REPORT

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT SITE AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

VOLUME I OF IV

General Electric Company

Pittsfield, Massachusetts

March 1994

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT SITE AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

VOLUME I OF IV

SUBMITTED TO THE MASSACHUSETTS DEPARTMENT
OF ENVIRONMENTAL PROTECTION AND
U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MARCH 1994

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ACKNOWLEDGEMENT

This report has been prepared by Blasland, Bouck & Lee, Inc. of Syracuse, New York, on behalf of the General Electric Company. This report is based upon previous work performed at this site by Blasland, Bouck & Lee, Inc., Geraghty & Miller, Inc., Albany, New York, and Zorex Environmental Engineers, Pittsfield, Massachusetts.

SECTION 1 - INTRODUCTION

1.1 General

This report has been prepared on behalf of the General Electric Company (GE) by Blasland, Bouck & Lee, Inc., to meet two sets of requirements applicable to the GE facility in Pittsfield, Massachusetts. First, the report constitutes an Interim Phase II - Comprehensive Site Assessment Report for the Newell Street Parking Lot Site, as required by the Massachusetts Department of Environmental Protection (MDEP), pursuant to the Massachusetts Contingency Plan (MCP) and a Consent Order executed by GE and the MDEP in May 1990. This site is designated by the MDEP as the Newell Street Area II Site (ID #1-1057) or former Oxbow Area G. Second, this report constitutes a Current Assessment Summary (CAS) Report for the area designated as USEPA Area 5b pursuant to the requirements of a permit (the "Permit") issued to GE by the United States Environmental Protection Agency (USEPA) under the corrective-action provisions of the Resource Conservation and Recovery Act (RCRA) as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA). The Permit was originally issued in February 1991 and was reissued, as modified, effective January 3, 1994. The MDEP-designated Newell Street Area II Site and the USEPA-designated Area 5b are coextensive and will hereafter be jointly referred to as "the Newell Street Parking Lot Site."

GE submitted a MCP Interim Phase II Report for the broader Newell Street Site to the MDEP in February 1992. At that time, the "Newell Street Site" consisted of both (1) the Oxbow Area I Site, which is comprised of the commercial/industrial area along Newell Street (including former Oxbow Area I) and the riverbank north of that area, and (2) the Newell Street Parking Lot Site, which is comprised of the GE Newell Street Parking Lot and the adjacent GE-owned property (a wooded area to the east and the riverbank to the north) and

includes former Oxbow Area G. That report was conditionally approved by the MDEP in a letter dated March 18, 1993. The MDEP's letter stated that a Supplemental Scope of Work (SOW) for a Phase II - Comprehensive Site Assessment was required within 60 days of the date of the letter. In response, GE submitted a MCP Supplemental Phase II SOW for the entire Newell Street Site on May 17, 1993.

When the MCP Interim Phase II Report and the Supplemental Phase II SOW were prepared, the USEPA Permit was stayed pending resolution of an appeal of the Permit by GE and others. Following that appeal, USEPA modified certain portions of the Permit and issued final Permit modifications on December 1, 1993. The modified Permit became effective on January 3, 1994.

The MDEP and the USEPA have executed a Memorandum of Understanding (MOU) that provides for coordination between them in reviewing GE's submittals. As part of the MOU, certain submittals prepared by or on behalf of GE pursuant to the Permit and the May 1990 Consent Order are to be prepared jointly in order to facilitate coordinated agency review.

Under the Permit, the USEPA's jurisdiction, as it relates to the Newell Street area, is limited to the Newell Street Parking Lot Site (designated in the Permit as USEPA Area 5b). Thus, activities conducted by GE at the Newell Street Parking Lot Site are subject to joint agency review under the MOU. USEPA's jurisdiction does not, however, include the Oxbow Area I Site; that site thus remains under the sole regulatory jurisdiction of the MDEP under the MCP. [USEPA does assert jurisdiction over the narrow strip of riverbank owned by GE north of the commercial/industrial properties at the Oxbow Area I Site. However, USEPA has indicated that it will not require a RCRA Facility Investigation (RFI) Proposal for that strip. Instead, the general investigation and remedial-action assessment of that strip will be conducted in connection with the

commercial/industrial area under the sole regulation of the MDEP.] Figure 1-1 illustrates these two sites and the corresponding regulatory jurisdiction.

The MCP Interim Phase II Report and the Supplemental Phase II SOW previously submitted to the MDEP were not prepared to serve as documents for joint agency review. In addition, these documents addressed the entire Newell Street Site, including both the Newell Street Parking Lot Site and the Oxbow Area I Site. As noted above, however, the USEPA's jurisdiction under the Permit is limited to the Newell Street Parking Lot Site. Hence, these two documents have been revised to address this site only. As indicated above, this report is not only a revised MCP Interim Phase II Report, but also a Current Assessment Summary. The May 1993 MCP Supplemental Phase II SOW has also been revised to serve as both a MCP Supplemental Phase II SOW and a RCRA Facility Investigation (RFI) Proposal for this site pursuant to the Permit and is being submitted concurrently with this document. In addition, a Preliminary Health and Environmental Assessment (HEA) Proposal for this site is being submitted under separate cover.

