.05	<0.05	<0.05
		8 - 10	<0.05	0.11	<0.05	0.11
		10 - 12	<0.05	<0.05	<0.05	<0.05
MM-4	5/4/88	Surface Sample	<0.05	2.4**	1.6**	4.0
MM-5	5/4/88	Surface Sample	<0.05	0.83**	0.36**	1.2
MM-6	5/4/88	Surface Sample	<0.05	<0.05	0.10	0.10
MM-7	5/4/88	Surface Sample	<0.06***	0.88**	0.79**	1.7
MM-8	3/16/89	Surface Sample	<0.05	0.28**	0.38	0.66
Hibbard Playground						
PK-1	4/28/88	Surface Sample	<0.05	0.07	0.21**	0.28
PK-2	4/28/88	Surface Sample	<0.05	0.1**	0.77**	0.87
PK-3	4/28/88	Surface Sample	<0.05	<0.05	0.06**	0.06
PK-4	4/28/88	Surface Sample	<0.05	<0.05	0.35**	0.35
PK-5	4/28/88	Surface Sample	<0.05	<0.05	0.22**	0.22
PK-6	4/28/88	Surface Sample	<0.05	<0.05	0.24**	0.24
PK-7	4/28/88	Surface Sample	<0.05	0.06**	0.46**	0.52
PK-8	4/28/88	Surface Sample	<0.05	0.06**	0.33**	0.39
PK-9	4/28/88	Surface Sample	<0.05	<0.05	0.09**	0.09
PK-10	4/28/88	Surface Sample	<0.05	<0.05	0.35**	0.35
PK-11	4/28/88	Surface Sample	<0.18***	0.35**	1.1**	1.4
PK-11R	4/28/88	Surface Sample	<0.5	0.13	0.72*	0.85

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
Housatonic River Bank						
RB-1	5/16/88	3	<1.7	100	26**	130
		6	<2.9	130	34**	160
		9	<1.5	85	23**	110
RB-2	5/16/88	3	<0.07	2.8**	1.5**	4.3
		6	<0.07	2.4	2.5	4.9
		9	<0.07	9.2	3.4**	12.6
RB-3	5/16/88	3	<0.38	<13***	14**	14
		6	<0.39	<13***	18**	18
		9	<0.47	30	8.7	39
RB-4	5/16/88	3	<0.05	2.6	1.5	4.1
		6	<0.34	15	14	29
		9	<1.5	52	24	76
Ravin Auto Body						
RV-1	2/16/89	0 - 2	<0.05	1.2	2.4	3.6
		2 - 4	<0.49	66	57	120
		4 - 6	<2.4	67**	36**	100
		6 - 8	<7.4	170	180	350
		8 - 10	<5.1	<3.0	61**	61
		10 - 12	<2.3	<2.8	53	53
		12 - 14	<0.05	0.15**	0.19**	0.34
		14 - 16	<0.7	3.2	5.7	8.9
RV-2	2/16/89	0 - 2	<0.05	<0.05	<0.05	<0.05
		2 - 4	<0.05	1.6	1	2.6
		4 - 6	<0.05	0.7	1.3	2
		6 - 8	<34	820	280	1,100
		8 - 10	<0.08	1.7**	0.95**	2.6
		10 - 12	<0.05	0.22**	0.06**	0.28
		12 - 14	<0.05	<0.05	<0.05	<0.05
		14 - 16	<0.05	0.15	<0.05	0.15

(see notes on Page 12)

TABLE 6
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PCB CONCENTRATIONS IN SOIL (PPM - Dry Weight)

Soil Boring Number	Date Collected	Depth (feet below land surface)	Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors
RV-3	2/16/89	0 - 2	<0.05	0.09	0.41	0.5
		2 - 4	<0.05	0.07	0.09	0.16
		4 - 6	<0.08	10**	6.4**	16
		6 - 8	<0.05	<0.05	<0.05	<0.05
		8 - 10	<0.05	0.09**	<0.05	0.09
		10 - 12	<0.05	0.1	<0.05	0.10
RV-4	3/16/89	Surface Sample	<0.05	1.1**	2.7	3.8
RV-5	3/16/89	Surface Sample	<0.05	0.54**	1.2	1.7
RV-6	3/16/89	Surface Sample	<0.05	0.48**	1.3	1.8

Notes:

Concentrations are in ug/gram (or parts per million) - dry weight.

* Aroclor pattern was identified and/or calculated as Aroclor 1242.

** Sample exhibits alteration of standard Aroclor pattern.

*** Higher detection limit due to interference.

TABLE 7

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

ADDITIONAL SOIL SAMPLING - METALS ANALYSES OCTOBER 1989
(All Concentrations are in Mg/Kg or PPM)

Parameter	FW-20 0-4'	FW-20 4-8'	FW-20 8-10'	FW-21 0-4'	FW-21 4-8'	FW-21 8-10'	QP-22 0-4'	QP-22 4-8'	QP-22 8-12'	QP-23 0-4'	QP-23 4-8'	QP-23 8-12'	Method Blank
Antimony	3U	4	3U	3U	3U	3U	3U	14	16	48	14	10	30
Arsenic	3U	3	8	6	3U	3U	15	34	42	46	49	40	3U
Beryllium	0.6	0.3	0.2U	0.4	0.3	0.1U	0.3	0.2	0.1	0.4	0.2	0.2	0.1U
Cadmium	2.0	2.0	0.5U	0.8	0.5U	0.5U	1.0	14.5	11.1	12.0	16.7	13.7	0.5U
Chromium	15	30	10.	11	12	8	26	142	111	372	165	99	1U
Copper	341	706	27	169	189	36	326	3,130	3,220	4,480	3,980	3,880	1U
Lead	181	479	13	98	163	16	210	5,870	5,630	6,950	6,630	5,440	3U
Mercury	2.0	3.9	0.1U	1.0	0.3	0.1U	0.1	4.9	1.8	10.3	4.0	2.4	0.1U
Nickel	23	42	21	24	26	25	33	161	204	195	205	147	6
Selenium	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U
Silver	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Thallium	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
Zinc	721	830	68.1	211	342	61.2	44.3	7,440	7,070	6,260	8,430	6,960	6.7

Note:

U = Compound was analyzed for but not detected. The number is the detection limit for the sample.

TABLE 8

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

GROUND-WATER QUALITY (PPB)

Parameter	Detection Limit	Sample Date	NS-1	FW-16	GE-3	IA-9	MW-1	MW-2	MW-3	SZ-1	SZ-3	SZ-R	Method Blank
Benzene	5.0	5/88		--	--	--	--	--	--	--	--	--	--
	0.5	2/89		--	--	--	--	--	--	--	--	--	--
	0.5	8/89	39										
Chlorobenzene	5.0	5/88		--	--	11	--	--	--	--	<5.	<5.	--
	0.5	2/89		--	--	--	--	--	--	--	1.7	1.3	--
	0.5	8/89	600										
Trans-1,2-dichlorethene	5.0	5/88		--	--	--	--	--	--	--	--	--	--
	0.5	2/89		--	--	--	--	--	--	--	--	--	--
	0.5	8/89	7										
Ethyl Benzene	5.0	5/88		--	--	--	--	--	--	--	--	--	--
	0.5	2/89		--	--	--	--	--	--	--	--	--	--
	0.5	8/89	4										
Methylene Chloride	5.0	5/88		--	--	--	--	--	--	--	--	--	--
	0.5	2/89		--	--	--	--	--	--	--	--	--	--
	0.5	8/89	--										
Toluene	5.0	5/88											
	0.5	2/89		--	--	--	--	--	--	--	--	--	--
	0.5	8/89	3	--	--	--	--	--	--	--	--	--	--

(see notes on Page 3)

TABLE 8
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

GROUND-WATER QUALITY (PPB)

Parameter	Detection Limit	Sample Date	NS-1	FW-16	GE-3	IA-9	MW-1	MW-2	MW-3	SZ-1	SZ-3	SZ-R	Method Blank
Trichloroethene	5.0	5/88											
	0.5	2/89		--	--	--	--	--	--	--	--	--	--
	0.5	8/89	2	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	5.0	5/88		--	--	--	--	--	--	--	--	--	--
	0.5	2/89		--	--	--	--	--	--	--	--	--	--
	0.5	8/89	2,000										
Arclor 1016, 1232, 1242, and/or 1248		5/88		<0.1	<0.4***	<0.1				<0.8***	<0.1	<0.1	
		2/89											
		8/89	<0.6										
Aroclor 1254	1.00	5/88		1.8	<0.3	5.2**	--	--	--	<0.3	2.6**	2.8**	
		2/89		--	--	--	--	--	--	--	--	--	--
		8/89	17										<0.3
Aroclor 1260	1.00	5/88		0.6	<0.3	<0.3				<0.3	0.7	0.8	
		2/89		--	--	--	--	--	--	--	--	--	--
		8/89	<1										<0.3

(see notes on Page 3)

TABLE 8
(Cont')

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

GROUND-WATER QUALITY (PPB)

Parameter	Detection Limit	Sample Date	NS-1	FW-16	GE-3	IA-9	MW-1	MW-2	MW-3	SZ-1	SZ-3	SZ-R	Method Blank
Total Aroclors		5/88		2.4	<0.4	5.2				<0.8	3.3	3.6	
		2/89											
		8/89	17										<0.3

Notes:

1. A blank indicates that the well was not analyzed.
2. Halogenated volatile organics were analyzed using Method 601.
3. Aromatic Volatile hydrocarbons were analyzed using Method 602.
4. Compounds analyzed for, but not detected are not included on this table.

ug/l Micrograms per liter.
-- Not detected.
** Sample exhibits alteration of standard Aroclor pattern.
*** Higher detection limit due to interference.
<5. Compound detected, but at a level less than the detection limit.

TABLE 9

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SUMMARY OF SOIL QUALITY DATA IN THE VICINITY OF THE GE-NEWELL STREET PARKING LOT

Compound	Boring:	NS-1			NS-2			NS-3			NS-4		
	Depth:	0-4	4-8	8-12	0-4	4-8	8-12	0-4	4-8	8-12	0-4	4-8	8-12
Volatile Organics													
Benzene		5											
Bromodichloromethane						3							
Chloroform[a]						9							
Methylene Chloride[a]		7	7		14			6	12	8	10	6	11
Tetrachloroethene			2										
Toluene		13	27	1	3	4		1					
Trichloroethene		9	15			3			1				
Base/Neutral Organic Compounds													
Acenaphtylene		510	480		180	1,800			2,900				
Anthracene						540			850				
Benzo(a)anthracene					160	1,100		580	2,200				
Benzo(b)fluoranthene		580	470		140	1,100		420	2,100				
Benzo(k)fluoranthene		470	490		130	1,100							
Benzo(a)pyrene		560	410		200	1,400		550	1,800				
Benzo(g,h,i)perylene						1,600			2,100				
Bis(2-ethylhexyl)phthlate				140						98		140	280
Chrysene					160	1,200		480	1,700				
Dibenzo(a,h)anthracene									570				
Fluoranthene					240	1,100		780	1,500				
Indeno(1,2,3-cd)pyrene		440	350		110	1,100			1,600				

(see notes on Page 2)

TABLE 9
(Cont'd)

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SUMMARY OF VOCS AND BASE/NEUTRAL ORGANICS IN SOIL (PPB)

Compound	Boring:	NS-1			NS-2			NS-3			NS-4		
	Depth:	0-4	4-8	8-12	0-4	4-8	8-12	0-4	4-8	8-12	0-4	4-8	8-12
Phenanthrene					210	690		710	660				
Pyrene					380	1,800		910	3,200				
1,2,4-Trichlorobenzene		1,700	2,500										

Notes:

1. Depths are in feet below land surface.
2. Compounds analyzed for, but not detected, have not been included.
3. Sampling was conducted 8/29/89 by Geraghty & Miller, Inc.
4. Analysis by I.T. Analytical, Knoxville, Tennessee.

TABLE 10

NEWELL STREET

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

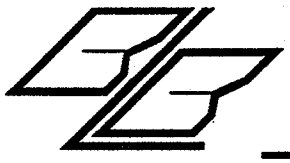
SUMMARY OF AIR SAMPLING RESULTS - METHOD 1

Date	Location	Laboratory Sample I.D.	Actual Air-Volume Sampled, m^3	PCB Concentration ng/std. m^3
Nov. 30	Lyman	W 1501	2.900	26.7
Nov. 30	Newell	W 1503	2.136	54.4
Dec. 1A	Lyman	W 1511	5.107	3.1
Dec. 1A	Newell	W 1512	4.323	3.7
Dec. 2B	Lyman	W 1531	5.914	6.2
Dec. 2B	Newell	W 1532	5.285	4.6
Dec. 2C	Lyman	W 1544	2.662	7.1
Dec. 2C	Newell	W 1545	2.874	7.3
Dec. 3D	Lyman	W 1564	5.559	0.9
Dec. 3D	Newell	W 1565	5.292	1.8
Dec. 9	Lyman	W 1636	4.531	ND
Dec. 9	Newell	W 1634	4.531	1.4

Notes:

A Corresponds to Trial Burn - First Test
B Corresponds to Trial Burn - Second Test
C Corresponds to Trial Burn - Third Test
D Corresponds to Trial Burn - Fourth Test

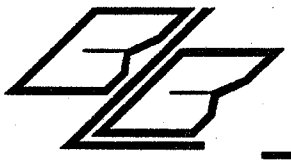
ND Not Detected (detection limits were less than 1 nanogram (10^{-9} gram) per sample for Aroclor 1254 and 2 nanograms per sample for Aroclor 1260)



References

REFERENCES

Reference Number	
1	Investigation of Soil Conditions in the Vicinity of Newell Street, Interim Report Geraghty & Miller, July 1987.
2	Investigation of Soil and Ground-Water Conditions at the Newell Street Site, Geraghty & Miller, July 1988.
3	Analysis of Potential Remedial Measures (Feasibility Study) at the Newell Street Site, Blasland & Bouck, September 1988.
4	Supplemental Investigation of Soil and Ground-Water Conditions at the Newell Street Site, Geraghty & Miller, April 1989.
5	Risk Assessment for the Newell Street Site, Geraghty & Miller, May 1989.
6	US Environmental Protection Agency, Region I, "Report on Residential Air Monitoring for PCBs in Pittsfield, Massachusetts." J.F. Kennedy Federal Building, Boston, MA. 02203.
7	Data provided to the DEP with a cover letter dated October 27, 1989.



Figures

BLDG. 63X

BLDG. 63

BLDG. 67

BLDG. 61R

BLDG. 68

BLDG. 60A

TANK FARM

BLDG. 6-B

BLDG. 60

DWS 64W

Housatonic River

BRIDGE

G.E. PARKING LOT

HIBBARD PLAYGROUND

ONTARIO STREET

MOLDMASTER

QUALITY PRINTING

ITALIAN AMERICAN CLUB

RAVIN AUTO BODY

VINCENT J. STRACUZZI

ANTHONY MARCHETTO CONTRACTORS

F.W. WEBB COMPANY

PITTSFIELD TRANSMISSION COMPANY, INC.

ALLEGRON CONSTRUCTION COMPANY, INC.

NEWELL STREET

HURON STREET

MICHIGAN STREET

DORCHESTER ST.

LONGFELLOW STREET

EDISON AVENUE

LEGEND

- WELL LOCATION AND DESIGNATION
- SOIL BORING LOCATION AND DESIGNATION
- SURFACE SOIL SAMPLE LOCATION AND DESIGNATION
- RIVER BANK SAMPLE LOCATION AND DESIGNATION

B-D:\10196S4C\10196D02

APPROX. SCALE: 1" = 60'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init

In charge of _____

Designed by _____

Drawn by RLP

Checked by _____

BLASLAND & BOUCK ENGINEERS, P.C.
Syracuse, New York
White Plains, New York

GENERAL ELECTRIC COMPANY • PITTSFIELD, MA

MCP PHASE II – NEWELL STREET SITE
PREVIOUS SAMPLING LOCATIONS
SUPPLEMENTAL DATA SUMMARY

File Number 101.96.54

Date JUNE, 1990

1

BLDG. 63X

BLDG. 63

BLDG. 67

BLDG. 61R

BLDG. 68

BLDG. 60A

BLDG. 6-B

BLDG. 60

TANK FARM

OWS 64W

Housatonic River

BRIDGE

G.E. PARKING LOT

ONTARIO STREET

MOLDMASTER

QUALITY PRINTING

ITALIAN AMERICAN CLUB

RAVIN AUTO BODY

VINCENT J. STRACUZZI

ANTHONY MARCHETTO CONTRACTORS

F.W. WEBB COMPANY

PITTSFIELD TRANSMISSION COMPANY, INC.

ALLEGRONI CONSTRUCTION COMPANY, INC.

HIBBARD PLAYGROUND

NEWELL STREET

HURON STREET

MICHIGAN STREET

DORCHESTER ST.