1.2 Background Information

Prior to about 1940, the stretch of the Housatonic River which flows through Pittsfield, Massachusetts, was characterized as a meandering stream. As such, the river contained a series of alternating bends, or oxbows, as well as lowland areas.

In an effort to reduce the flooding potential of the Housatonic River, the City of Pittsfield, in a joint program with the U.S. Army Corps of Engineers during the late 1930s and/or early 1940s, altered the natural course of the river to form a relatively straight channel. In order to accomplish this, a total of 11 oxbows or low-lying areas, which had previously conveyed river flows, were deliberately isolated from the newly formed channel of the river.

These former oxbows were subsequently filled with various materials. There are no known records as to the specific sources or types of material used as fill (apart from recent sampling data). Oxbow Area G, one of the 11 areas which had been isolated from the river channel and then filled, was later paved for use as the existing Newell Street Parking Lot. Figure 1-2 presents a general location plan of the Newell Street Parking Lot Site and the areas encompassed within radii of 500 feet and one-half mile of the site, while Figure 1-1 provides a more detailed illustration of the site features.

A significant number of investigations have been conducted at and near the Newell Street Parking Lot Site. A summary of studies performed to date is presented in Table 1-1. A brief discussion of these studies is provided below.

The presence of polychlorinated biphenyls (PCBs) within the soils of former Oxbow Area I (in the commercial/industrial area east of the Newell Street Parking Lot Site) was initially identified during a routine environmental assessment performed in 1987 for one of the property owners in that area. The detection of PCBs in the soils triggered additional investigations and activities performed by GE starting in 1987 and continuing to the present.

As part of subsurface soil investigations performed in former Oxbow Area I in May 1987, two soil borings were installed in the Newell Street Parking Lot. Certain soil samples collected from these borings were analyzed for PCBs. PCBs were detected at concentrations of up to 94 parts per million dry weight (ppm).

Between May 1988 and February 1989, a total of six soil borings were drilled and one monitoring well was installed at the site. Select soil samples from each boring were analyzed for PCBs, with PCB concentrations ranging from below detection to 250 ppm. Groundwater samples were collected and analyzed for volatile organic compounds (VOCs) and PCBs in May 1988, and for VOCs, chlorinated hydrocarbons, and PCBs in February 1989. The results of these

analyses showed the presence of PCBs only, but at concentrations less than their quantitation limit.

Also in May 1988, three surficial soil samples were collected from the riverbank adjacent to the Housatonic River. PCB concentrations of these samples ranged from 110 to 160 ppm.

As the results of efforts described above, investigations specific to the Newell Street Parking Lot were initiated. In August 1989, four soil borings were advanced in an area along the northern edge of the site. Soil samples from these borings were analyzed for PCBs, VOCs, and base/neutral organics. One of these soil borings was completed as a monitoring well and groundwater collected from this well was analyzed for PCBs, VOCs, and base/neutral organics. Soil PCB concentrations ranged from 0.6 ppm to 12,000 ppm, while that of groundwater was 0.017 ppm. The analytical results also showed the presence of several VOCs and base/neutral organics in both soils and groundwater.

In May 1990 GE and the MDEP executed a Consent Order requiring investigations and studies of the Housatonic River and its former oxbow areas under the MCP. In June 1990, pursuant to that Consent Order, GE submitted two documents: "Newell Street MCP Supplemental Phase II Scope of Work" (Blasland & Bouck, June 1990a) and the "Newell Street MCP Supplemental Data Summary" (Blasland & Bouck, June 1990b). These documents summarized the investigations that had been previously performed at the site, compared the extent of these activities with MCP Phase II requirements for a Comprehensive Site Assessment, and proposed additional activities to fulfill several MCP Phase II data needs. The SOW was conditionally approved by the MDEP in a letter dated August 24, 1990, and field activities were conducted between May 1991 and January 1992. MCP activities included the collection of subsurface soil samples, as well as groundwater samples, to further define the nature and extent of hazardous constituents present at the site. A total of 17 soil borings were

drilled in and around the Newell Street Parking Lot Site, three were completed as monitoring wells, and representative soil and groundwater samples were collected and submitted for laboratory analyses. Analytical results indicated the presence of various constituents including PCBs, VOCs, semivolatile organic compounds (SVOCs), metals, certain dioxin/furan compounds, cyanide, sulfide, and one pesticide (aldrin) in groundwater and one pesticide (sulfotepp) in soil.

In February 1992, GE submitted a report to the MDEP entitled "MCP Interim Phase II Report for the Newell Street Site" (Blasland & Bouck, February 1992) summarizing the results of completed Phase II activities. In a letter dated March 18, 1993, the MDEP conditionally approved the Newell Street Interim Phase II Report. The Newell Street Supplemental Phase II Scope of Work (Blasland & Bouck, May 1993) was subsequently prepared and submitted to the MDEP. However, that report was not acted upon by the MDEP, since the Permit had not yet been finalized and the associated jurisdictional issues were still pending.

Additional field activities have recently been conducted at the MDEP's request. These activities involved the collection of several surficial soil samples in an area along the southern edge of the parking lot as well as at an adjacent residential property. These samples were collected, at the MDEP's direction, in October 1993 and January 1994 to assist the MDEP in the performance of an "imminent hazard" evaluation.

1.3 Format of Document

This document is divided into several sections. Section 2 provides a summary of the physical characteristics and environmental setting of the site, while Section 3 presents information concerning site history. Hydrogeologic investigations that have been performed to date are summarized in Section 4, while Section 5 provides a summary of an ambient air monitoring program

conducted by GE as part of a MCP facility-wide monitoring program. Section 6 summarizes the short-term mitigating measures that GE has performed or proposed to minimize potential human and environmental exposures to the detected constituents of concern. A discussion of the fate and transport characteristics of the hazardous constituents detected at the site is provided in Section 7. Potential migration pathways for those constituents and the potential for exposure of human and environmental receptors to those constituents in the affected media are discussed in Section 8. Section 9 identifies remaining data needs, and Section 10 presents a summary of the overall conclusions and of intended future activities concerning the site.

In addition, Appendices A through L and the various tables and figures included herein provide supporting information referenced in this report.

SECTION 2 - PHYSICAL AND ENVIRONMENTAL SETTING

2.1 General

This section summarizes the current physical and environmental characteristics of the Newell Street Parking Lot Site located in Pittsfield, Massachusetts. Characteristics including site location, topography, surface drainage, vegetation, surface water, wetlands and critical habitat, regional and site-specific geology/hydrogeology, land use, climatology/meteorology, and utilities are described herein.

2.2 Geographic Location of Site

The general geographic location of the Newell Street Parking Lot Site in relation to the GE facility, the Housatonic River, and Newell Street is illustrated in Figure 1-2. The site is generally bounded by the Housatonic River to the north, the western edge of the Newell Street Parking Lot to the west, and the property line between GE-owned property and the adjacent commercial/industrial properties located to the south and east. The boundaries of the site are shown on Figure 2-1.

The Universal Transverse Mercator (UTM) coordinates for the site are approximately 4,700,900m N, 645,500m E. The site is located at approximately 42° 26' 40" N latitude and 73° 15' 20" W longitude.

There are several parcels which border the Newell Street Parking Lot. Figure 2-1 illustrates the adjacent parcels and presents the corresponding City of Pittsfield Tax Assessor's property identification numbers. Table 2-1 lists the names and addresses of the owners of these adjacent parcels.

As illustrated in Figure 1-2, there do not appear to be any institutions within a 500-foot radius of the Newell Street Parking Lot Site. The population residing within a one-half mile radius of the site boundary is estimated to be

approximately 2,800 individuals. This is based on a review of 1990 aerial photographs of the area which indicate that approximately 700 homes are located within this radius. For purposes of estimating the population within one-half mile of the site, an average of four people were assumed to reside in each home.

2.3 Site Mapping and Photographs

2.3.1 Site Mapping

Figure 1-2 provides a general location plan of the Newell Street Parking Lot Site. This figure was prepared using a USGS 7.5 by 15 minute quadrangle topographic mapping and includes topographic contours and elevations; streets, roads, highways, and other manmade structures; and water features. Figure 2-1 provides a more detailed site plan including two-foot interval topographic contours and other physical site features such as related property boundaries, fencing, and vegetation. Figure 1-1 shows the approximate location of the former oxbow which was present in this area. The approximate location of the former oxbow was obtained from mapping prepared by the City of Pittsfield in 1940. That mapping has been reproduced and is included in Appendix A.

2.3.2 Site Photographs

Table 2-2 presents a summary list of available aerial photographs which depict the Newell Street Parking Lot Site. Representative aerial photographs have been reproduced to illustrate the progression of change related to this site. These photographs are presented in Figures 2-2 through 2-4. They include a photograph taken in 1942 showing post rechannelization conditions (Figure 2-2), a photograph taken in 1969 showing the paved parking lot present today (Figure 2-3), and a photograph

taken in 1990 which serves to illustrate recent site conditions (Figure 2-4). Additional aerial photographs for other years are presented in Appendix B.

2.4 Topography, Surface Drainage, and Vegetation

The topography of the Newell Street Parking Lot Site is generally characterized by land gently sloping northward to the Housatonic River. Along the riverbank of the Housatonic River, which is vegetated, the topography drops off steeply. Topographic information for the Housatonic River floodplain (which includes a portion of the site) has been developed by GE as part of its separate, ongoing investigation of the Housatonic River. Several additional sources of topographical information have been obtained and reviewed. These sources include USGS mapping, an assessor's map from the City of Pittsfield showing elevation in 5-foot contour intervals (Appendix C), and engineering drawings associated with a municipal sewer line project performed within a portion of the site (Appendix D). These sources of information confirm that the land surface slopes gently northward from Newell Street to the top of the Housatonic riverbank. The riverbank drops sharply from the top of the bank to the river.

An existing drainage swale, located west of the Newell Street Parking Lot, receives stormwater flows from the Newell Street Parking Lot area. Appendix D shows the location of this swale.

The extent of vegetation at the Newell Street Parking Lot Site is limited since a large percentage of the site is covered with asphalt pavement. The general limits and type of surface cover present within and adjacent to the site are shown on Figure 2-5. The riverbank area north of the parking lot is heavily vegetated and the wooded area, located adjacent to the parking lot to the east, is heavily vegetated, primarily with brush. Typical tree species in the area include Cottonwood and Ashleaf Maple. Other vegetation identified include Wild

Strawberry, Cypress Spurge, Spotted Knapweed, Black Raspberry, Rough Cinquefoil, Yarrow, Trembling Aspen, Riverbank Grape, Honeysuckle, Dames Rocket, Red Osier Dogwood, and American Elm.