LONGFELLOW STREET

EDISON AVENUE

LEGEND

- PAVED
- GRASS
- TREES
- BARE SOIL
- PROPOSED ADDITION TO EXISTING BUILDING
- SAND PILE (15-20 FT HIGH)

B-D:\101965\4C\101965005

APPROX. SCALE: 1" = 60'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init

In charge of _____

Designed by _____

Drawn by RLP

Checked by _____

BLASLAND & BOUCK ENGINEERS, P.C.
Syracuse, New York
White Plains, New York

GENERAL ELECTRIC COMPANY • PITTSFIELD, MA

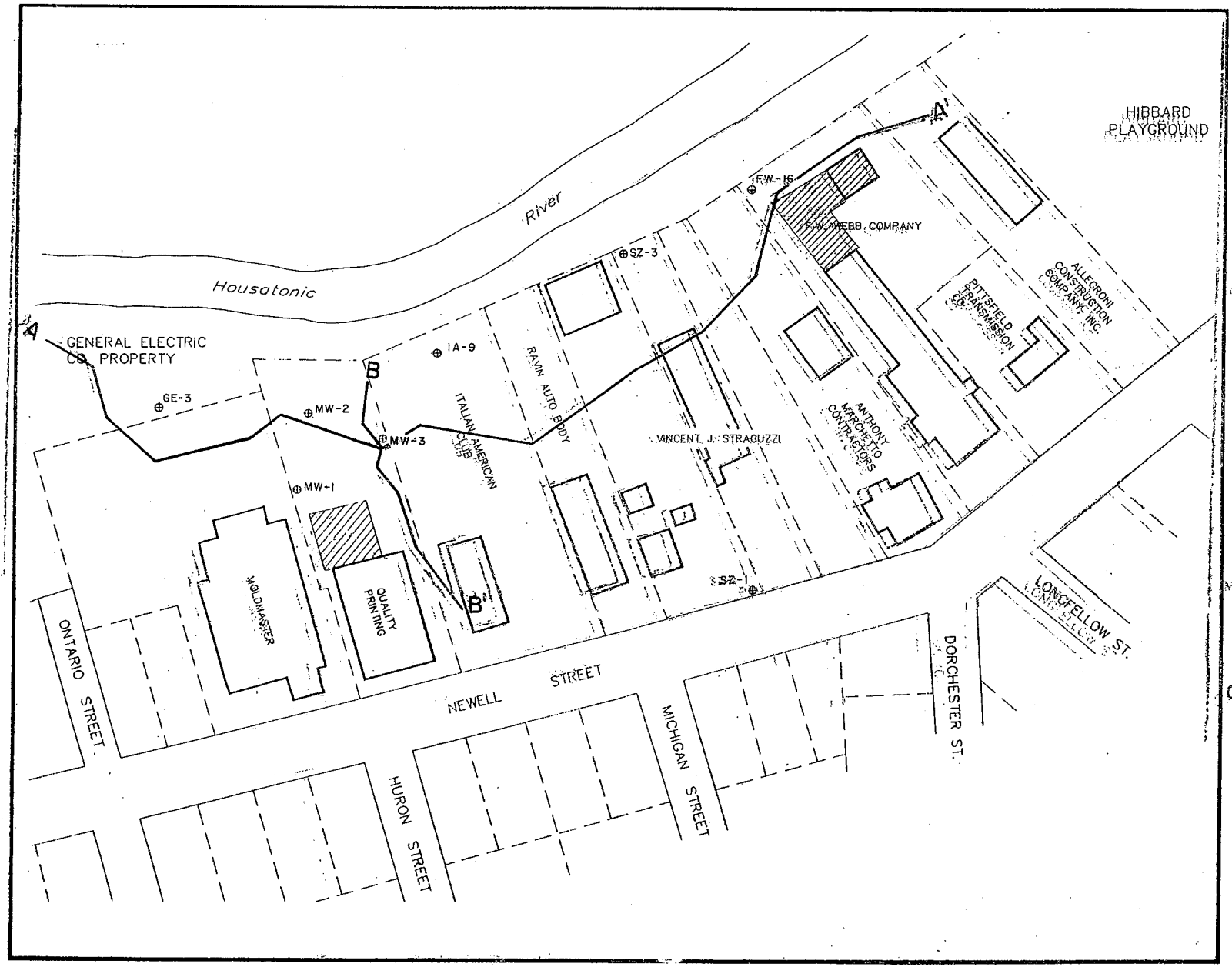
MCP PHASE II – NEWELL STREET SITE
LAND USE INFORMATION
SUPPLEMENTAL DATA SUMMARY

File Number 101.96.54

Date JUNE, 1990

2

FIGURE 3



LEGEND

A—A' GEOLOGIC CROSS-SECTION LINE

⊕ GROUND-WATER MONITORING WELL

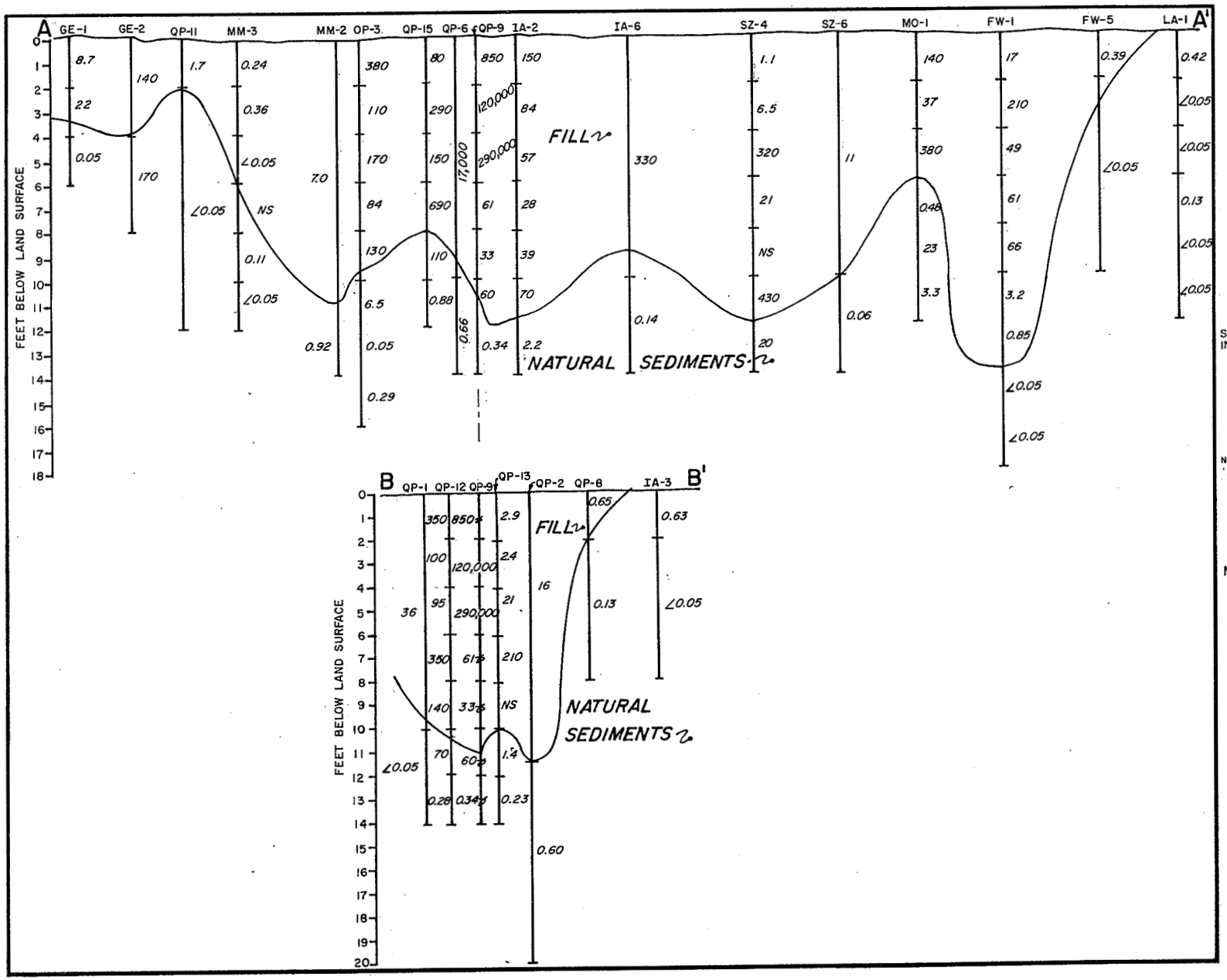
GENERAL ELECTRIC COMPANY
MCP PHASE II - NEWELL STREET SITE
PITTSFIELD, MA.

CROSS-SECTION LOCATION MAP

SCALE
100' 0' 100'

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

FIGURE 4



LEGEND

QP-3 ← SOIL BORING DESIGNATION

380 ← TOTAL PCB CONTENT IN SOIL (PPM)

SAMPLED INTERVAL { 110 / 170 / 84

NS ← NO SAMPLE RECOVERY

NOTE: CROSS SECTION IS FROM GERAGHTY & MILLER INC.

GENERAL ELECTRIC COMPANY
MCP PHASE II - NEWELL STREET SITE
PITTSFIELD, MA.

GEOLOGIC CROSS-SECTION

SCALE
100' 0' 100'

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

GE-5	
Depth (ft)	PCBs (ppm)
0–2	0.57
2–4	250
4–6	<0.05
6–8	<0.05

GE-6	
Depth (ft)	PCBs (ppm)
0–2	7.4
2–4	<0.05
4–6	<0.05

GE-7	
Depth (ft)	PCBs (ppm)
0–2	1.7
2–4	<0.05
4–6	<0.05

QP-3	
Depth (ft)	PCBs (ppm)
0–2	380
2–4	110
4–6	170
6–8	84
8–10	130
10–12	6.5
12–14	0.05
14–16	0.29

GE-2	
Depth (ft)	PCBs (ppm)
0–4	140
4–8	170

GE-1	
Depth (ft)	PCBs (ppm)
0–2	8.7
2–4	22
4–6	0.05

QP-12	
Depth (ft)	PCBs (ppm)
0–2	350
2–4	100
4–6	95
6–8	350
8–10	140
10–12	170
12–14	0.28

QP-15	
Depth (ft)	PCBs (ppm)
0–2	80
2–4	290
4–6	150
6–8	690
8–10	110
10–12	0.88

QP-7	
Depth (ft)	PCBs (ppm)
0–8	62
8–14	0.28

QP-1	
Depth (ft)	PCBs (ppm)
0–10	36
10–14	<0.05

IA-1	
Depth (ft)	PCBs (ppm)
0–10	200
10–14	0.47

IA-9	
Depth (ft)	PCBs (ppm)
0–2	42
2–4	63
4–6	7.9
6–8	320
8–10	0.28
10–12	0.28
12–14	0.65
14–16	0.17

IA-6	
Depth (ft)	PCBs (ppm)
0–10	330
10–14	0.14

IA-5	
Depth (ft)	PCBs (ppm)
0–10	1,300
10–16	0.66

RV-2	
Depth (ft)	PCBs (ppm)
0–2	<0.05
2–4	2.6
4–6	2
6–8	1,100
8–10	2.6
10–12	0.28
12–14	<0.05
14–16	0.15

RV-1	
Depth (ft)	PCBs (ppm)
0–2	3.6
2–4	120
4–6	100
6–8	350
8–10	61
10–12	53
12–14	0.34
14–16	8.9

RV-3	
Depth (ft)	PCBs (ppm)
0–2	0.5
2–4	0.16
4–6	16
6–8	<0.05
8–10	0.09
10–12	0.10

SZ-4	
Depth (ft)	PCBs (ppm)
0–2	1.1
2–4	6.5
4–6	320
6–8	21
10–12	430
12–14	20

SZ-3	
Depth (ft)	PCBs (ppm)
0–8	350
8–12	0.33

SZ-2	
Depth (ft)	PCBs (ppm)
0–6	160
6–12	6.0

SZ-7	
Depth (ft)	PCBs (ppm)
0–12	24
12–16	<0.05

SZ-6	
Depth (ft)	PCBs (ppm)
0–12	11
12–14	<0.06

FW-16	
Depth (ft)	PCBs (ppm)
0–2	130
2–4	62
4–6	920
6–8	2,300
8–10	0.39
10–12	1.0
12–14	0.27

LA-1	
Depth (ft)	PCBs (ppm)
0–2	0.42
2–4	<0.05
4–6	<0.05
6–8	0.13
8–10	<0.05
10–12	<0.05

FW-5	
Depth (ft)	PCBs (ppm)
0–4	0.39
4–10	<0.05

FW-10	
Depth (ft)	PCBs (ppm)
0–4	1.7

FW-9	
Depth (ft)	PCBs (ppm)
0–4	2.3

FW-1	
Depth (ft)	PCBs (ppm)
0–2	17
2–4	210
4–6	49
6–8	61
8–10	66
10–12	3.2
12–14	0.85
14–16	<0.05
16–18	<0.05

FW-8	
Depth (ft)	PCBs (ppm)
0–4	6.8

FW-12	
Depth (ft)	PCBs (ppm)
0–4	14

FW-3	
Depth (ft)	PCBs (ppm)
0–6	0.06
6–10	<0.05

FW-7	
Depth (ft)	PCBs (ppm)
0–4	400

FW-11	
Depth (ft)	PCBs (ppm)
0–4	21

FW-13	
Depth (ft)	PCBs (ppm)
0–4	0.63

MO-1	
Depth (ft)	PCBs (ppm)
0–2	140
2–4	37
4–6	380
6–8	0.48
8–10	23
10–12	3.3

FW-2	
Depth (ft)	PCBs (ppm)
0–6	22
6–12	0.05

FW-4	
Depth (ft)	PCBs (ppm)
0–4	5.5
6–12	0.64

LA-2	
Depth (ft)	PCBs (ppm)
2–6	1.3
6–12	<0.05

FW-14	
Depth (ft)	PCBs (ppm)
0–4	25

LA-3	
Depth (ft)	PCBs (ppm)
0–10	<0.05

FW-6	
Depth (ft)	PCBs (ppm)
0–10	5.2
10–16	1.1

MO-2	
Depth (ft)	PCBs (ppm)
0–6	8.9
6–12	0.29

SZ-5	
Depth (ft)	PCBs (ppm)
0–6	10
6–8	<0.05

SZ-1	
Depth (ft)	PCBs (ppm)
0–4	0.08
4–10	<0.05

NS-1 ▲	
Depth (ft)	PCBs (ppm)
0–4	8,500
4–8	12,000
8–12	310

NS-2 ▲	
Depth (ft)	PCBs (ppm)
0–4	220
4–8	200
8–12	260

NS-3 ▲	
Depth (ft)	PCBs (ppm)
0–4	240
4–8	20
8–12	1.3

NS-4 ▲	
Depth (ft)	PCBs (ppm)
0–4	31
4–8	0.60
8–12	1.6

GE-4	
Depth (ft)	PCBs (ppm)
0–2	0.17
2–4	8.9
4–6	7.9
6–8	<0.05

QP-11	
Depth (ft)	PCBs (ppm)
0–2	1.7
2–12	<0.05

MM-3	
Depth (ft)	PCBs (ppm)
0–2	0.24
2–4	0.36
4–6	<0.05
8–10	0.11
10–12	<0.05

QP-10	
Depth (ft)	PCBs (ppm)
0–8	94
8–12	0.06

MM-1	
Depth (ft)	PCBs (ppm)
0–8	25
8–16	0.10

QP-4	
Depth (ft)	PCBs (ppm)
0–14	0.20
14–18	<0.05

MM-2	
Depth (ft)	PCBs (ppm)
0–12	7.0
12–14	0.92

QP-6	
Depth (ft)	PCBs (ppm)
0–10	17,000
10–14	0.66

QP-14	
Depth (ft)	PCBs (ppm)
0–2	36
2–4	330
4–6	260
6–8	380
8–10	520
10–12	280
12–14	12

QP-5	
Depth (ft)	PCBs (ppm)
0–2	<0.05
2–4	0.06
4–6	410
6–8	240
8–10	55
10–12	0.07
12–14	<0.05

QP-13	
Depth (ft)	PCBs (ppm)
0–2	2.9
2–4	2.4
4–6	21
6–8	210
10–12	1.4
12–14	0.23

QP-9	
Depth (ft)	PCBs (ppm)
0–2	850
2–4	120,000
4–6	290,000
6–8	61
8–10	33
10–12	60.
12–14	0.34