2.5 Surface Water/Flooding Potential

There are no surface waters on the Newell Street Parking Lot Site. However, the site is bordered on the north by the Housatonic River. In addition, Silver Lake is located approximately 0.2 miles (1,000 feet) northwest of the site, and Goodrich Pond is located approximately 0.6 miles (3,000 feet) east of the site (Figure 1-2).

The maximum elevation at the site is approximately 986 feet above MSL, placing the site entirely within the 100-year floodplain of the Housatonic River, as estimated by the Federal Emergency Management Agency (FEMA, 1987). Except for the steep riverbank area, the minimum land surface elevation is approximately 982 feet above MSL, or approximately two feet higher than the 10-year floodplain as estimated by recent HEC-2 modeling performed as part of the Housatonic River investigations (see Figure 2-1).

2.6 Wetlands and Critical Habitats

The Massachusetts Wetlands Protection Act identifies specific resource areas as wetlands subject to protection. Resource area designations applicable to the Newell Street Parking Lot Site include the floodplain, riverbank, and a 100-foot buffer zone from the river bank. The National Wetlands Inventory, performed by the United States Department of the Interior Office of Biological Services, has not classified any portion of the site as wetlands (with the exception of the adjacent Housatonic River, which is classed as riverine, lower perennial, open water).

The majority of the Newell Street Parking Lot Site consists of a paved parking lot, with the only vegetated areas being the narrow strip along the riverbank and the wooded area just east of the parking lot. Except as discussed above, these areas have not been designated as areas of critical environmental concern or protected areas, and there is no evidence that these areas constitute a critical habitat for any species.

2.7 Geologic Characteristics

Pittsfield is situated in the Housatonic River Basin between the Berkshire Hills to the east and the Taconic Range to the west. Bedrock in the Pittsfield area consists of an assemblage of north-south trending metamorphic units (mainly gneiss, schist, and marble), which has resulted from a series of Paleozoic mountain-building episodes which occurred between 520 to 480 million years ago. The bedrock is overlain by a series of unconsolidated materials formed by glacial scouring and deposition, as well as pre- and post-glacial fluvial modification of the landscape.

The main axis of the Housatonic River Valley is underlain by carbonate rock (marble, limestone, and dolomite) of the Ordovician-Cambrian Stockbridge Group. These rock types are less resistant and erode more easily than the gneiss and schist of the Berkshire Highlands.

The bedrock underlying the area is reported to be lower Ordovician age, tan-beige quartzose calcite and dolomite marble (USGS, 1983). Immediately west of the site the underlying bedrock is also reported as the Stockbridge Formation but the bedrock unit is described as Lower Cambrian age massive to finely laminated steel-grey calcitic dolomite marble containing a prominent zone of white quartz modules near the top (USGS, 1983).

The unconsolidated surficial geologic deposits within the basin (excluding swamps and alluvium) are of Pleistocene glacial origin (1.6 million to 10,000

years ago) and are classified as either stratified (glaciofluvial and glaciolacustrine) or nonstratified (till) deposits. Known thicknesses of stratified and till deposits have been documented at 240 feet and 90 feet, respectively (Norvitch et al. 1968). Till predominates in the upland areas, and stratified deposits occur primarily along the lower slopes. More recent alluvial and swamp deposits are found mainly in the valley bottoms.

Aquifers and water bodies within the basin are recharged by precipitation (rainfall plus snowfall). The nearest mapped aquifers are within the Housatonic River Basin to the north and the Connecticut River Basin to the southeast, as indicated on the Pittsfield East quadrangle. According to the Pittsfield Department of Public Utilities, the city obtains its industrial and municipal water supply from the following surface water bodies located several miles to the south and to the east: Sand Washington Reservoir, Cleveland Reservoir, Farnham Reservoir, New Sackett Reservoir, Lake Ashley, and the Lower Ashley Intake. In the past, Onota Lake (approximately 3 miles to the north) has been used as an emergency municipal and recreational water supply.

The stratified and nonstratified surficial deposits are not considered productive aquifers (Norvitch et al. 1968), and the carbonate bedrock will provide sufficient water for domestic and industrial use only if a well is installed within a solution or fault zone.

The near-surface geologic characteristics of oxbow areas are influenced by alluvial (i.e., river) depositional conditions. Currents of varying velocity in the river channel, as well as in flood waters, cause the deposition of varying sediment types. Sands and gravels are generally deposited in or near the river channel itself and may form local ridges known as natural levees. Overbank deposits, consisting of fine sands and silts, are deposited from a suspended state onto a floodplain area during flooding episodes. Finally, clay can be deposited in flow areas where standing water remains after a flood. This whole

scenario is complicated by the fact that the river has meandered across its floodplain through time.