IA-7	
Depth (ft)	PCBs (ppm)
0–2	110
2–4	0.66
4–6	4.6
6–8	300
12–14	8.9

IA-3	
Depth (ft)	PCBs (ppm)
0–2	0.63
2–8	<0.05

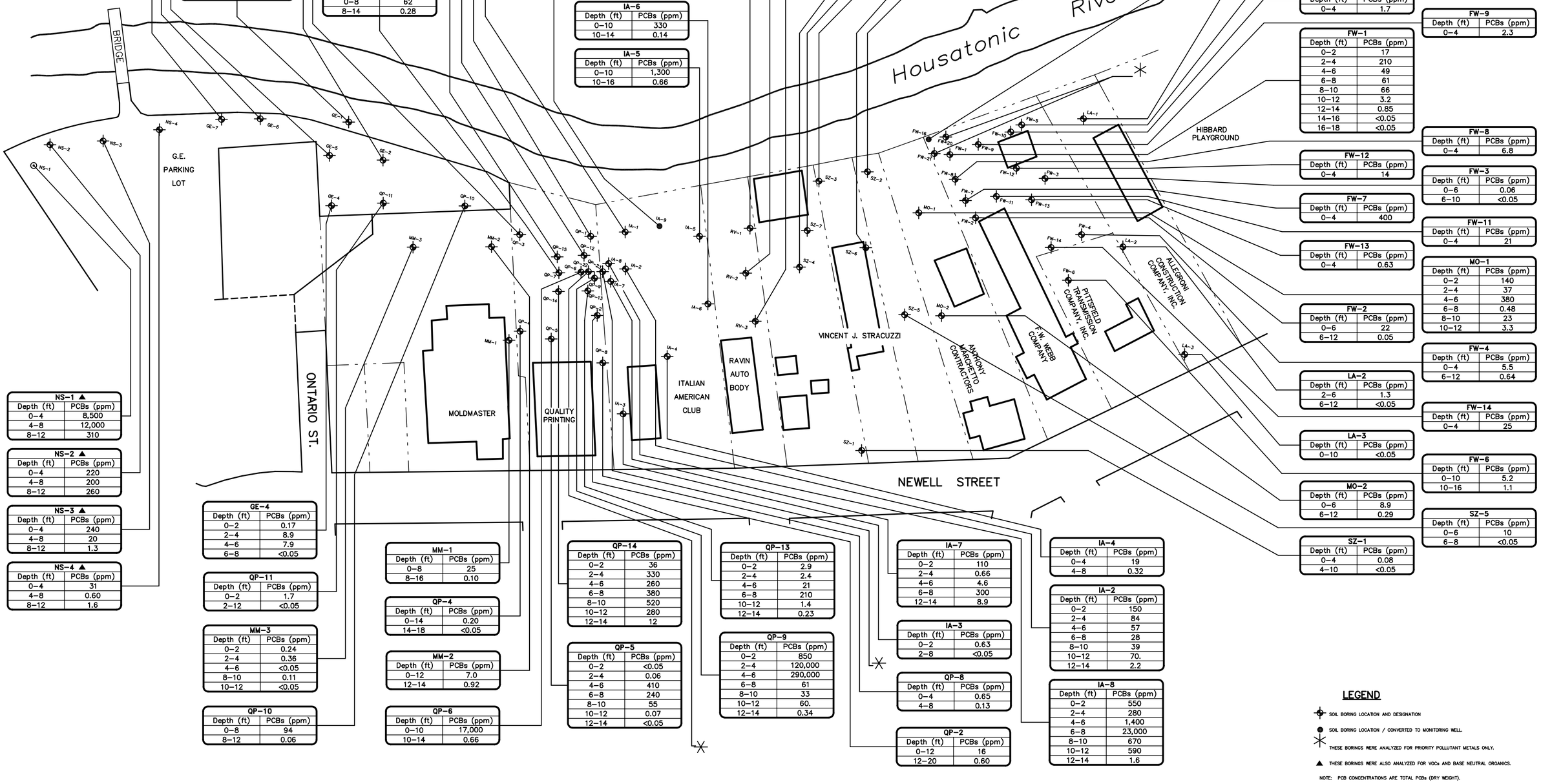
QP-8	
Depth (ft)	PCBs (ppm)
0–4	0.65
4–8	0.13

QP-2	
Depth (ft)	PCBs (ppm)
0–12	16
12–20	0.60

IA-4	
Depth (ft)	PCBs (ppm)
0–4	19
4–8	0.32

IA-2	
Depth (ft)	PCBs (ppm)
0–2	150
2–4	84
4–6	57
6–8	28
8–10	39
10–12	70.
12–14	2.2

IA-8	
Depth (ft)	PCBs (ppm)
0–2	550
2–4	280
4–6	1,400
6–8	23,000
8–10	670
10–12	590
12–14	1.6



LEGEND

- SOIL BORING LOCATION AND DESIGNATION
- SOIL BORING LOCATION / CONVERTED TO MONITORING WELL.
- THESE BORINGS WERE ANALYZED FOR PRIORITY POLLUTANT METALS ONLY.
- ▲ THESE BORINGS WERE ALSO ANALYZED FOR VOCs AND BASE NEUTRAL ORGANICS.

NOTE: PCB CONCENTRATIONS ARE TOTAL PCBs (DRY WEIGHT).

B-D:\0196541C\10196003

APPROX. SCALE: 1" = 60'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init

In charge of _____
Designed by _____
Drawn by RLP
Checked by _____

BLASLAND & BOUCK ENGINEERS, P.C.
Syracuse, New York
White Plains, New York

GENERAL ELECTRIC COMPANY • PITTSFIELD, MA

MCP PHASE II – NEWELL STREET SITE
SOIL BORING DATA
SUPPLEMENTAL DATA SUMMARY

File Number 101.96.54
Date JUNE, 1990

BLDG. 63X

BLDG. 63

BLDG. 67

BLDG. 61R

BLDG. 6-B

BLDG. 60A

BLDG. 60

TANK FARM

OWS 64W

BLDG. 68

BRIDGE

Housatonic River

G.E. PARKING LOT

HIBBARD PLAYGROUND

PITTSFIELD TRANSMISSION COMPANY, INC.

ALLEGRONI CONSTRUCTION COMPANY, INC.

ANTHONY MARCHETTO CONTRACTORS

F.W. WEBB COMPANY

VINCENT J. STRACUZZI

MOLDMASTER

QUALITY PRINTING

ITALIAN AMERICAN CLUB

RAVIN AUTO BODY

ONTARIO STREET

NEWELL STREET

HURON STREET

MICHIGAN STREET

DORCHESTER ST.

LONGFELLOW STREET

EDISON AVENUE

LEGEND

△ SURFACE SOIL SAMPLE LOCATION AND DESIGNATION

□ RIVER BANK SAMPLE LOCATION AND DESIGNATION

B-D:\101961C\10196G04

APPROX. SCALE: 1" = 60'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init

In charge of

Designed by

Drawn by RLP

Checked by

BLASLAND & BOUCK ENGINEERS, P.C.

Syracuse, New York
White Plains, New York

GENERAL ELECTRIC COMPANY • PITTSFIELD, MA

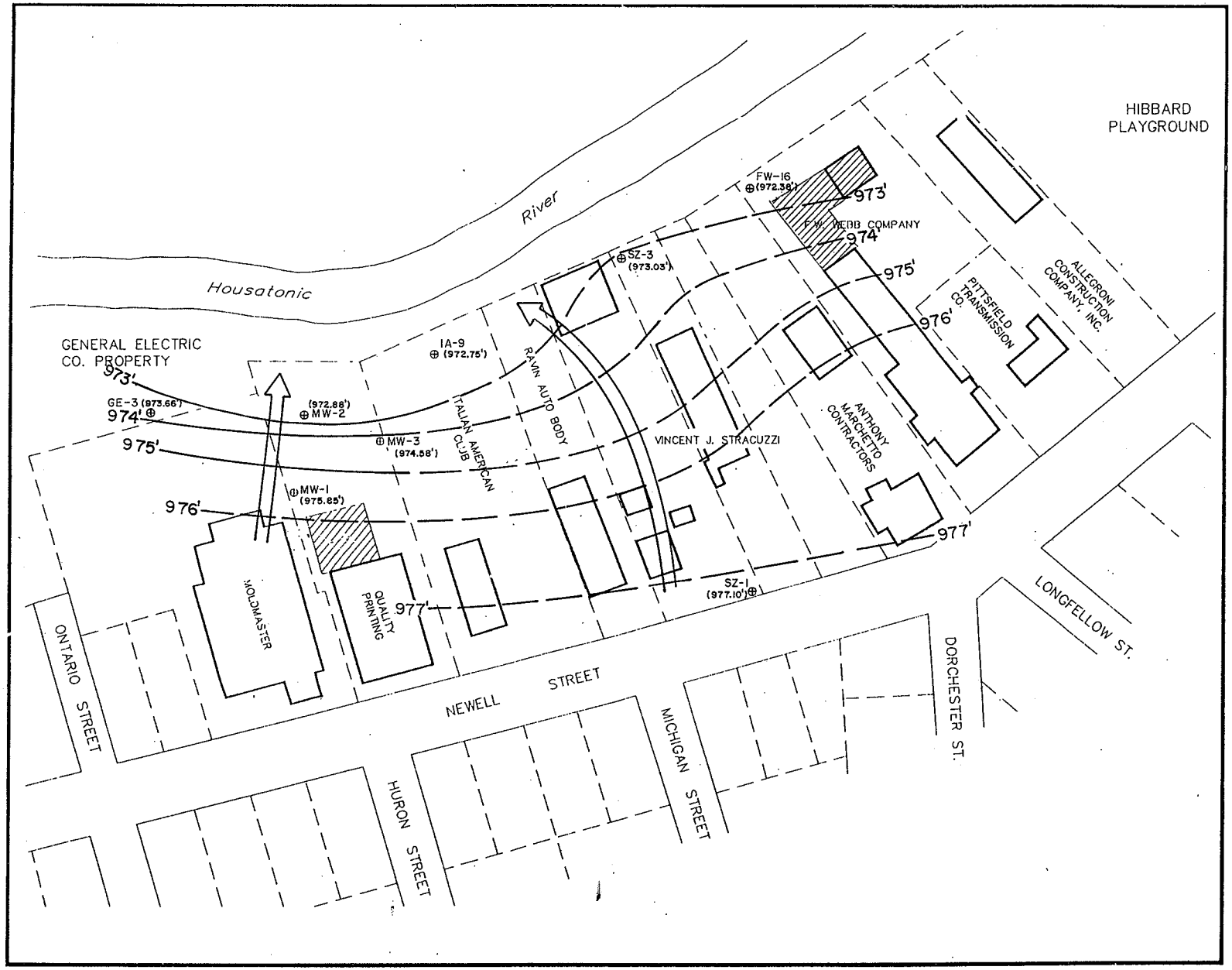
MCP PHASE II – NEWELL STREET SITE
SURFACE SOIL SAMPLING LOCATIONS
SUPPLEMENTAL DATA SUMMARY

File Number 101.96.01

Date APRIL, 1990

6

FIGURE 7



LEGEND

⊕ GROUND-WATER MONITORING WELL

973'—— GROUND-WATER CONTOUR LINE

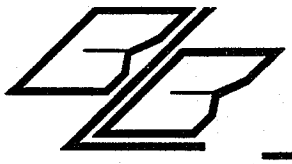
(973.03') GROUND-WATER ELEVATION

GENERAL ELECTRIC COMPANY
MCP PHASE II - NEWELL STREET SITE
PITTSFIELD, MA.

GROUND-WATER CONTOUR MAP
JUNE 7, 1988

SCALE
100' 0' 100'

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS



Appendices

SAMPLE/CORE LOG

BORING: GE-2 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: General Electric Co. Parking Lot DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 10 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.2	20-20	Fill - sand and gravel, trace silt, brown.
				10-10	
	2	4	1.3	7-4-	Fill - sand, medium to fine, some gravel, trace silt,
				5-6	brown.
	4	6	1.0	3-3-	Sand, fine to medium, trace gravel, trace silt, dark
				5-8	brown (natural sediments).
	6	8	0.8	6-3-	Same as above, interlayered with fine gray sand.
				2-6	
	8	10	1.1	6-5-	Same (did not take sample).
				3-2	

SAMPLE/CORE LOG

WELL: GE-3 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: General Electric Co. Parking Lot, Newell St. DRILLING STARTED: 5/5/88 DRILLING COMPLETED: 5/5/88

TOTAL DEPTH DRILLED: 18.8 ft HOLE DIAMETER: 8 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	0.9	3-4-	Fill - sand and gravel, trace silt, brown.
				10-9	
	2	4	0.6	3-5-	Same as above.
				7-9	
	4	6	0.5	7-8-	Same as above.
				8-6	
	6	8	0.5	10-8-	Same as above to ~ 7 ft. Sand, coarse to fine, some
				6-6	gravel, trace silt, gray, (natural sediments).
	8	10	0.8	8-8-	Sand, coarse to fine, some gravel, trace silt, gray
				6-6	(natural sediments).
	10	12	1.0	10-8-	Same as above, moist.
				8-5	
	12	14	1.5	10-10-	Same as above, wet (6 in.). Sand, fine to medium,
				16-18	with silt, trace gravel, light brown, wet (12 in.).
	14	16	1.1	20-23-	Sand, medium to fine, some silt, some large gravel,
				12-30	brown, wet.
	16	18	2.0	9-10-	Sand, fine, silty, some gravel, gray-brown.
				40-55	
	18	18.8	0.5	47-	Sand, fine to medium, with silt, large gravel,
				150/.3	gray-brown.

SAMPLE/CORE LOG

BORING: GE-1 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: General Electric Co. Parking Lot DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 6 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	0.3	7-10-	Fill - topsoil, pieces of asphalt, vegetation.
				5-7	
	2	4	1.1	7-8-	Sand and gravel fill (6 in.); sand, fine, and silt,
				11-8	trace gravel (6 in.) (natural sediments).
	4	6	1.4	7-4-	Same as above, moist (natural sediments).
				2-4	

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING: GE-4 PROJECT NO: NY0360QP03 PAGE: 1 of 1

SITE LOCATION: GE - Parking lot DRILLING STARTED: 2/6/89 DRILLING COMPLETED: 2/6/89

TOTAL DEPTH DRILLED: 8 HOLE DIAMETER: 8 inches TYPE OF SAMPLE/ CORING DEVICE: Split spoon

LENGTH & DIAMETER OF CORING DEVICE: 5' x 4" SAMPLING INTERVAL: 5 feet

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: Auger

DRILLING CONTRACTOR: Layne-Northern DRILLER: Norm HELPER: John

PREPARED BY: W. Gray HAMMER WEIGHT: HAMMER DROP:

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	2.0	-	Fill - Sand and gravel, trace silt.
2	4	2.0	-	Fill as above to 3'.
				Natural at 3' - Sand, fine, trace silt, trace
				vegetation, brown.
4	6	2.0	-	Sand, fine to medium, trace gravel, trace silt, dark
				brown.
6	8	2.0	-	Sand, fine to medium, trace gravel, trace silt, dark
				brown with interlayers of fine gray sand.

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING: GE-5 PROJECT NO: NY0360QP03 PAGE: 1 of 1

SITE LOCATION: GE-Parking lot Newell St. DRILLING STARTED: 2/6/89 DRILLING COMPLETED: 2/6/89

TOTAL DEPTH DRILLED: 8 HOLE DIAMETER: 8 inches TYPE OF SAMPLE/ CORING DEVICE: Split spoon

LENGTH & DIAMETER OF CORING DEVICE: 5' x 4" SAMPLING INTERVAL: 5 feet

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: Auger

DRILLING CONTRACTOR: Layne-Northern DRILLER: Norm HELPER: John

PREPARED BY: W. Gray HAMMER WEIGHT: HAMMER DROP:

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	2.0	-	Fill - Sand and large gravel, gray, trace silt.
2	4	2.0	-	Same as above to 3.5 ft.
				Natural at 3.5' - Sand, fine to medium trace silt,
				trace vegetation, brown.
4	6	2.0	-	Sand, fine to medium, trace silt, trace vegetation,
				brown.
6	8	2.0	-	Sand, fine to medium, trace silt, trace vegetation,
				brown.

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING: GE-6 PROJECT NO: NY0360QP03 PAGE: 1 of 1

SITE LOCATION: GE-Parking lot Newell St. DRILLING STARTED: 2/6/89 DRILLING COMPLETED: 2/6/89

TOTAL DEPTH DRILLED: 6 HOLE DIAMETER: 8 inches TYPE OF SAMPLE/ CORING DEVICE: Split spoon

LENGTH & DIAMETER OF CORING DEVICE: 5' x 4" SAMPLING INTERVAL: 5 feet

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: Auger

DRILLING CONTRACTOR: Layne-Northern DRILLER: Norm HELPER: John

PREPARED BY: W. Gray HAMMER WEIGHT: HAMMER DROP:

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	2.0	-	Fill to 1.5' - sand and large gravel, trace silt.
				Natural at 1.5' - sand, medium to fine, trace silt,
				brown.
2	4	2.0	-	Sand, fine to medium, trace silt, trace vegetation,
				brown.
4	6	2.0	-	Sand, fine to medium trace silt, trace gravel, brown.