The soils encountered during the previous investigations performed at the site indicate that the area is underlain by an assemblage of fine to coarse sand, gravel, with lesser amounts of silt and clay. From the land surface to depths of between 2 and 18 feet below the surface a fill unit has been observed in various portions of the site. This fill unit consists of sands and gravels with varying percentages of anthropogenic and vegetative matter. This fill material contains numerous foreign material such as glass, cinders, wood, bricks, vegetation, concrete, ceramic fragments, foil, paper, and wire. The presence of these foreign materials, plus known information concerning the filling of this oxbow area in the 1940s (see Section 3) confirms the unnatural placement/ deposition of this material. Underlying this fill layer is a heterogeneous assemblage of gravel, sand, silt, and clay alluvial deposits.

Bedrock has not been encountered at the site, as the previous investigations have focused on fill areas adjacent to the Housatonic River, as well as impacts that the fill material has had on the local hydrogeologic system. However, based on other investigations performed by GE in areas in immediate proximity to the Newell Street Parking Lot Site, there is site-specific information available concerning the presence of bedrock. Specifically, at the GE Lyman Street Parking Lot Site (also known as USEPA Area 5a), located immediately across the Housatonic River, bedrock has been reported at approximately 50 feet below ground surface, as discussed in Section 4.3.6.1 of the MCP Phase I Report for Lyman Street Parking Lot (Oxbow Area D) and Current Assessment Summary for USEPA Area 5a (Blasland, Bouck & Lee, February 1994).

2.8 Hydrogeologic Characteristics

As determined from a review of the MDEP's "Water Supply Protection Atlas," and discussions with GE personnel, public or private water supply wells used for drinking water purposes are not located within a one-half mile radius of the site. However, Altresco, Inc. has several deep bedrock wells which are located at the GE facility across the river to the north. These wells are operated to provide cooling water for industrial use.

There is a limited amount of information available concerning the hydrogeologic conditions associated with the shallow groundwater zone beneath the Newell Street Parking Lot Site. Based on available information, the groundwater flow direction is toward the Housatonic River. However, further information is needed with respect to groundwater elevation, the direction and rates of groundwater flow, and the occurrence and magnitude of any seasonal changes in groundwater elevation. These data needs are addressed in the separately bound MCP Supplemental Phase II Scope of Work for Newell Street Parking Lot Site and Proposal for RCRA Facility Investigation of USEPA Area 5b ("Supplemental Phase II SOW/RFI Proposal") (Blasland, Bouck & Lee, March 1994).

2.9 Past and Present Land Uses

Aerial photographs for the site indicate that the river rechannelization project had been completed in this area by 1942. The rechannelization is evident in the 1942 photograph by the lack of trees along the new river bank and evidence of bare, unvegetated surfaces in the former lowland/oxbow area (Figure 2-2). The 1942 photograph shows no structures along Newell Street, and most of the area appears to be either bare ground or grass-covered. As evident in the 1957 and 1960 photographs (Appendix B), the Newell Street Parking Lot Site remained essentially undeveloped at that time and the presence

of increasing vegetation over time is noted. However, by 1969, the parking lot had been constructed and appeared to be at full capacity (Figure 2-3). (GE's records indicate that the parking lot was constructed in 1966.) Continued use of the parking lot was observed (in varying degrees) in all remaining photographs (1974, 1979, 1981, and 1990).

The site, identified as Parcel J9-23-12 on the City of Pittsfield tax maps (Appendix C), is currently zoned for commercial, warehouse, and storage (C-W-S) use, as indicated on the Pittsfield Zoning Map (Appendix C). The land within the current limits of the Newell Street Parking Lot Site is entirely owned by GE.

As illustrated on Figures 2-1 and 2-5, the Newell Street Parking Lot is enclosed by a chain link fence except along a portion of the perimeter adjacent to the riverbank and is paved. Access to this area is further restricted by a locked gate on the approach road to the parking lot. The riverbank area north of the Newell Street Parking Lot is steep and heavily vegetated. Access to this area is restricted by the steep terrain and the presence of heavy vegetation. While this area had previously been used for GE employee parking, the Newell Street Parking Lot has not been used for parking since 1992.

As illustrated on Figure 2-1, the wooded area adjacent to the eastern edge of the Newell Street Parking Lot is fenced on the northern and western sides, and partially fenced on the eastern side. Access to the wooded area is restricted by the presence of fencing and the heavy vegetation, primarily consisting of trees and brush. The Newell Street Parking Lot, the riverbank north of the parking lot, and the wooded area are the focus of a proposed interim measure, designed to further restrict and discourage access to these areas, as discussed in Section 6.3.

2.10 Climatological and Meteorological Information

The climate in the area of the site is characterized as humid, with a mean annual temperature of about 46°F based on data recorded at the nearby Pittsfield Municipal Airport. The mean summer temperature is 68°F, while the mean winter temperature is 28°F (Norvitch et al., 1968). Prevailing winds are from the west. This fact is supported by wind directional data collected during 1992 as part of a facility air monitoring program. These data, illustrated in Figure 2-6, were collected at a meteorological station located at GE's East Street Area 2 site (also known as USEPA Area 4) which is located on the opposite side of the Housatonic River, northeast of the Newell Street Parking Lot Site.

The average precipitation varies from a low of 2.5 inches per month during the winter months, to a high of about 5 inches per month in the summer months. The Housatonic River Basin, which includes the site, receives an average of 46 inches of precipitation per year. Approximately 22 inches per year escape by evaporation and transpiration to the atmosphere, while the remaining 24 inches per year are lost as runoff or collected in reservoirs, lakes, and ponds (Norvitch et al., 1968).