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING: GE-7 PROJECT NO: NY0360QP03 PAGE: 1 of 1

SITE LOCATION: GE-Parking lot Newell St. DRILLING STARTED: 2/6/89 DRILLING COMPLETED: 2/6/89

TOTAL DEPTH DRILLED: 6 HOLE DIAMETER: 8 inches TYPE OF SAMPLE/ CORING DEVICE: Split spoon

LENGTH & DIAMETER OF CORING DEVICE: 5' x 4" SAMPLING INTERVAL: 5 feet

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: Auger

DRILLING CONTRACTOR: Layne-Northern DRILLER: Norm HELPER: John

PREPARED BY: W. Gray HAMMER WEIGHT: HAMMER DROP:

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	2.0	-	Fill to 1' - sand and large gravel, trace silt gray.
				Natural at 1' - sand, fine to medium, trace silt,
				trace vegetation.
2	4	2.0	-	Sand, fine to medium, trace silt, trace vegetation.
4	6	2.0	-	Sand, trace silt, brown.

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

WELL: NS-1 PROJECT NO: NY0360RB02 PAGE: 1 of 2

SITE LOCATION: Pittsfield, Mass. GE (Newell St. Lot) DRILLING STARTED: 8/29/89 DRILLING COMPLETED: 8/29/89

TOTAL DEPTH DRILLED: 18 ft. HOLE DIAMETER: 6 inches TYPE OF SAMPLE/ CORING DEVICE: Split spoon

LENGTH & DIAMETER OF CORING DEVICE: 24 in. x 2 ft SAMPLING INTERVAL: Continuous

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: NA DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil and Material Testing DRILLER: Gilly HELPER: Joe

PREPARED BY: V. Betro HAMMER WEIGHT: 140 HAMMER DROP: 30 inches

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	1.1	4-3-4-7	Approximately 0 to 0.5 ft of asphalt
				Brown to black sand, medium to fine; trace of silt;
				pebble and rock fragments (approximately 20%); foil
				paper, glass, ceramic fragments, metal fragments, moist.
2	4	.5	4-6-	Black and same as above; more rock and pebble fragments
			16-21	(approximately 30% to 35%), trace silt; moist, fill.
4	6	.5	8-4-2-2	Dark brown sand, medium to fine; pebble and rock
				fragments (approximately 20%), glass, metal, foil;
				insulator parts coming up on auger flights; moist, fill.
6	8	.5	8-4-2-2	Same as above.
8	10	1.4	1-2-4-4	Dark green sand, fine, some silt; no pebbles or other
				fragments, oil sheen on samples; moist, fill.
10	12	1.6	3-3-1-1	Same as above; oil sheen on samples; wet, fill.

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG (Cont.d)

WELL: NS-1 PREPARED BY: V. Betro PAGE: 2 of 2

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
12	14	.4	8-6-7-9	Dark gray sand, coarse to medium; gravel (approximately
				2 to 4 mm and approximately 25%); foil paper, fill.
14	16	.5	7-6-8-9	Same as above; fill.
16	18	.5	11-9-6-8	Same as above; fill.

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING: NS-2 PROJECT NO: NY0360RB02 PAGE: 1 of 1

SITE LOCATION: Pittsfield, Mass. GE (Newell St. Lot) DRILLING STARTED: 8/29/89 DRILLING COMPLETED: 8/29/89

TOTAL DEPTH DRILLED: 12 ft. HOLE DIAMETER: 6 inches TYPE OF SAMPLE/ CORING DEVICE: Split spoon

LENGTH & DIAMETER OF CORING DEVICE: 24 in. x 2 in. SAMPLING INTERVAL: Continuous

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: NA DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil and Material Testing DRILLER: Gilly HELPER: Joe

PREPARED BY: V. Betro HAMMER WEIGHT: 140 HAMMER DROP: 30 inches

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	1.0	10-9-	Topsoil and brown sand, coarse to fine; trace silt;
			11-12	pebble and rock fragments (approximately 30-35%) dry.
2	4	.6	13-30-	Same as above; moist, some metal fragments; fill.
			52-29	
4	6	2.0	3-4-2-4	Light brown to brown sand, very coarse to medium; trace
				silt; few pebble and rock fragments; moist.
6	8	1.6	4-4-4-4	Light brown sand, medium to fine; some silt, few pebble
				and rock fragments; moist, natural sediment.
8	10	1.7	2-2-1-2	Brown to light brown sand; coarse to fine; some silt; no
				rock fragments; very moist, natural sediment.
10	12	1.4	1-2-2-3	Light brown to tan sand, coarse to fine; little silt;
				wet, natural sediment.
				Wet at 11.0'.

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING: NS-3 PROJECT NO: NY0360RB02 PAGE: 1 of 1

SITE LOCATION: Pittsfield, Mass. GE (Newell St. Lot) DRILLING STARTED: DRILLING COMPLETED:

TOTAL DEPTH DRILLED: HOLE DIAMETER: TYPE OF SAMPLE/ CORING DEVICE: Split spoon

LENGTH & DIAMETER OF CORING DEVICE: 24 in. x 2 in. SAMPLING INTERVAL: Continuous

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: NA DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil and Material Testing DRILLER: Gilly HELPER: Joe

PREPARED BY: V. Betro HAMMER WEIGHT: 140 HAMMER DROP: 30 inches

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	1.0	9-7-6-6	Brown sand, medium to fine; little silt; pebble and rock fragments (approximately 35%), ash and slag fragments; moist, (fill).
2	4	.8	7-9-12-12	Same as above with dark gray sand, medium to fine; trace silt; more rock fragments (approximately 50%) moist, fill.
4	6	1.0	6-3-3-3	Brown sand medium to fine; to silt; few pebbles and rock fragments, glass, ash, slag, moist (fill).
6	8	1.4	3-4-4-5	Dark brown sand, medium to fine; some silt; few pebble and rock fragments; moist, (fill).
8	10	1.6	3-4-5-7	Dark olive-green sand, fine to very fine, and silt; no fragments; wet, natural sediments.
10	12	1.4	3-4-2-2	Olive green sand, fine to very fine; trace of silt; wet, natural sediments.

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING: NS-4 PROJECT NO: NY0360RB02 PAGE: 1 of 1

SITE LOCATION: Pittsfield, Mass. GE (Newell St. Lot) DRILLING STARTED: DRILLING COMPLETED:

TOTAL DEPTH DRILLED: HOLE DIAMETER: TYPE OF SAMPLE/ CORING DEVICE: Split spoon

LENGTH & DIAMETER OF CORING DEVICE: 24 in. x 2 in. SAMPLING INTERVAL: Continuous

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: NA DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil and Material Testing DRILLER: Gilly HELPER: Joe

PREPARED BY: V. Betro HAMMER WEIGHT: 140 HAMMER DROP: 30 inches

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	1.2	9-10-	Brown sand, coarse to medium; trace of silt; many rock
			11-19	fragments and pebbles (approximately 40%); ash and sla
				fragments; dry, fill.
2	4	1.1	12-12-	Brown to dark brown sand, fine; trace of silt; some
			5-5	brick fragments (2 to 3 ft); fill.
4	6	0.8	6-4-6-6	Brown sand fine and silt; few pebble and rock fragment
				moist, natural sediments.
6	8	1.5	5-4-4-5	6 to 7 ft - brown sand, fine; trace of silt; moist
				natural sediment.
				7 to 8 ft- olive green sand, fine, and silt; moist,
				few pebble or rock fragments (<5%), natural sediments.
8	10	0.9	8-7-6-8	Brown sand, medium to fine; trace of silt; pebbles and
				rock fragments (approximately 20%) moist, natural
				sediments.
10	12	0.4	8-6-5-4	Brown sand, same as above, wet at approximately 12.0 f

SAMPLE/CORE LOG

BORING/WELL: QP-1 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA DRILLING STARTED: 5/7/87 8:00 DRILLING COMPLETED: 5/7/87 9:00

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - ( ) SURVEYED ( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.2	4-6-	Fill - 3" topsoil, brown, with gravel; fine gray
				5-4	sand; fine white sand-silt.
	2	4	1.4	6-9-	Fill - 1" white fine sand; 2" fine gray sand-silt;
				6-2	medium-coarse sand and gravel, red brick
					fragments, some cinders.
	4	6	1.0	3-3-	Fill - 6" brown and white sand and gravel; 6" dark
				5-4	brown medium fine sand and silt; red brick
					fragments, moist.
	6	8	2.0	3-2-	Fill - 4" medium-fine brown sand, some silt - moist;
				1-2	dark brown-black, silty fine sand with fibers,
					some clay, cinders.
	8	10	2.0	Rod	Fill - Same as above, dark brown-black silt with
				hammer	roots; bottom 3" is composed of fine sand, light
				-1-0-2	brown-gray (Natural sediments).
	10	12	2.0	2-3-	Silty black sand, roots; alternating bands gray sand.
				3-3	
	12	14	2.0	1-1-	1' gray silt and clay, roots, 2" brown peat layer,
				2-4	medium gray sand on bottom.

SAMPLE/CORE LOG

BORING/WELL: QP-2 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA DRILLING STARTED: 5/7/87 9:15 DRILLING COMPLETED: 5/7/87 11:15

TOTAL DEPTH DRILLED: 20 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - ( ) SURVEYED ( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	4-5-	Fill - Sand and gravel fill, coarse-fine, some large
				10-7	gravel fragments, ceramic material.
	2	4	1.2	2-1-	Fill - Sand and small gravel fill, dark brown and
				4-4	orange, medium sand with silt.
	4	6	0.5	1-2-	Fill - same as above.
				3-2	
	6	8	1.5	3-2-	Fill - Sand coarse-fine, brown; bottom half of spoon
				3-2	graded to fine sand and silt, gray.
	8	10	1.8	1-1-	Fill - Black silt, fibrous, very moist, some cinders.
				0-0	
	10	12	2.0	Rod &	Fill - Same as above, very fibrous
				Hammer	Bottom 4" is composed of black organic material,
				-1	sand and silt, many roots and leaves
					(Natural sediments).
	12	14	2.0	1-1-	Dark brown-black, organic silt and sand; many roots,
				3-3	leaves and wood fragments; 1/2" rose colored wood,
					wet at 12.7 ft.
	14	16	0.2	5-4-	Same as above, wet.
				1-2	
	16	18	0.8	3-3-	2" wood and dark brown sand, wet
				2-7	2" gray coarse-fine sand, then coarse-fine sand,
					brown; some silt.
	18	20	1.5	5-6-	Coarse-fine sand and gravel; some silt, brown; well
				7-5	mixed.

SAMPLE/CORE LOG

BORING/WELL: QP-3 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA DRILLING STARTED: 5/7/87 11:30 DRILLING COMPLETED: 5/7/87 12:17

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - { } SURVEYED { } ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.5	4-4-	Fill - Sand, medium-fine, brown; small red brick
				3-6	fragments; a few large mica fragments; small
					ceramic and glass fragments.
	2	4	1.8	5-10-	Fill - Same as above.
				13-9	
	4	6	2.0	7-5-	Fill - 2" same as above; dark brown-black sand and
				6-6	silt, fibrous material throughout; small flecks
					of cinder.
	6	8	2.0	3-4-	Fill - Black fine sand and silt; fibrous material;
				4-4	copper wire, glass fragments, cinder flecks, red
					brick fragments and ceramic material.
	8	10	1.2	1-2-	Fill - Black fine sand and silt; fibrous material;
				3-3	flecks of cinder, wood; Bottom 4 inches is
					composed of fine gray brown fine sand and silt,
					some root material, small reeds, moist
					(Natural sediments).
	10	12	1.5	3-2-	1" black fine sand and silt, reeds and roots; fine
				3-4	sand and silt, gray and light brown, cinder
					flecks.
	12	14	1.7	3-2-	Sand and silt, fine, gray and light brown, mica
				2-3	flecks. Very moist.
	14	16	1.0	3-4-	Sand and gravel, coarse-fine, some silt and wood
				4-4	fragments and bark. Wet.

SAMPLE/CORE LOG

BORING/WELL: QP-4 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA
DRILLING STARTED: 5/7/87 13:35
DRILLING COMPLETED: 5/7/87 14:50

TOTAL DEPTH DRILLED: 18
HOLE DIAMETER: 5-3/4 in
TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2"
SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: -
( ) SURVEYED
( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none
DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing
DRILLER: Mike
HELPER: Daryl

PREPARED BY: W. Gray
HAMMER WEIGHT: 140 lb
HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	0	2	1.0	6-4-	Fill - 6" sand and gravel; 6" sand, fine gray brown,
				5-7	tight, silt.
	2	4	0	5-5-	No recovery - large cobble in end of spoon.
				6-6	
	4	6	0.9	4-4-	Fill - Sand and gravel fill, coarse sand,
				4-5	medium-large gravel.
	6	8	1.0	4-3-	Fill - Sand and gravel fill, coarse sand,
				3-4	medium-large gravel.
	8	10	1.0	3-3-	Fill - Same as above.
				4-3	
	10	12	1.0	4-3-	Fill - Same as above; moist.
				3-1	
	12	14	1.0	5-6-	Fill - 6" same as above; Bottom 6 inches composed of
				6-8	fine sand and silt, gray-brown, little clay, wet
					(Natural sediments).
	14	16	0.9	12-33-	Large gravel fragments; coarse-fine sand, brown and
				14-9	silt.
	16	18	0.8	5-7-	Same as above.
				8-9	

SAMPLE/CORE LOG

BORING/WELL: QP-5 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA DRILLING STARTED: 5/7/87 15:24 DRILLING COMPLETED: 5/7/87 16:10

TOTAL DEPTH DRILLED: 14 HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - ( ) SURVEYED ( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	0	2	1.2	12-11-	Fill - Sand and gravel fill, coarse-fine sand, silt,
				10-7	brown.
	2	4	0.1	5-2-	Fill - Same as above - some ceramic and glass.
				1-2	
	4	6	1.8	3-2-	Fill - 5" sand and gravel fill, ceramic fragments,
				2-2	glass, wood; Bottom of sample is composed of black
					fine sand and silt, fibrous, with cinders.
	6	8	1.7	1-2-	Fill - Dark brown-black coarse-fine sand and silt,
				1-1	fibrous glass fragments - clear and amber, Moist.
	8	10	0.3	1-4-	Fill - Dark brown, coarse-fine sand and silt,
				6-5	fibrous, very moist.
	10	12	0.8	4-3-	Fill - 1" same as above; Bottom of sample is composed
				2-2	of coarse sand and gravel; some silt
					(Natural sediments).
	12	14	1.0	2-2-	Same as natural sediments above; with 2-1/2" silt and
				3-3	and clay, gray-brown, tight, Wet.

SAMPLE/CORE LOG

BORING/WELL: QP-6 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA DRILLING STARTED: 5/7/87 16:20 DRILLING COMPLETED: 5/7/87 17:15

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - ( ) SURVEYED ( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	0.2	8-5-	Fill - Sand and gravel fill, ceramic material, glass.
				4-5	
	2	4	0.4	2-1-	Fill - 1" dark brown sand, medium-fine; ceramic
				1-4	material, paper rolls,
					Sand, white-light brown, medium-fine; some silt.
	4	6	0.3	8-4-	Fill - Sand, medium-fine, light brown-dark brown;
				4-4	large ceramic fragments.
	6	8	2.0	1-0-	Fill - Black silt and fine sand, fibrous, moist.
				1-0	
	8	10	1.9	1-0-	Fill - 12" same as above; cinder flecks; Bottom of
				2-4	sample is composed of 1" black organic sediments,
					roots, reeds; 5" fine sand and silt, gray
					(Natural sediments).
	10	12	1.7	4-4-	Coarse-fine sand, silt, gray, moist.
				5-4	
	12	14	1.5	2-1-	Coarse-fine sand, silt, gray, wood fragments, Wet.
				2-2	

SAMPLE/CORE LOG

BORING/WELL: QP-7 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA DRILLING STARTED: 5/7/87 17:20 DRILLING COMPLETED: 5/7/87 18:00

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - ( ) SURVEYED ( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.5	6-5-	Fill - 12" gray silt and fine sand; 1" crushed red
				4-8	stone; 5" brown sand, medium-fine and silt.
	2	4	2.0	8-8-	Fill - Medium-fine sand and silt, brown.
				7-7	
	4	6	2.0	4-4-	Fill - 12" medium-fine sand and silt, brown; glass
				2-1	fragments.
					12" medium-fine sand and silt, gray; glass
					fragments.
	6	8	2.0	1-0-	Fill - Black silt and sand, fibrous.
				1-1	
	8	10	1.7	1-2-	Sand, fine, silt, light brown-gray; roots
				3-3	(Natural sediments).
	10	12	1.5	3-2-	Same as above, very moist.
				2-2	
	12	14	1.0	2-1-	Coarse-fine sand, some silt, some gravel. Wet.
				1-2	

SAMPLE/CORE LOG

BORING/WELL: QP-8 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA DRILLING STARTED: 5/8/87 9:00 DRILLING COMPLETED: 5/8/87 9:25

TOTAL DEPTH DRILLED: 8 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - ( ) SURVEYED ( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	2-3-	Fill - Black-brown, medium-fine sand, and silt; glass
				4-2	fragments; slag type fragments.
	2	4	1.0	3-2-	Fill - 1" as above.
				2-2	11" fine sand and silt, yellow-brown; some small
					gravel (Natural sediments).
	4	6	1.4	2-2-	Silt and fine sand, yellow, brown and gray.
				3-3	
	6	8	1.6	3-3-	Same as above.
				4-4	

SAMPLE/CORE LOG

BORING/WELL: QP-9 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Quality Printing Pittsfield, MA DRILLING STARTED: 5/8/87 9:33 DRILLING COMPLETED: 5/8/87 10:40

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - ( ) SURVEYED ( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	3-3-	Fill - Sand and gravel; fine sand and silt, brown;
				5-5	bolts, metal fragments, ceramic, cinder type
					material.
	2	4	0.2	6-4-	Fill - Brown, medium-fine sand and silt; paper rolls,
				5-3	aluminum some staining
	4	6	0.5	9-13-	Fill - Brown-black sand, medium-fine; paper and
				6-4	aluminum, metal fragments and slag material.
	6	8	1.5	2-2-	Fill - Black silt; fibrous, ceramic fragments.
				2-2	
	8	10	2.0	Wt of	Fill - Same as above.
				rods	
				-1	
	10	12	2.0	Wt of	12" as above.
				hammer	1" Black organic silt and clay, reeds and roots
				1-1-2	and 11" brown peat type material, silt, moist
					(Natural sediments).
	12	14	2.0	1-1-	Brown-black, fine sand and silt; roots and wood,
				2-2	bark.

SAMPLE/CORE LOG

BORING/WELL: QP-10 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: GE Woodlot Pittsfield, MA DRILLING STARTED: 5/8/87 13:10 DRILLING COMPLETED: 5/8/87 13:50

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - { } SURVEYED { } ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.5	4-6-	Fill - 4" Sand and gravel, light brown; small red
				7-9	brick fragments, dark brown sand, coarse-fine,
					some silt, glass fragments.
	2	4	2.0	11-10-	Fill - Same as above.
				7-7	
	4	6	1.7	10-13-	Fill - Same as above.
				6-9	
	6	8	2.0	4-6-	Fill - Same as above.
				7-3	
	8	10	1.7	1-2-	1" Black organic silt and clay, roots; silt, fine
				2-2	sand, light brown-gray, mottled; moist
					(Natural sediments).
	10	12	1.8	2-1-	Silt and fine sand, light brown-gray, mottled; very
				2-1	moist.

SAMPLE/CORE LOG

BORING/WELL: QP-11 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: GE Parking Lot Pittsfield, MA DRILLING STARTED: 5/8/87 14:00 DRILLING COMPLETED: 5/8/87 14:35

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: 2 ft

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: - ( ) SURVEYED ( ) ESTIMATED DATUM: -

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Daryl

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	2-5-	Fill - Sand and gravel fill, dark brown-gray; light
				4-3	brown, medium-fine sand and silt, trace clay.
	2	4	0.8	2-2-	Sand, medium-fine, gravel small - large brown, some
				4-6	silt (natural material).
	4	6	1.0	3-4-	Sand and gravel as above.
				4-3	
	6	8	1.5	4-4-	Coarse sand and gravel; mixed with medium-fine sand;
				5-6	some white mica.
	8	10	1.3	4-5-	Same as above; some grayish bands and
				4-3	yellow-brown bands approximately 1/4" each.
	10	12	1.0	3-2-	4" coarse sand and gravel; silt and fine sand, light
				7-11	brown-gray, mottled, moist.

SAMPLE/CORE LOG

BORING: QP-12 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Quality Printing DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.5	5-11-	Fill - sand, medium to fine; some gravel; brown, red
				10-7	brick. Sand; trace silt; light brown-white
					(bottom 6 in.).
	2	4	1.1	6-2-	Fill - sand, medium to fine; trace gravel; trace
				2-5	silt; red brick, light brown - white.
	4	6	2.0	4-3-	Fill - sand, medium to fine, trace gravel, trace
				3-4	silt, light brown-dark brown.
	6	8	2.0	5-4-	Black muck, silt and fine sand, fiberous, moist.
				2-2	
	8	10	2.0	3-1-	Same as above, with small pieces of copper wire
				1-1	(2 or 3).
	10	12	1.6	1-2-	Black organic material, vegetation (2 in.)
				2-3	(natural sediment). Sand, medium to fine, some
					silt, gray, moist (17 in.).
	12	14	1.4	5-7-	Brown organic material, vegetation (15 in.). Sand,
				7-7	coarse to fine, trace silt, gray, moist to wet
					(2 in.).

SAMPLE/CORE LOG

BORING: QP-13 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Quality Printing DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.2	3-6-	Fill - sand, and gravel; ceramic material, glass,
				7-6	cinders; fine sand and silt at bottom (4 in.).
	2	4	1.0	7-4-	Fill - sand and gravel, ceramic fragments, glass.
				3-6	
	4	6	0.4	7-3-	Fill - same as above, some red brick.
				2-9	
	6	8	1.5	3-3-	Black muck, silt and sand, fiberous, moist.
				2-2	
	8	10	0	2-1-	No recovery
				1-1	
	10	12	0.9	1-2-	Brown organic material, vegetation
				1-1	(natural sediment).
	12	14	1.1	5-5-	Organic, silt and sand, vegetation, wood, dark
				6-7	brown-black, wet.

SAMPLE/CORE LOG

BORING: QP-14 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Quality Printing DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.5	9-11-	Fill - sand and gravel, ceramic, glass; gray sand
				11-10	(3 in.).
	2	4	1.7	8-5-	Fill - sand, medium to fine, pieces red brick,
				8-16	rubber, trace gravel, dark brown.
	4	6	2.0	12-14-	Same as above, gray and brown.
				14-9	
	6	8	1.1	6-3-	Black, sand and silt, fiberous material, trace
				2-2	gravel, trace red brick, moist.
	8	10	0.9	2-2-	Black, mucky silt and sand, fiberous material, wet.
				2-2	
	10	12	1.5	3-6-	Peat material, brown-black, vegetation
				6-15	(natural sediment).
	12	14	1.8	12-10-	Sand, fine, with silt, trace clay, brown (12 in.),
				10-17	sand, medium to fine, gray and brown (10 in.).

SAMPLE/CORE LOG

BORING: QP-15 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Quality Printing DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.3	8-8-	Fill - sand, medium to fine, trace gravel, trace red
				10-10	brick, trace wood, trace glass.
	2	4	1.8	14-9-	Same as above.
				14-11	
	4	6	1.3	11-9-	Same as above.
				11-11	
	6	8	2.0	5-1-	Same as above (6 in.). Black mucky silt and sand,
				1-1	fiberous, moist, (18 in.).
	8	10	1.7	3-4-	Sand, fine, with silt, dark brown-black, vegetation
				4-7	(natural sediment - 18 in.). Sand, medium to
					fine, some silt, gray, moist (3 in.).
	10	12	1.0	7-4-	Sand, medium to fine, some silt, gray, moist.
				4-5	Bottom 6 in. coarser and wetter.

SAMPLE/CORE LOG

BORING: MM-1 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Moldmaster DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	11-10-	Fill - sand and gravel, brown, wood, glass fragments.
				8-2	
	2	4	0.4	3-2-	Same as above, large glass fragments.
				2-4	
	4	6	0.6	4-3-	Same as above.
				2-2	
	6	8	1.4	3-2-	Same as above, less glass fragments.
				2-4	
	8	10	1.1	4-3-	Sand, coarse to fine, trace silt, some gravel
				3-3	(natural sediments).
	10	12	0.4	7-5-	Same as above with larger gravel, moist
				4-4	(natural sediments).
	12	14	1.2	4-2-	Sand, coarse to fine, with gravel, wet.
				3-2	
	14	16	1.5	4-3-	Same as above, gray (6 in.). Silt and fine sand,
				3-5	trace gravel, trace clay, light brown (12 in.).

SAMPLE/CORE LOG

BORING: MM-2 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Moldmaster DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	10-9-	Fill - sand, medium to fine, with gravel, brown.
				11-11	
	2	4	1.4	7-7-	Fill - sand, medium to fine, trace gravel, wood,
				7-7	amber glass fragments, dark brown.
	4	6	1.7	7-24-	Fill - sand, medium to fine, trace gravel, trace
				16-14	silt, trace glass, gray.
	6	8	1.6	12-10-	Same as above, small pieces copper wire (2 or 3),
				10-11	moist.
	8	10	1.7	7-7-	Fill - same as above, with more copper wire. Black
				6-6	silt and sand, fiberous, wet (bottom 2 in.).
	10	12	1.2	3-1-	Black silt and sand, fiberous, wet (11 in.); peat
				1-1	material, black, vegetation (natural sediment -
					3 in.).
	12	14	1.6	1-1-	Sand, fine to medium, some silt, gray.
				1-2	

SAMPLE/CORE LOG

BORING: MM-3 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Moldmaster DRILLING STARTED: 5/4/88 DRILLING COMPLETED: 5/4/88

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	9-10-	Fill - sand and gravel, trace silt.
				15-10	
	2	4	0.6	15-10-	Fill - same as above.
				9-6	
	4	6	1.2	7-7-	Fill - same as above.
				5-5	
	6	8	0.1	7-5-	Poor recovery, pieces of gravel.
				5-3	
	8	10	1.5	7-7-	Silt and fine sand, light brown, wet (12 in.)
				5-5	(natural sediments). Sand, coarse to fine, trace
					silt, gray (6 in.).
	10	12	1.3	3-3-	Sand, medium to fine, trace silt, trace gravel, gray.
				5-6	

SAMPLE/CORE LOG

BORING/WELL: IA-1 PROJECT NO: NO360QP1 PAGE: 1

SITE LOCATION: Italian American Club Pittsfield, MA DRILLING STARTED: 7/1/87 DRILLING COMPLETED: 7/1/87

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	3-6-	Top soil (3 inches)
				4-4	Fill - black silt with small red brick fragments.
	2	4	1.0	4-2-	Fill - same as above with wood.
				3-3	
	4	6	1.1	1-3-	Fill - sand and gravel, cinders, and small glass
				4-3	fragments.
	6	8	2.0	4-5-	Fill - fine sand and silt, black.
				2-2	
	8	10	1.7	3-3-	Sand, fine to medium (80%); some gray silt (natural
				4-5	sediments).
	10	12	2.0	2-2-	Sand, fine (80%); with gray silt and grass.
				1-2	
	12	14	2.0	1-1-	Same as above.
				2-2	

SAMPLE/CORE LOG

BORING/WELL: IA-2 PROJECT NO: NO360QP1 PAGE: 1

SITE LOCATION: Italian American Club Pittsfield, MA DRILLING STARTED: 7/1/87 DRILLING COMPLETED: 7/1/87

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	0.6	3-18-	Top soil (3 inches)
				20-6	Fill - brown sand and gravel, glass, plastic and
					ceramic fragments.
	2	4	0.5	7-5-	Fill - brown sand and gravel with cinders.
				7-4	
	4	6	1.0	1-1-	Fill - fine sand and silt, black with cinders.
				2-1	
	6	8	1.7	2-1-	Fill - fine to medium sand, some silt, brown and
				2-3	black; moist.
	8	10	2.0	1-0-	Fill - black, mucky, silt man-made fibers; moist.
				1-0	
	10	12	2.0	0-1-	Fill - Same as above with ceramic fragments
				1-2	(10-11.5 feet). Peat, brown, wet (11.5-12 feet).
	12	14	1.3	1-2-	Silt, some clay, black; roots, wood and bark.
				2-2	

SAMPLE/CORE LOG

BORING/WELL: IA-3 PROJECT NO: NO360QP1 PAGE: 1

SITE LOCATION: Italian American Club, Pittsfield, MA DRILLING STARTED: 7/1/87 DRILLING COMPLETED: 7/1/87

TOTAL DEPTH DRILLED: 8 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.2	1-4-	Top soil (3 inches) with wood (1 inch) and sand and
				3-3	gravel (natural sediments).
	2	4	2.0	3-2-	Sand, fine to medium (75%), with brown silt.
				3-3	
	4	6	1.7	4-5-	Sand (80%), some silt, brown.
				5-5	
	6	8	1.8	3-3-	Same as above.
				3-3	

SAMPLE/CORE LOG

BORING/WELL: IA-4 PROJECT NO: NO360QP1 PAGE: 1

SITE LOCATION: Italian American Club, Pittsfield, MA DRILLING STARTED: 7/1/87 DRILLING COMPLETED: 7/1/87

TOTAL DEPTH DRILLED: 8 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	3-2-	Top soil (2 inches), sandy, dark brown;
				3-7	Fill - Sand and gravel, brown.
	2	4	0.4	5-4-	Fill - Sand and gravel, red brick and plastic
				11-7	fragments, with nails.
	4	6	1.5	4-5-	Same as above (4 to 4.5 feet)
				3-4	Sand, fine to medium (75%); with brown silt
					(natural sediments)
	6	8	1.7	3-4-	Sand (80%); some brown silt.
				3-4	

SAMPLE/CORE LOG

BORING/WELL: IA-5 PROJECT NO: NO360QP1 PAGE: 1

SITE LOCATION: Italian American Club, Pittsfield, MA DRILLING STARTED: 7/2/87 DRILLING COMPLETED: 7/2/87

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	5-4-	Fill - sand and gravel; red brick fragments.
				4-5	
	2	4	1.2	6-3-	Fill - cinders (6 inches); red and yellow brick
				2-1	fragments; fine white and brown sand.
	4	6	0.3	5-7-	Fill - black silt; cinders, and red brick fragments.
				2-1	
	6	8	1.5	1-2-	Fill - same as above (6 inches); black silt; glass
				2-0	fragments.
	8	10	1.7	0-2-	Fill - same as above, moist (8-9 feet).
				1-0	Brown and black silt, some clay; grass and reeds
					(natural sediments).
	10	12	1.0	1-1-	Same as above (6 inches).
				2-2	Gray silt, fine sand and clay, moist (6 inches).
	12	14	1.7	1-0-	Silt and fine sand, gray, moist.
				1-0	
	14	16	2.0	0-0-	Same as above with peat at 15.5 to 16 feet.
				0-3	

SAMPLE/CORE LOG

BORING/WELL: IA-6 PROJECT NO: NO360QP1 PAGE: 1

SITE LOCATION: Italian American Club Pittsfield, MA DRILLING STARTED: 7/2/87 DRILLING COMPLETED: 7/2/87

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.3	-0-8	Fill - sand and gravel with red brick fragments.
				-10-10	
	2	4	1.2	8-4-	Fill - cinders (7 inches), red and yellow brick
				3-3	fragments, brown and white sand.
	4	6	-	1-0-	No recovery.
				1-0	
	6	8	0.2	0-1-	Fill - cinders, red and yellow brick fragments with
				3-1	brown sand.
	8	10	1.1	0-1-	Fill - Same as above, with wood fragments (8-9 feet)
				2-1	Silt and peat (9-10 feet - (Natural sediments).
	10	12	2.0	1-1-	Silt and fine sand, brown, reeds and grass
				2-2	(6 inches). Silt and fine sand, little clay,
					gray, some grass.
	12	14	1.5	0-2-	Peat (8 inches).
				1-5	Silt and fine sand, little clay, brown (4 inches).
					Sand, gray (2 inches).
					Silt, gray, little clay (4 inches).

SAMPLE/CORE LOG

BORING: IA-7 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Italian American Club DRILLING STARTED: 5/6/88 DRILLING COMPLETED: 5/6/88

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.7	4-10-	Fill - sand with gravel, trace silt, cinders, glass,
				8-7	gray and brown.
	2	4	0.7	6-5-	Same as above, brown-black.
				3-3	
	4	6	0.6	3-2-	Fill - sand, some gravel, trace silt, black-brown,
				2-1	red brick, yellow brick, cinders.
	6	8	1.0	3-3-	Same (4 in.). Black, mucky silt and sand, trace red
				2-2	brick, fiberous, wet.
	8	10	0	1-1-	No recovery.
				1-1	
	10	12	0	1-2-	No recovery (cobble in spoon).
				1-1	
	12	14	1.3	2-2-	Peat material, brown vegetation (natural sediments,
				2-3	12 to 13 ft). Sand, medium to fine, some silt,
					gray interlayered with brown (13 to 14 ft).