2.11 Site Utilities

Underground and overhead utilities in the vicinity of the Newell Street Parking Lot Site include electric, water, telephone, and sewer. Engineering drawings for the underground utilities are presented in Appendix D.

Drawings for the water distribution mains, presented in Appendix D, indicate that 16-inch and 10-inch water mains are present beneath Newell Street; however, these drawings indicate that no water mains pass through the site itself. Sewerage and drainage drawings are also included in Appendix D. From these drawings, it appears that no sanitary sewer or stormwater drainage lines

are present beneath the site. These figures also indicate that a stormwater drain line discharges to an open ditch west of the Newell Street Parking Lot. A 48-inch reinforced concrete sanitary sewer pipe runs through the northern portion of the site along the bank of the Housatonic River (Appendix D). The sewer line was likely constructed some time during the early 1960s, based on the date of the engineering drawings. The line is located approximately 6 to 10 feet below the ground surface and is partially below the water table (according to information presented on the engineering drawings).

In addition, bordering the western side of the site are overhead power lines owned by Northeast Utilities Service Company.

SECTION 3 - SITE HISTORY AND SWMU IDENTIFICATION

3.1 General

As mentioned in Section 1.2 and explained in more detail below, the Newell Street Parking Lot Site was once comprised of a former Housatonic River oxbow and low-lying area (Oxbow Area G). The oxbow/low-lying area was cut off from the river, subsequently filled, and later paved to construct a parking lot which exists today. It is difficult to determine the precise location of the former oxbow/low-lying area. However, as explained in more detail in Section 4.6.1, based on the review of both analytical and boring log information, as well as historical aerial photographs, the former oxbow/low-lying area appears to be located principally within the paved portion of the Newell Street Parking Lot proper, with a portion possibly extending under the power lines located immediately to the west and/or possibly extending to the south beyond the boundary of the parking lot (see Figure 1-1).

The USEPA Permit divides the GE facility and other affected properties into various areas to facilitate the investigation of releases from Solid Waste Management Units (SWMUs) at the GE Facility. The Permit identifies the former oxbow/low-lying area located within the Newell Street Parking Lot area as SWMU G-6. That SWMU and the surrounding GE-owned land comprising the Newell Street Parking Lot Site are designated under the Permit as Area 5b. That area includes the riverbank north of the parking lot and the wooded area located adjacent to the parking lot to the east (Figure 1-1).

3.2 Past and Present Site Owners

According to information obtained at the Pittsfield Registry of Deeds, portions of the Newell Street Parking Lot Site were acquired by GE in March

1918 from Frederick G. and Florence G. Rice and Sarah J. Smith. The remaining portions of the site were acquired by GE in December 1972 from David V. and Dorothy F. Chiorgno.

3.3 History of Disposal Practices

There is no known information on disposal practices at the Newell Street Parking Lot Site. As noted in Section 1.2, it is believed that, as part of or after the Housatonic River rechannelization project in the late 1930s or early 1940s, this former lowland area/oxbow was filled with various materials of unknown origin.

In its letter of August 24, 1990 regarding GE's June 1990 MCP Supplemental Phase II Scope of Work, the MDEP stated that GE should discuss the disposal history of the "former pond" area as referred to in the Phase II SOW and the "disposal area" as referred to in Figure 2 of an October 27, 1989 letter from GE to the MDEP, and should include, if available, records and a description of the materials disposed of in this area. As indicated above, there are no records available that describe the placement of fill material in the "former pond" area (i.e., Oxbow Area G). Information regarding the fill material placed in this and other low-lying areas is based on visual observation of recovered samples and the results of subsequent analytical efforts.

This information has essentially identified the fill material as the primary "source" of hazardous materials at the site. As a result, investigation activities have been primarily directed toward further characterization of the presence and extent of the fill material. These efforts indicate that the fill materials generally consist of sands and gravel with assorted industrial fill, including fragments of brick, glass, steel, copper, assorted metal debris, cinders, ceramic, paper, and concrete.

In addition to the fill materials that were placed within the site, it is possible that there are other contributing sources of hazardous constituents to the various media at the site. While it is not expected that these potential sources are significant in comparison to the fill materials, they may impact the scope of subsequent investigations. Potential sources may include the commercial/industrial operations that have occurred to the east of the site since the 1940s. These include printing operations, automobile parts and service-oriented activities, and contractor facilities. Each of these activities potentially creates a situation where the release of oils or hazardous materials may occur to the site media.

SECTION 4 - HYDROGEOLOGIC INVESTIGATIONS

4.1 General

This section provides a summary of the hydrogeologic investigations that have been performed to date at the Newell Street Parking Lot Site. Separate summaries have been prepared for subsurface soils, surficial soils, and groundwater. For each of these media, the discussion has been further categorized into "Pre-MCP" investigations (i.e., activities that were performed prior to the Consent Order executed by GE and the MDEP under the MCP in May 1990), and "MCP Investigations", which were performed in accordance with the MDEP-approved "Newell Street MCP Supplemental Phase II Scope of Work" (June 1990a) or thereafter. Discussions regarding subsurface soil, surficial soil, and groundwater investigations are presented in Sections 4.2 through 4.4, respectively. Section 4.5 provides summary of soil gas data, and Section 4.6 provides an overall hydrogeologic assessment. To support the information included in this section, several data summary tables and attachments will be referenced as appropriate. Figure 4-1 illustrates the sampling locations for the field investigations.