SAMPLE/CORE LOG

BORING: IA-8 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Italian American Club DRILLING STARTED: 5/6/88 DRILLING COMPLETED: 5/6/88

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	0.6	3-7-	Fill - sand and gravel, trace silt, glass, cinders.
				9-8	
	2	4	1.0	10-9-	Mucky silt and sand, fibers, black, wet (6 in.).
				9-11	Sand and gravel, glass, cinders, concrete,
					ceramic fragments, brown (6 in.).
	4	6	0.4	9-10-	Brown sand and gravel, concrete, foil, paper.
				19-10	
	6	8	0.3	10-10-	Same as above.
				10-7	
	8	10	0.4	1-1-	Same as above.
				1-3	
	10	12	2.0	1-2-	Mucky silt and sand, fiberous, black, wet.
				2-2	
	12	14	2.0	5-7-	Peat material, brown, vegetation (18 in.) -
				8-10	(natural sediment). Sand, medium to fine, with
					silt, interlayered gray and brown (6 in.).

SAMPLE/CORE LOG

WELL: IA-9 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: Italian American Club DRILLING STARTED: 5/6/88 DRILLING COMPLETED: 5/6/88

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 8 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	3-5-	Fill - sand and gravel, trace silt, cinders, brown.
				12-5	
	2	4	1.4	5-4-	Same as above, dark brown.
				4-5	
	4	6	1.0	3-3-	Fill - sand, fine, with silt, black, red brick.
				4-5	
	6	8	2.0	3-5-	Sand, fine to medium, some silt, vegetation (12 in.)
				5-11	(natural sediments). Sand, medium to fine, trace
					silt, interlayered gray-brown (12 in.).
	8	10	1.9	9-7-	Sand, fine to medium, trace silt, interlayered,
				5-5	vegetation.
	10	12	2.0	5-3-	Same as above.
				3-3	
	12	14	1.6	4-2-	Sand, fine, with silt, trace vegetation, gray.
				2-1	
	14	16	1.7	1-1-	Sand, fine, with silt, gray, interlayered with peat.
				3-3	

SAMPLE/CORE LOG

BORING/WELL: SZ-1 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 7/8/87 DRILLING COMPLETED: 7/8/87

TOTAL DEPTH DRILLED: 10 ft HOLE DIAMETER: 5-3/4 TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Rich

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	0	2	2.0	18-53	Fill - Sand and gravel, brown and black, red brick.
				40-11	
	2	4	1.5	7-5-	Fill - Same as above (2 - 2.5 feet).
				8-9	Silt, brown (8 inches);
					Silt and fine sand, brown (Natural sediments).
	4	6	1.3	6-6-	Alternating bands of fine sand and silt with little
				5-5	clay, gray and brown.
	6	8	1.5	4-3-	Sand and silt layers, gray and brown, moist.
				3-4	
	8	10	1.1	4-4-	Same as above, moist.
				5-5	

SAMPLE/CORE LOG

BORING/WELL: SZ-2 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 7/8/87 DRILLING COMPLETED: 7/8/87

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: MIke HELPER: Rich

PREPARED BY: W. gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.7	2-8-	Fill - Sand and gravel, brown.
				12-12	
	2	4	1.6	14-15-	Fill - Sand and gravel, brown, cinder, glass.
				14-14	
	4	6	0.4	6-	Fill - Same as above.
				100/.2	
	6	8	1.2	3-3-	Sand - fine-medium, brown-gray; some gravel.
				3-3	(Natural sediments).
	8	10	2.0	2-2-	Sand (85%), some silt, gray, roots, moist.
				2-2	
	10	12	2.0	1-3-	Sand, fine, some silt, gray, roots, reeds, moist.
				3-3	

SAMPLE/CORE LOG

BORING/WELL: SZ-3 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 7/10/87 DRILLING COMPLETED: 7/10/87

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: MIke HELPER: Rich

PREPARED BY: W. gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.8	6-9-	Fill - Sand and gravel, cinder fragments.
				13-10	
	2	4	1.8	9-13-	Fill - Same as above, some wood.
				12-13	
	4	6	1.5	6-6-	Fill - Same as above, some glass.
				6-5	
	6	8	1.2	5-5-	Fill - Same as above.
				6-5	
	8	10	1.0	5-6-	Sand (60%), some silt, some gravel
				6-6	(Natural sediments).
	10	12	1.7	5-4-	Sand (80%), some silt, gray and brown, layered,
				5-5	roots and bark.

SAMPLE/CORE LOG

BORING/WELL: SZ-4 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 7/10/87 DRILLING COMPLETED: 7/10/87

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: MIke HELPER: Rich

PREPARED BY: W. gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	2.0	4-14-	Fill - Sand and gravel, cinder fragments.
				14-27	
	2	4	1.5	8-12-	Fill - same as above (4 inches); wood (12 inches).
				9-22	
	4	6	1.7	11-15-	Fill - Sand and gravel, some red brick, some wood,
				17-7	some crushed purple material.
	6	8	1.0	4-4-	Crushed purple material (2 inches);
				2-1	Crushed cinder, black.
	8	10	-	0-0-	No recovery.
				0-1	
	10	12	1.5	1-2-	Black silt, roots, reeds, stained sand, black.
				1-1	
	12	14	1.0	1-1-	Peat Material, (Natural sediments). Wet.
				2-3	
					Water at 12.5 feet

SAMPLE/CORE LOG

BORING/WELL: SZ-5 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 7/10/87 DRILLING COMPLETED: 7/10/87

TOTAL DEPTH DRILLED: 8 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: MIke HELPER: Rich

PREPARED BY: W. gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	2.0	10-20-	Fill - Sand and gravel, little red brick.
				15-11	
	2	4	1.0	6-5-	Fill - Same as above, little cinder.
				7-5	
	4	6	1.0	15-7-	Fill - Same as above (4 - 5 feet).
				5-5	Sand, fine-medium, some silt, light brown
					(Natural sediments).
	6	8	1.3	4-5-	Sand (85%), fine-medium, some silt, light brown,
				5-6	small silt layers.

SAMPLE/CORE LOG

BORING/WELL: SZ-6 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 7/14/87 DRILLING COMPLETED: 7/14/87

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: MIke HELPER: Rich

PREPARED BY: W. gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	0	2	1.0	17-40-	Fill - Sand and gravel, brown.
				22-22	
	2	4	2.0	17-22-	Fill - Sand and gravel, crushed cinder, black, red
				33-23	brick, yellow brick.
	4	6	1.0	20-12-	Fill - Cinder, crushed, black, red brick, glass.
				10-9	
	6	8	1.0	6-3-	Fill - Same as above.
				2-5	
	8	10	0.2	10-2-	Fill - Large gravel, crushed cinder, red brick,
				2-1	glass; moist.
	10	12	1.5	2-1-	Fine sand and silt, some peat material, moist
				4-3	(12 inches);
					Fine sand and silt, light brown, roots and leaves
					(Natural sediments).
	12	14	1.7	4-2-	Peat, brown.
				5-7	
					Water at 9 feet

SAMPLE/CORE LOG

BORING/WELL: SZ-7 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 7/14/87 DRILLING COMPLETED: 7/14/87

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: MIke HELPER: Rich

PREPARED BY: W. gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	5-10-	Fill - Sand and gravel, brown.
				11-16	
	2	4	1.5	13-9-	Fill - Same as above.
				7-7	
	4	6	1.1	7-6-	Fill - Same as above with green glass.
				6-5	
	6	8	0.4	5-6-	Fill - Same as above with some crushed cinder.
				5-5	
	8	10	1.5	3-5-	Fill - Same as above, gray.
				3-4	
	10	12	0.4	4-	Fill - Same as above, no cinder.
				100/.2	
	12	14	0.2	5-3-	Sand, some silt, gray, moist (Natural sediments).
				3-5	
	14	16	1.0	3-2-	Same as above, wet.
				3-3	
					Water at 13.4 feet

SAMPLE/CORE LOG

WELL: SZ-1 PROJECT NO: NO360QP02 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 5/9/88 DRILLING COMPLETED: 5/9/88

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 8 in. TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	2.0	18-53	Fill - Sand and gravel, brown and black, red brick.
				40-11	
	2	4	1.5	7-5-	Fill - Same as above (2 - 2.5 feet).
				8-9	Silt, brown (8 inches);
					Silt and fine sand, brown (Natural sediments).
	4	6	1.3	6-6-	Alternating bands of fine sand and silt with little
				5-5	clay, gray and brown.
	6	8	1.5	4-3-	Sand and silt layers, gray and brown, moist.
				3-4	
	8	10	1.1	4-4-	Same as above, moist.
				5-5	
	10	12	1.4	4-4-	Same as above, moist.
				4-5	
	12	14	1.0	5-4-	Same as above, wet.
				5-5	
	14	16	1.2	4-4-	Sand and silt, layered, brown and light brown.
				4-4	

SAMPLE/CORE LOG

WELL: SZ-3 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: V.J. Stracuzzi, Contr. Pittsfield, MA DRILLING STARTED: 5/9/88 DRILLING COMPLETED: 5/9/88

TOTAL DEPTH DRILLED: 19 ft HOLE DIAMETER: 8 in. TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Tom HELPER: Bob

PREPARED BY: W. gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.8	6-9-	Fill - Sand and gravel, cinder fragments.
				13-10	
	2	4	1.8	9-13-	Fill - Same as above, some wood.
				12-13	
	4	6	1.5	6-6-	Fill - Same as above, some glass.
				6-5	
	6	8	1.2	5-5-	Fill - Same as above.
				6-5	
	8	10	1.0	5-6-	Sand (60%), some silt, some gravel
				6-6	(Natural sediments).
	10	12	1.7	5-4-	Sand (80%), some silt, gray and brown, layered,
				5-5	roots and bark.
	12	14	1.5	4-5-	Same as above.
				5-5	
	14	16	1.7	5-5-	Sand and silt, layered, brown.
				5-5	
	16	18	1.6	4-5-	Same as above.
				6-6	
	18	20	1.2	5-6-	Same as above.
				6-6	

SAMPLE/CORE LOG

BORING/WELL: MO-1 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Marchetto Contracting Pittsfield, MA DRILLING STARTED: 7/9/87 DRILLING COMPLETED: 7/9/87

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Rich

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.5	6-9-	Fill - Sand and gravel, cinder, red brick.
				9-9	
	2	4	1.0	6-7-	Fill - Sand and gravel, crushed cinder, red brick,
				5-9	wood, copper wire, ceramic fragments.
	4	6	0.3	3-2-	Fill - Same as above, moist.
				1-2	
	6	8	1.2	1-0-	Sand (90%), little silt, gray, wet
				0-1	(Natural sediments).
	8	10	1.5	0-1-	Same as above (6 inches);
				0-2	Peat, brown, moist.
	10	12	2.0	1-1-	Sand, medium-fine, some silt, gray (12 inches);
				2-3	Silt with clay, roots and grasses, moist
					(12 inches).
					Water at 6.5 feet

SAMPLE/CORE LOG

BORING/WELL: MO-2 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Marchetto Contracting Pittsfield, MA DRILLING STARTED: 7/10/87 DRILLING COMPLETED: 7/10/87

TOTAL DEPTH DRILLED: 10 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Rich

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	0.5	6-9-	Fill - Sand and gravel.
				8-10	
	2	4	1.8	4-4-	Fill - Same as above (3 inches); crushed cinder,
				3-7	black (12 inches); silt and fine sand, brown.
	4	6	1.1	3-1-	Crushed cinder (6 inches); Sand fine-medium, some
				1-1	silt, brown.
	6	8	1.6	1-0-	Sand, fine-medium, some silt, brown and gray, moist
				2-1	(Natural sediments).
	8	10	1.5	1-3-	Sand (90%), little silt, gray, moist.
				3-3	

SAMPLE/CORE LOG

BORING/WELL: FW-1 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Plumbing Pittsfield, MA DRILLING STARTED: 7/7/87 DRILLING COMPLETED: 7/7/87

TOTAL DEPTH DRILLED: 18 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	0	2	1.4	8-7-	Fill - Sand and gravel, some silt, red brick and
				10-13	glass fragments.
	2	4	1.6	15-15-	Fill - Same as above.
				14-	
				100/.2	
	4	6	0.2	100/.2	Fill - Sand and gravel, copper wire.
	6	8	1.3	3-3-	Fill - Sand, glass fragments.
				2-3	
	8	10	0.4	33-	Fill - Sand and gravel, cinders.
				100/.4	
	10	12	1.2	3-1-	Fill - Sand and gravel, cinders, red brick, moist.
				5-4	
	12	14	0.4	7-8-	Fill - Gravel fragments and sand, wet.
				7-3	
	14	16	1.2	4-3-	Thin layers of silt, and fine sand
				3-3	(Natural sediments), wet.
	16	18	1.2	3-5-	Same as above (4 inches);
				3-8	Medium-coarse sand, gray, (5 inches);
					Medium-coarse sand and small gravel.
					Water at 12.0 feet

SAMPLE/CORE LOG

BORING/WELL: FW-2 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Plumbing Pittsfield, MA DRILLING STARTED: 7/7/87 DRILLING COMPLETED: 7/7/87

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	6-6-	Fill - Sand and gravel, brown.
				8-22	
	2	4	1.0	6-6-	Same as above (2 inches); yellow brick (5 inches);
				8-24	Gray silt and cinder (5 inches).
	4	6	0.9	13-10-	Fill - Sand and gravel, wood, concrete, cinder,
				6-4	yellow brick, moist.
	6	8	1.2	2-2-	Sand with silt, gray (4 inches) -
				2-1	(Natural sediments)
					Sand with silt, little clay, brown, moist.
	8	10	0.6	2-1-	Sand and silt, gray, moist.
				2-1	
	10	12	1.1	0-0-	Same as above (8 inches), moist;
				1-1	Peat material, reed grass; brown-black.

SAMPLE/CORE LOG

BORING/WELL: FW-3 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Plumbing Pittsfield, MA DRILLING STARTED: 7/7/87 DRILLING COMPLETED: 7/7/87

TOTAL DEPTH DRILLED: 10 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	2.0	12-14-	Fill - Sand and gravel, cinder.
				18-13	
	2	4	1.5	12-13-	Fill - Same as above, with yellow brick fragments.
				15-17	
	4	6	1.3	15-14-	Fill - Yellow brick fragments (3 inches).
				11-12	Silt, gray (3 inches) - (Natural sediments);
					Medium to coarse sand, brown, some silt.
	6	8	1.5	7-6-	Same as above (3 inches);
				6-4	Silt, some fine sand, gray (12 inches);
					Silt with clay, gray (3 inches).
	8	10	1.5	2-2-	Silt with clay, gray (5 inches);
				2-4	Silt, some fine sand, gray-brown (4 inches);
					Silt with clay, gray-brown.

SAMPLE/CORE LOG

BORING/WELL: FW-4 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Plumbing Pittsfield, MA DRILLING STARTED: 7/7/87 DRILLING COMPLETED: 7/7/87

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.2	3-6-	Fill - Sand and gravel, black and brown, red brick.
				8-10	
	2	4	1.0	6-6-	Fill - Sand and gravel, brown, cinder (2 - 3 feet).
				6-11	Sand, fine, and silt, white with alternating gray
					bands (3 - 4 feet - Natural sediments).
	4	6	0.1	2-1-	Sand and gravel, brown.
				1-2	
	6	8	2.0	5-6-	Sand, medium-coarse, some silt, gray.
				9-9	
	8	10	1.3	6-6-	Sand and gravel, some silt, gray and brown.
				8-9	
	10	12	1.0	7-4-	Same as above with small layers of medium-coarse
				4-4	gray sand.

SAMPLE/CORE LOG

BORING/WELL: FW-5 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Plumbing Pittsfield, MA DRILLING STARTED: 7/7/87 DRILLING COMPLETED: 7/7/87

TOTAL DEPTH DRILLED: 10 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.2	5-12-	Fill - Sand and gravel, brown.
				14-14	
	2	4	1.3	11-14-	Fill - Same as above (2 - 2.5 feet).
				11-11	Silt, some clay, brown and gray (2.5 - 4 feet -
					Natural sediments).
	4	6	1.6	11-8-	Sand and gravel, brown; some silt (12 inches).
				7-4	Sand, medium-coarse, brown (2 inches).
					Silt and clay, brown and gray.
	6	8	1.0	1-1-	Sand, medium-fine, some silt, brown, reeds, grass,
				1-1	Sand, medium-coarse, brown (2 inches).
	8	10	2.0	1-1-	Silt, with fine sand and clay, brown (2 inches).
				3-3	Silt with fine sand and clay, gray, bark and
					roots.

SAMPLE/CORE LOG

BORING/WELL: FW-6 PROJECT NO: NO360QP1 PAGE: 1 of 1

SITE LOCATION: Stomsky Pittsfield, MA DRILLING STARTED: 7/7/87 DRILLING COMPLETED: 7/7/87

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Mike

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.8	16-18-	Fill - Sand and gravel, red brick fragments.
				16-16	
	2	4	0.6	19-22-	Fill - Sand and gravel, cinder, red brick.
				36-36	
	4	6	0.5	22-18-	Fill - Sand and gravel, black, green glass fragments.
				11-5	
	6	8	0.4	3-1-	Fill - Sand and gravel, gray, moist
				1-1	
	8	10	1.0	1-1-	Fill - Sand and gravel, gray, wood, wet.
				2-1	
	10	12	0.5	13-5-	Fill - Same as above; (10 - 11 feet)
				4-4	Peat (11 - 12 feet) - (Natural sediments)
	12	14	0.1	1-2-	Sand and black silt, wet.
				3-3	
	14	16	1.5	1-2-	Peat material (2 inches);
				4-7	Silt, layered, some clay, brown (4 inches);
					Silt and fine sand, gray.
					Water at 6.9 feet

SAMPLE/CORE LOG

BORING: FW-7 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/27/88 DRILLING COMPLETED: 4/27/88

TOTAL DEPTH DRILLED: 4 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	0.4	5-8-	Sand, medium to fine; trace silt, trace gravel;
				9-10	vegetation. Topsoil (clean fill).
	2	4	1.1	8-12-	Sand, medium to fine; trace silt, trace gravel
				7-7	(clean fill).

SAMPLE/CORE LOG

BORING: FW-8 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/27/88 DRILLING COMPLETED: 4/27/88

TOTAL DEPTH DRILLED: 4 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	4-6-	Sand, fine; trace silt; trace gravel; (clean fill).
				6-6	
	2	4	1.8	11-11-	Do
				8-10	

SAMPLE/CORE LOG

BORING: FW-9 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/27/88 DRILLING COMPLETED: 4/27/88

TOTAL DEPTH DRILLED: 4 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.3	12-10-	Sand, fine to medium; some gravel angular; trace
				10-10	silt. (clean fill)
	2	4	1.8	9-8-	Sand, fine; silty; some vegetation;
				3-5	(natural sediments).

SAMPLE/CORE LOG

BORING: FW-10 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/27/88 DRILLING COMPLETED: 4/27/88

TOTAL DEPTH DRILLED: 4 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.5	6-8-	Sand, medium to fine; trace silt; trace gravel;
				10-6	(clean fill).
	2	4	1.8	6-10-	Sand, fine, silty; trace gravel (clean fill).
				8-9	

SAMPLE/CORE LOG

BORING: FW-11 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/27/88 DRILLING COMPLETED: 4/27/88

TOTAL DEPTH DRILLED: 4 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	2-7-	Silt, sandy; trace gravel; trace vegetation
				7-8	(clean fill).
	2	4	1.5	7-7-	Sand, fine; trace silt; some gravel (clean fill).
				7-7	

SAMPLE/CORE LOG

BORING: FW-12 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/27/88 DRILLING COMPLETED: 4/27/88

TOTAL DEPTH DRILLED: 4 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	5-7-	Sand, fine to coarse; some gravel; trace silt
				9-5	(clean fill).
	2	4	1.4	5-7-	Sand, medium to fine; some gravel; trace silt
				15-20	(clean fill).

SAMPLE/CORE LOG

BORING: FW-13 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/27/88 DRILLING COMPLETED: 4/27/88

TOTAL DEPTH DRILLED: 4 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.0	5-7-	Sand, fine; some silt; trace gravel; (clean fill).
				6-3	-
	2	4	1.5	7-13-	Sand, fine; some silt; some gravel; (clean fill).
				14-8	

SAMPLE/CORE LOG

BORING: FW-14 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/27/88 DRILLING COMPLETED: 4/27/88

TOTAL DEPTH DRILLED: 4 ft HOLE DIAMETER: 2 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.5	14-14-	Sand, fine; trace silt; trace gravel (clean fill).
				19-20	
	2	4	1.0	23-7-	Sand, medium to fine; trace silt; some gravel; red
				5-5	brick; glass (fill).

SAMPLE/CORE LOG

WELL: FW-16 PROJECT NO: NY360QP02 PAGE: 1 of 1

SITE LOCATION: F.W. Webb Pittsfield, MA DRILLING STARTED: 4/29/88 DRILLING COMPLETED: 4/29/88

TOTAL DEPTH DRILLED: 14 ft HOLE DIAMETER: 8 in. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow Stem Auger

DRILLING CONTRACTOR: Soil & Mat'l. Testing DRILLER: Mike HELPER: Bob

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in.

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.6	1-2-	Sand, fine to medium; trace silt; trace gravel;
				2-14	vegetation (clean fill).
	2	4	1.7	11-6-	Do (clean fill)
				5-4	
	4	6	1.0	4-3-	Sand, medium to fine; trace silt; some gravel;
				3-2	vegetation (natural sediment).
	6	8	1.5	2-2-	12 in. same as above. Bottom 6 in. sand, coarse to
				2-3	fine; trace silt; some gravel; light brown.
	8	10	1.4	5-4-	Gravel, medium to small; some sand; trace silt;
				4-4	gray. Wet at ~9 ft.
	10	12	1.3	4-3-	Gravel, small to medium; some sand; trace silt.
				4-3	
	12	14	1.0		Same as above, dark brown (6 in.); sand, fine,
					silty; trace gravel; gray (6 in.).

SAMPLE/CORE LOG

BORING/WELL: LA-1 PROJECT NO: NO3601P1 PAGE: 1 of 1

SITE LOCATION: Louis Allegrone Constr. Pittsfield, MA DRILLING STARTED: 7/8/87 DRILLING COMPLETED: 7/8/87

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Rich

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	1.6	8-9-	Sand, medium-fine (80%), with silt; some gravel;
				10-9	brown (Natural sediments).
	2	4	1.5	5-4-	Same as above.
				4-4	
	4	6	1.0	4-3-	Same as above.
				2-3	
	6	8	0.2	4-3-	Same as above.
				3-3	
	8	10	0.4	2-1-	Sand (75%), some silt, brown, some gravel, moist.
				2-2	
	10	12	0.3	3-3-	Same as above.
				2-2	

SAMPLE/CORE LOG

BORING/WELL: LA-2 PROJECT NO: NO3601P1 PAGE: 1 of 1

SITE LOCATION: Louis Allegrone Constr. Pittsfield, MA DRILLING STARTED: 7/8/87 DRILLING COMPLETED: 7/8/87

TOTAL DEPTH DRILLED: 12 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Rich

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
	0	2	-	-	No sample taken - Black top (6 inches).
	2	4	1.2	6-5-	Fill - cinder, black.
				4-4	
	4	6	1.0	2-1-	Same as above (4 - 4.5 feet);
				3-2	Sand, fine to medium, some silt, brown
					(4.5 - 6 feet) - (Natural sediments).
	6	8	1.5	3-2-	Sand (75%), some gravel, some silt, brown.
				2-3	
	8	10	2.0	4-4-	Sand (90%), some silt, brown.
				4-4	
	10	12	1.6	2-4-	Same as above.
				6-6	

SAMPLE/CORE LOG

BORING/WELL: LA-3 PROJECT NO: NO3601P1 PAGE: 1 of 1

SITE LOCATION: Louis Allegrone Constr. Pittsfield, MA DRILLING STARTED: 7/9/87 DRILLING COMPLETED: 7/9/87

TOTAL DEPTH DRILLED: 10 ft HOLE DIAMETER: 5-3/4 in TYPE OF SAMPLE/ CORING DEVICE: split spoon

LENGTH & DIAMETER OF CORING DEVICE: 2' x 2" SAMPLING INTERVAL: 2 ft

LAND-SURFACE ELEVATION: ( ) SURVEYED ( ) ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: auger

DRILLING CONTRACTOR: Soil & Mat'l Testing DRILLER: Mike HELPER: Rich

PREPARED BY: W. Gray HAMMER WEIGHT: 140 lb HAMMER DROP: 30 in

SAMPLE NO	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	0	2	1.3	1-6-	Top soil, sandy, brown (4 inches);
				24-12	Sand and gravel (Natural sediments).
	2	4	1.7	6-4-	Same as above.
				4-4	
	4	6	2.0	4-5-	Silt (80%), little clay, gray; layered with sand.
				4-5	
	6	8	1.8	3-2-	Silt, with some clay, brown and gray, with thin bands
				2-2	of sand, medium-fine, moist.
	8	10	1.6	1-1-	Same as above, moist.
				5-5	

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING/WELL: RV-1 PROJECT NO: NY0360QP03 PAGE: 1 of 1

SITE LOCATION: Ravin Auto Body DRILLING STARTED: 2/16/89 DRILLING COMPLETED: 2/16/89

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 4 inches TYPE OF SAMPLE/ CORING DEVICE: Split-spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 feet

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: Auger

DRILLING CONTRACTOR: SMT DRILLER: Gilly HELPER: Joe

PREPARED BY: W. Gray HAMMER WEIGHT: 140 HAMMER DROP: 30 inches

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	1.8	50-50-	Fill- Sand and gravel, medium, trace silt, gray
			60-45	
2	4	1.6	10-14-	Fill- Sand, medium to fine, trace gravel, small trace
			15-16	silt, pieces of wood, light brown.
4	6	1.9	9-10-8-8	Fill- Sand, medium to fine, trace gravel, small, trace
				silt; pieces of wood, red brick, yellow brick and glass,
				dark brown.
6	8	1.6	5-7-11-8	Fill- Sand, same as above with pieces of slag.
8	10	1.8	5-1-1-2	Same as above. Natural at 9.5'- sand fine, some silt,
				vegetation.
10	12	1.8	3-6-2-6	Sand, fine, some silt, vegetation, trace gravel, brown.
12	14	1.6	4-3-1-1	Same as above, wet.
14	16	0.8	4-3-5-8	Sand, medium to coarse, some silt, dark brown, wet.
				DTW = 11.5'

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING/WELL: RV-2 PROJECT NO: NY0360QP03 PAGE: 1 of 1

SITE LOCATION: Ravin Auto Body DRILLING STARTED: 2/16/89 DRILLING COMPLETED: 2/16/89

TOTAL DEPTH DRILLED: 16 ft HOLE DIAMETER: 4 inches TYPE OF SAMPLE/ CORING DEVICE: Split-spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 feet

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: Auger

DRILLING CONTRACTOR: SMT DRILLER: Gilly HELPER: Joe

PREPARED BY: W. Gray HAMMER WEIGHT: 140 HAMMER DROP: 30 inches

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	1.0	100-90	Fill-sand and gravel, pieces of cement, pieces of rubber
2	4	1.3		Fill-sand and gravel, pieces of wood, glass.
4	6	1.6	11-10-	Fill-sand, medium to fine, trace gravel, large pieces of
			5-4	red brick.
6	8	0.9	4-2-2-1	Fill-black muck, fiberous, odor.
8	10	1.2	4-9-6-8	1' same as above, then sand, medium to fine, little silt
				trace gravel, trace vegetation, layered. Natural at ~9'
10	12	1.7	1-4-3-2	Natural-sand, medium to fine, some silt, gray, wet.
12	14	1.6	2-1-1-1	Same as above.
14	16	1.5	1-1-1-3	Same as above; 3" peat at bottom.
				DTW = 11.5'

GERAGHTY & MILLER, INC.

SAMPLE/CORE LOG

BORING/WELL: RV-3 PROJECT NO: NY0360QP03 PAGE: 1 of 1

SITE LOCATION: Ravin Auto Body DRILLING STARTED: 2/16/89 DRILLING COMPLETED: 2/16/89

TOTAL DEPTH DRILLED: 13 ft HOLE DIAMETER: 4 inches TYPE OF SAMPLE/ CORING DEVICE: Split-spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 ft x 2 in. SAMPLING INTERVAL: 2 feet

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD: Auger

DRILLING CONTRACTOR: SMT DRILLER: Gilly HELPER: Joe

PREPARED BY: W. Gray HAMMER WEIGHT: 140 HAMMER DROP: 30 inches

SAMPLE DEPTH (FT BELOW LAND SURFACE)		CORE RECVRY (FT)	BLOW COUNTS PER 6 INCHES	SAMPLE/CORE DESCRIPTION
FROM	TO			
0	2	0.7	60-100/	Fill-sand and gravel, brown, pieces of red brick.
2	4	1.0	7-17-4-2	Fill-sand and gravel, brick, glass, metal, wire.
4	6	1.8	3-3-5-4	Same as above.
6	8		7-8-	Natural- sand, medium, some gravel, trace silt natural.
			11-10	
8	10	1.8	4-4-2-2	Sand, layered brown and gray, some silt.
11	13	1.9	3-3-2-2	Natural-sand, coarse to fine, trace silt, light brown.

SAMPLE/CORE LOG

BORING: RB-1 PROJECT NO: NY0360QP02 PAGE: 1 of 1

SITE LOCATION: Housatonic River Bank DRILLING STARTED: 5/16/88 DRILLING COMPLETED: 5/16/88

TOTAL DEPTH DRILLED: none HOLE DIAMETER: TYPE OF SAMPLE/ CORING DEVICE: none

LENGTH & DIAMETER OF CORING DEVICE: none SAMPLING INTERVAL:

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD:

DRILLING CONTRACTOR: none DRILLER: HELPER:

PREPARED BY: D. Colton HAMMER WEIGHT: HAMMER DROP:

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
RB-1-3	-	-	1.0	-	Sand, medium to fine, some silt and gravel, brown
					(sample collected 3 ft below the top of the
					riverbank).
RB-1-6	-	-	1.0	-	Same as above
					(sample collected 6 ft below the top of the
					riverbank).
RB-1-9	-	-	1.0	-	Same as above
					(sample collected 9 ft below the top of the
					riverbank).

SAMPLE/CORE LOG

BORING: RB-2 PROJECT NO: NY0360QP02 PAGE: 1 of 1

SITE LOCATION: Housatonic River Bank DRILLING STARTED: 5/16/88 DRILLING COMPLETED: 5/16/88

TOTAL DEPTH DRILLED: none HOLE DIAMETER: TYPE OF SAMPLE/ CORING DEVICE: none

LENGTH & DIAMETER OF CORING DEVICE: none SAMPLING INTERVAL:

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD:

DRILLING CONTRACTOR: none DRILLER: HELPER:

PREPARED BY: D. Colton HAMMER WEIGHT: HAMMER DROP:

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
RB-2-3	-	-	1.0	-	Sand, medium to fine, some silt and gravel, brown
					(sample collected 3 ft below the top of the
					riverbank).
RB-2-6	-	-	1.0	-	Same as above
					(sample collected 6 ft below the top of the
					riverbank).
RB-2-9	-	-	1.0	-	Same as above
					(sample collected 9 ft below the top of the
					riverbank).

SAMPLE/CORE LOG

BORING: RB-3 PROJECT NO: NY0360QP02 PAGE: 1 of 1

SITE LOCATION: Housatonic River Bank DRILLING STARTED: 5/16/88 DRILLING COMPLETED: 5/16/88

TOTAL DEPTH DRILLED: none HOLE DIAMETER: TYPE OF SAMPLE/ CORING DEVICE: none

LENGTH & DIAMETER OF CORING DEVICE: none SAMPLING INTERVAL:

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD:

DRILLING CONTRACTOR: none DRILLER: HELPER:

PREPARED BY: D. Colton HAMMER WEIGHT: HAMMER DROP:

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
RB-3-3	-	-	1.0	-	Sand, medium to fine, some silt and gravel, brown
					(sample collected 3 ft below the top of the
					riverbank).
RB-3-6	-	-	1.0	-	Same as above
					(sample collected 6 ft below the top of the
					riverbank).
RB-3-9	-	-	1.0	-	Same as above
					(sample collected 9 ft below the top of the
					riverbank).