4.2 Subsurface Soil Investigations

4.2.1 Pre-MCP Subsurface Soil Investigations

A number of pre-MCP subsurface soil investigations were conducted at the Newell Street Parking Lot Site as discussed below. Table 4-1 and Figure 4-2 present the PCB data from these investigations. The presence and thickness of any fill materials encountered are shown in Table 4-2, while Table 4-3 presents related photoionization detector (PID) readings.

Appendix E contains the geologic boring logs. The analytical data sheets are included in Appendix F in an organized way.

4.2.1.1 1987 Investigation

Subsurface soil investigations within the Newell Street Parking Lot Site were performed in May 1987 as part of an investigation performed by Geraghty & Miller, Inc. (Geraghty & Miller) to identify areas of subsurface fill associated with former Oxbow Area I in the commercial/industrial area to the east of the Newell Street Parking Lot. Although 35 soil borings were advanced during this effort, only two (QP-10 and QP-11) were located within the current limits of the Newell Street Parking Lot Site, as shown on Figure 4-1. Soil borings QP-10 and QP-11 were advanced to a depth of 12 feet below ground surface 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.

Once the sampler was retrieved, the lithology of the sample was described in detail. Select soil samples were collected and shipped via overnight courier to IT Analytical Services, Inc (ITAS), Knoxville, Tennessee, for PCB analysis.

For QP-10, samples representing the 0- to 8-foot and 8- to 12-foot depth increments were analyzed for PCBs, with results of 94 ppm and 0.06 ppm, respectively. For QP-11, samples representing the 0- to 2-foot and 2- to 12-foot depth increments were analyzed for PCBs, with results of 1.7 ppm and less than 0.05 ppm, respectively. At QP-10, 8 feet of fill material was noted, and at QP-11, 2 feet of fill was observed. The results of this investigation were summarized in a draft

report entitled "Investigation of Soil Conditions in the Vicinity of Newell Street - Interim Report" (Geraghty & Miller, Draft-July 1987).

4.2.1.2 1988 Investigation

The MDEP reviewed the above-referenced report and requested that additional investigative work be done to determine the quality of surficial soils and groundwater in Oxbow Area G, 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 additional investigations in response to the MDEP's comments. This work plan was approved by the MDEP in April 1988 and subsequently implemented by Geraghty & Miller. The results of this effort were summarized in a report titled "Investigation of Soil and Groundwater Conditions at the Newell Street Site" (Geraghty & Miller, July 1988).

Specific to the Newell Street Parking Lot Site, the investigation included the drilling of two soil borings (GE-1 and GE-2) and the installation of one groundwater monitoring well (GE-3) as shown on Figure 4-1. At GE-1, drilling was advanced to a depth of 6 feet below grade, and samples were collected in 2-foot depth increments, screened with a PID, and submitted to ITAS for PCB analysis. PCB results ranged from 0.05 ppm to 22 ppm.

At GE-2, the soil boring was advanced to a depth of 8 feet below grade and soil samples were collected, screened with a PID, and submitted to ITAS for PCB analysis. Two samples were submitted and analyzed: 0- to 4-feet (140 ppm) and 4- to 8-feet (170 ppm). No PCB analyses were performed as part of the installation of soil boring GE-3. The presence of fill material was noted at each location

beginning at the ground surface and extending to depths of 2.5, 4, and 7 feet at locations GE-1, GE-2, and GE-3, respectively.

4.2.1.3 1989 Investigation

In continuation of the investigation efforts associated with Oxbow Area I, additional subsurface soils were collected by Geraghty & Miller in February 1989, and analyzed for PCBs by ITAS. Within the Newell Street Parking Lot Site, subsurface soil samples were collected at locations GE-4, GE-5, GE-6, and GE-7, as shown on Figure 4-1. These borings were advanced to either 6 feet (GE-6 and GE-7) or 8 feet (GE-4 and GE-5) below grade, with samples collected in two-foot increments, screened within a PID, and submitted for PCB analysis.

A total of 14 samples were analyzed for PCBs. The results of these analyses indicated the presence of PCBs at concentrations ranging from less than 0.05 ppm to 250 ppm. Except for the PCB result of 250 ppm from GE-5 (2- to 4-feet), the next highest PCB result was 8.9 ppm and the PCB average concentration of the remaining 13 samples is approximately 2 ppm. Fill was detected at each location beginning at the ground surface and extending from 1 to 3.5 feet below grade as presented on Table 4-2.