SAMPLE/CORE LOG

BORING: RB-4 PROJECT NO: NY0360QP02 PAGE: 1 of 1

SITE LOCATION: Housatonic River Bank DRILLING STARTED: 5/16/88 DRILLING COMPLETED: 5/16/88

TOTAL DEPTH DRILLED: none HOLE DIAMETER: TYPE OF SAMPLE/ CORING DEVICE: none

LENGTH & DIAMETER OF CORING DEVICE: SAMPLING INTERVAL:

LAND-SURFACE ELEVATION: { } SURVEYED { } ESTIMATED DATUM:

DRILLING FLUID USED: none DRILLING METHOD:

DRILLING CONTRACTOR: none DRILLER: HELPER:

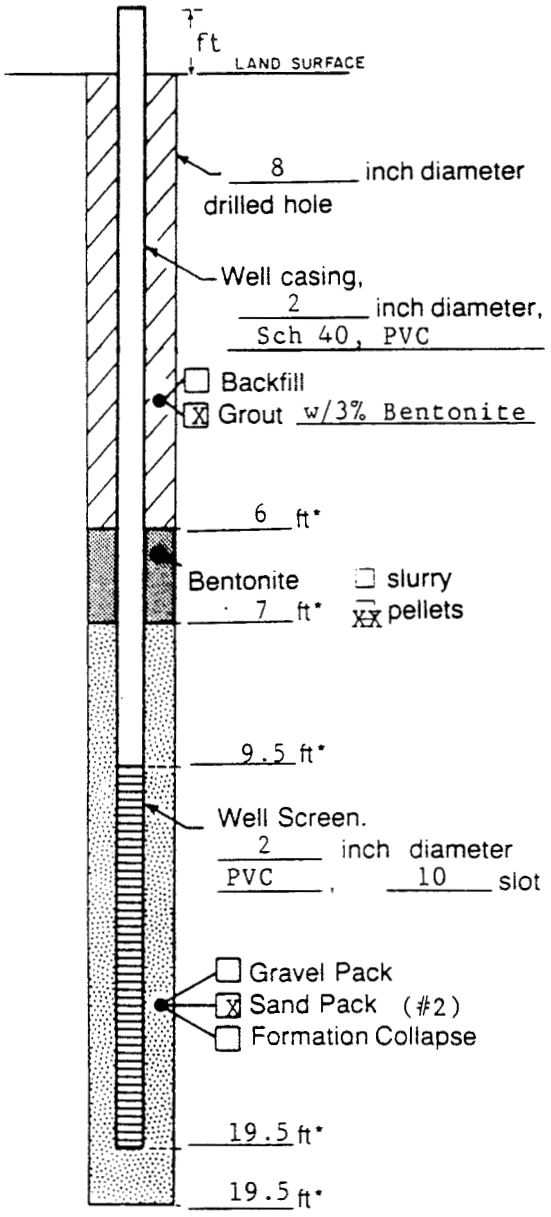
PREPARED BY: D. Colton HAMMER WEIGHT: HAMMER DROP:

SAMPLE NO	SAMPLE DEPTH		CORE RECVRY	BLOW COUNTS	SAMPLE/CORE DESCRIPTION
	FROM	TO			
RB-4-3	-	-	1.0	-	Sand, medium to fine, some silt and gravel, brown
					(sample collected 3 ft below the top of the
					riverbank).
RB-4-6	-	-	1.0	-	Same as above
					(sample collected 6 ft below the top of the
					riverbank).
RB-4-9	-	-	1.0	-	Same as above
					(sample collected 9 ft below the top of the
					riverbank).

GERAGHTY & MILLER, INC.
Ground-Water Consultants

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project NY360QP02 Well GE-3

Town/City Pittsfield

County Berkshire State MA

Permit No. _____

Land-Surface Elevation

and Datum _____ feet ☐ Surveyed

_____ ☐ Estimated

Installation Date(s) 5/5/88

Drilling Method Hollow-Stem Auger

Drilling Contractor Soil & Material Testing

Drilling Fluid None

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallon

Water Removed During Development _____ gallon

Static Depth to Water 11.0 feet below M.F

Pumping Depth to Water _____ feet below M.F

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

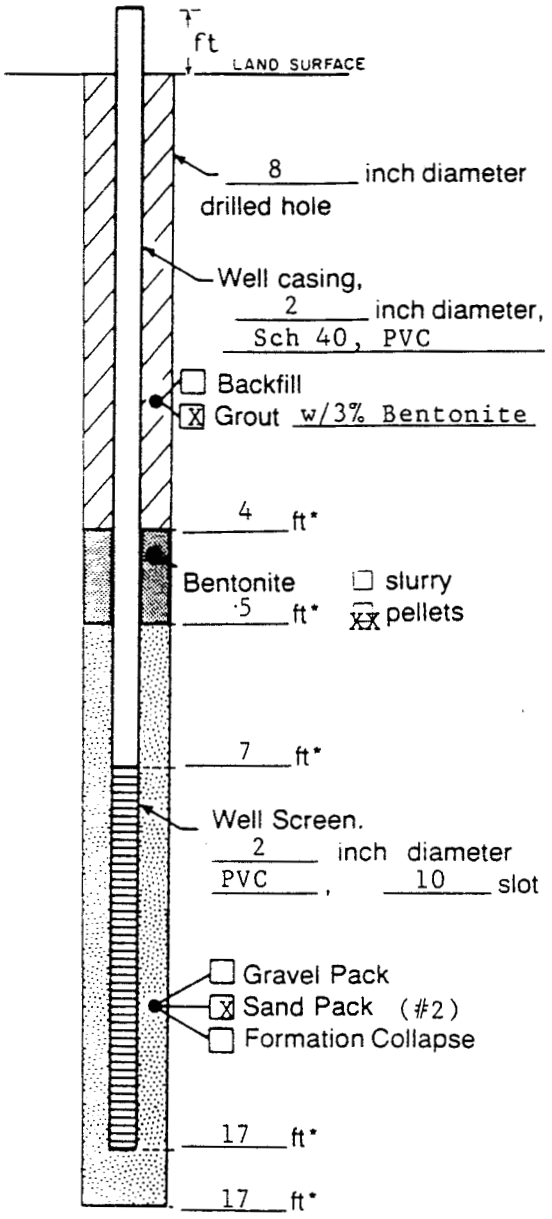
Well Purpose Monitoring Well

Remarks

Prepared by W. Gray

GERAGHTY & MILLER, INC.
Ground-Water Consultants

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project NY360QP02 Well IA-9

Town/City Pittsfield

County Berkshire State MA

Permit No. _____

Land-Surface Elevation

and Datum _____ feet ☐ Surveyed

_____ ☐ Estimated

Installation Date(s) 5/6/88

Drilling Method Hollow-Stem Auger

Drilling Contractor Soil & Material Testing

Drilling Fluid None

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water 11.9 feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

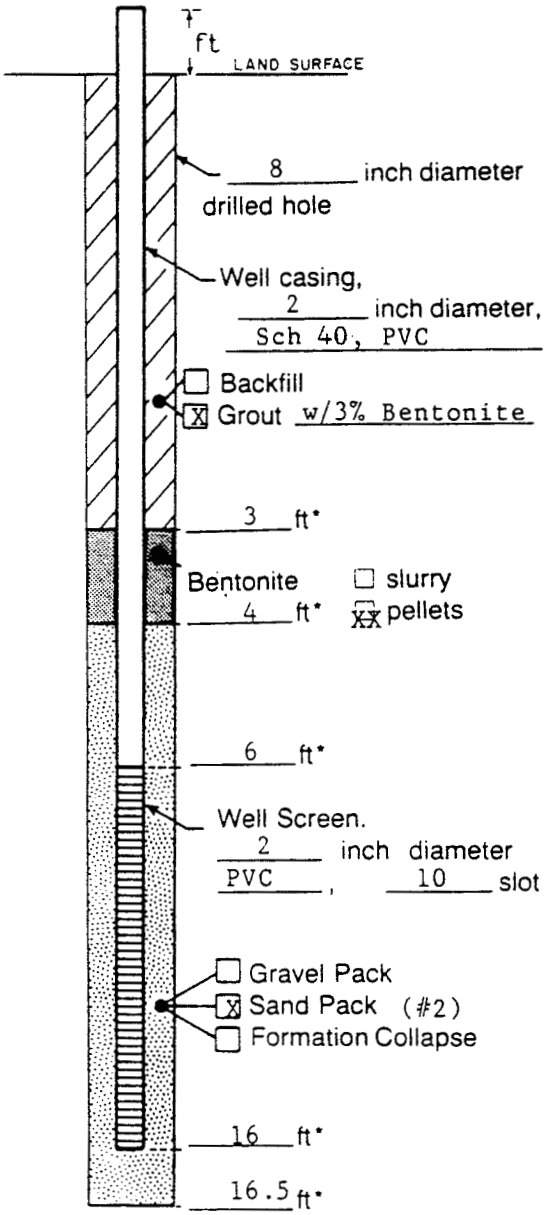
Well Purpose Monitoring Well

Remarks

Prepared by W. Gray

GERAGHTY & MILLER, INC.
Ground-Water Consultants

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project NY360QP02 Well SZ-1

Town/City Pittsfield

County Berkshire State MA

Permit No. _____

Land-Surface Elevation

and Datum _____ feet ☐ Surveyed

_____ ☐ Estimated

Installation Date(s) 5/10/88

Drilling Method Hollow-Stem Auger

Drilling Contractor Soil & Material Testing

Drilling Fluid None

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water _____ feet below M.P

Pumping Depth to Water _____ feet below M.P

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose Monitoring Well

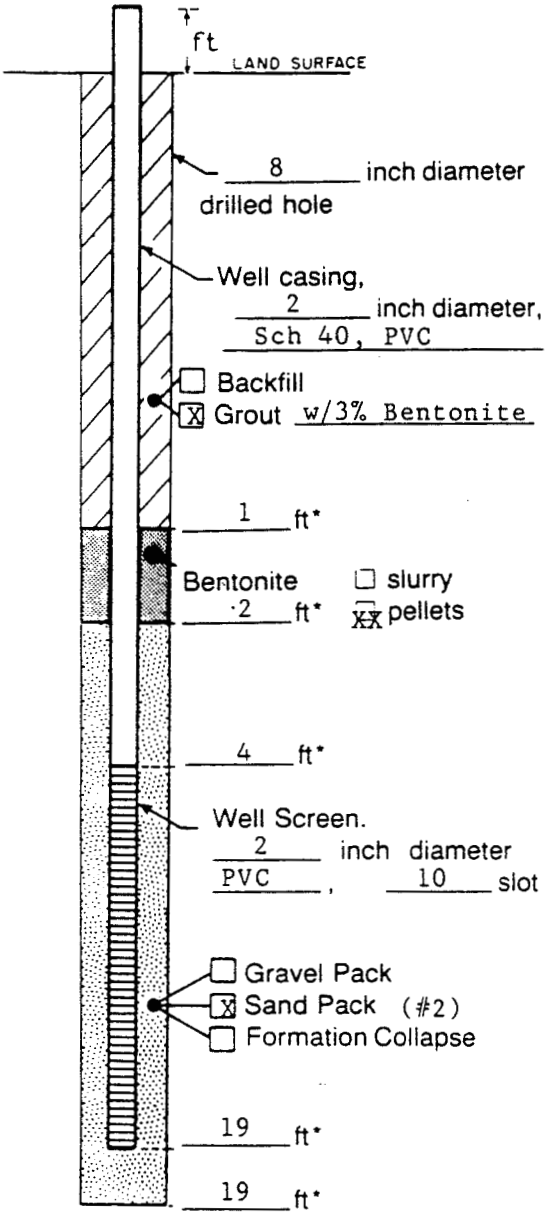
Remarks

Prepared by W. Gray

GERAGHTY & MILLER, INC.
Ground-Water Consultants

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project NY360QP02 Well SZ-3

Town/City Pittsfield

County Berkshire State MA

Permit No. _____

Land-Surface Elevation

and Datum _____ feet ☐ Surveyed

_____ ☐ Estimated

Installation Date(s) _____

Drilling Method Hollow-Stem Auger

Drilling Contractor Soil & Material Testing

Drilling Fluid None

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water 13.2 after installation feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

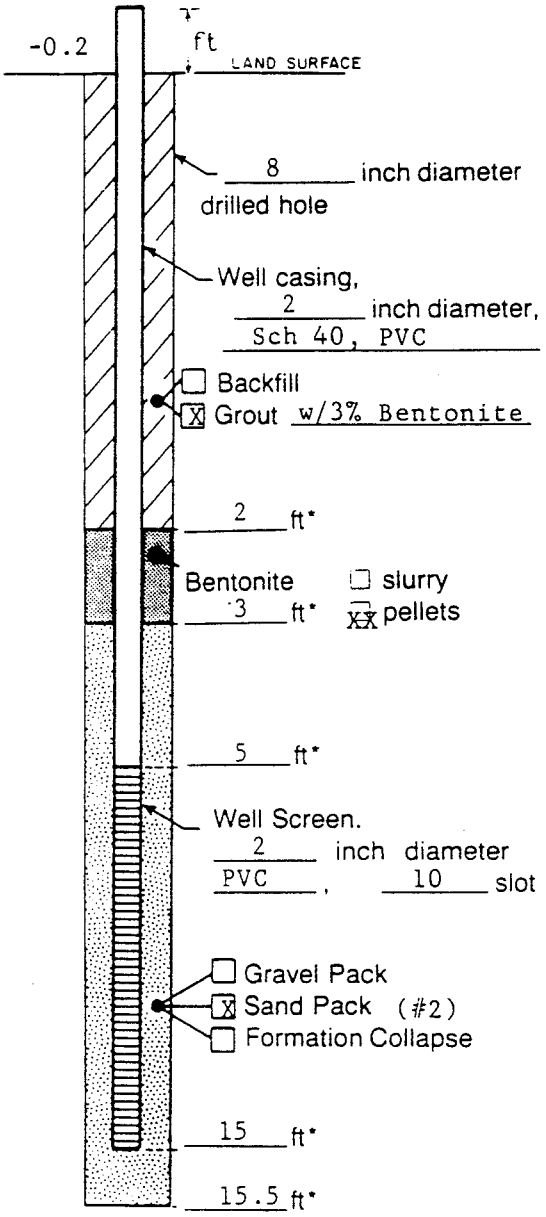
Well Purpose Monitoring Well

Remarks

Prepared by W. Gray

GERAGHTY & MILLER, INC.
Ground-Water Consultants

WELL CONSTRUCTION LOG
(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project NY360QP02 Well FW-16

Town/City Pittsfield

County Berkshire State MA

Permit No. _____

Land-Surface Elevation

and Datum _____ feet ☐ Surveyed

_____ ☐ Estimated

Installation Date(s) 4/29/88

Drilling Method Hollow-Stem Auger

Drilling Contractor Soil & Material Testing

Drilling Fluid None

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water 9.0 feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose Monitoring Well

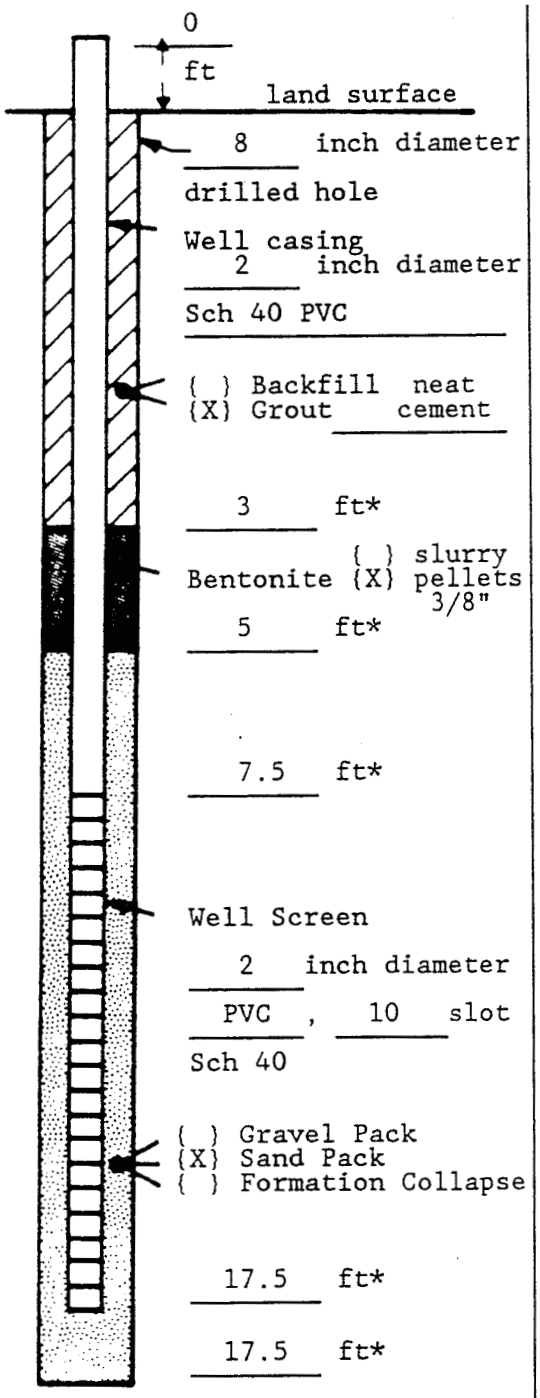
Remarks

Prepared by W. Gray

GERAGHTY & MILLER, INC.

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

* Depth Below Land Surface

Project NY0360RB02 Well NS-1

Town/City Pittsfield

County Berkshire State MA

Permit No.

Land-Surface Elevation and Datum feet ( ) Surveyed ( ) Estimated

Installation Date(s) 8/30/89

Drilling Method Auger

Drilling Contractor Soil & Material Testing

Drilling Fluid None

Development Technique(s) and Date(s)

Fluid Loss During Drilling gallons

Water Removed During Development gallons

Static Depth to Water approx. 12 feet below M.P.

Pumping Depth to Water feet below M.P.

Pumping Duration hours

Yield gpm Date

Specific Capacity gpm/ft

Well Purpose Monitoring well

Fracture Zones

Remarks

Prepared by B. Gray and V. Betro