In August 1989, Geraghty & Miller installed four soil borings (NS-1 through NS-4) along the northern edge of the Newell Street Parking Lot Site (Figure 4-1). Samples from each of these borings were collected at depths of 0- to 4-feet, 4- to 8-feet, and 8- to 12-feet below grade, screened with a PID, and submitted to ITAS for analysis of PCBs, VOCs, and base/neutral organics. The analytical results for these samples indicated the presence of PCBs ranging from 310 to 12,000 ppm in boring NS-1, from 200 to 260 ppm in boring NS-2,

from 1.3 to 240 ppm in boring NS-3, and from 0.6 to 31 ppm in boring NS-4 (see Table 4-1 and Figure 4-2). Boring NS-1 exhibited the presence of several VOCs including benzene, methylene chloride, toluene, and trichloroethene. Boring NS-2 exhibited the presence of methylene chloride and chloroform, while borings NS-3 and NS-4 exhibited the presence of methylene chloride only. Methylene chloride is a common laboratory artifact and its presence in site soils is suspect. No base/neutral organics were detected above the CLP-required quantitation limits in these borings (see Table 4-4).

Drilling at location NS-1 was extended to a depth of 18 feet below grade to facilitate the installation of a groundwater monitoring well, as discussed in Section 4.4.1. The presence of subsurface fill material was noted at all four locations (NS-1 through NS-4) at depths of 18, 4, 8 and 4 feet below grade, respectively.

4.2.2 MCP Subsurface Soil Investigations

Beginning in May 1991, Geraghty & Miller implemented the MCP investigation activities as proposed in the June 1990 Newell Street MCP Supplemental Phase II SOW, as conditionally approved by the MDEP in a letter dated August 24, 1990. All field activities were performed in accordance with the MDEP-approved "Sampling and Analysis Plan" (SAP) (Blasland & Bouck, September 1990).

A total of 17 soil borings were drilled in the areas comprising the Newell Street Parking Lot Site between May and December 1991. Two of these borings (RB-6 and RB-7) were hand-augured in the river bank along the northern edge of the Newell Street Parking Lot, 12 borings (NS-1A, NS-2A, and NS-5 through NS-14) were drilled in the Newell Street Parking Lot itself with a truck-mounted hollow-stem auger rig, and the remaining three

borings (GE-9 through GE-11) were drilled in the wooded area to the east of the Newell Street Parking Lot with a portable, cathead-driven tripod system. The locations of these borings were selected to assist in defining the extent of subsurface fill material and the presence of hazardous constituents within the site. The geologic boring logs are included in Appendix E.

As collected, the soil borings were segmented into 2-foot increments, screened in the field with a PID, and then submitted for laboratory analysis, as appropriate, for PCBs or the constituents listed in Appendix IX of 40 CFR Part 264 plus three additional constituents (benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine) (Appendix IX+3). The PID measurements are presented in Table 4-3, and the thickness of the fill material (if encountered) is shown in Table 4-2. The analytical results are presented in Tables 4-5 (PCBs), 4-6 (VOCs), 4-7 (semi-volatile organic compounds), 4-8 (inorganics), 4-9 (phenols, cyanide, and pesticides) and 4-10 (dioxins/furans). The analytical data sheets are included in Appendix F in an organized way. The results of this soil boring program are discussed in more detail, by area, in the following sections.

4.2.2.1 Riverbank Borings

Borings RB-6 and RB-7, located in the riverbank along the northern edge of the Newell Street Parking Lot, were advanced to a depth of 4 feet below land surface with a stainless steel hand auger. The auguring and sampling procedures were performed by Geraghty & Miller on May 21, 1991, in accordance with the Supplemental Phase II SOW and SAP. Fill materials were not encountered at these locations.

At each location, composite soil samples were collected from the 0- to 2-foot and 2- to 4-foot depth intervals, screened with a PID and placed in laboratory-supplied containers for shipment to CompuChem Laboratories (CompuChem) in Research Triangle Park, North Carolina. The samples were analyzed by CompuChem for the Appendix IX+3 constituents.

PCBs were detected in each sample, at concentrations ranging from 4.7 ppm to 1,400 ppm as presented in Table 4-5.

The VOC data resulting from the Appendix IX+3 analyses (Table 4-6) indicate that no VOCs were detected at these locations except for methylene chloride and acetone which were detected in the associated method blanks (thus indicating laboratory contamination).

Various semivolatile organic compounds (SVOCs) were detected in each of these borings (Table 4-7), but many were below associated quantitation limits. A total of 16 SVOC constituents were detected above associated quantitation limits. SVOC constituents noted at relatively higher concentrations included benzo(b)fluoranthene and benzo(k)fluoranthene both at 5.5 ppm; benzo(a)pyrene at 3.8 ppm; pyrene at 2.5 ppm; chrysene at 2.4 ppm, and benzo(g,h,i)perylene at 2.9 ppm.

Metals data for borings from the riverbank are shown in Table 4-8, indicating the presence of varied concentrations of a number of metals.

Phenols, sulfide, and cyanide data are summarized in Table 4-9. Cyanide was not detected in either of the borings, sulfide was detected only in RB-6 at 23.2 ppm in the 0- to 2-foot sample, and total phenols were reported at low concentrations in each of the four

samples submitted for analysis. Appendix IX herbicides and organochlorine and organophosphorus pesticides were not detected in any samples from RB-6 and RB-7.

The analytical results for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) are included in Table 4-10. PCDD/PCDF data for RB-6 shows the presence of varied concentrations of all PCDF isomers (0.0001 to 0.0007 ppm) and only one PCDD isomer (OCDD at 0.00047 ppm) at 0 to 2 feet below the ground surface, but no PCDD/PCDF isomers were detected at RB-6 2- to 4-feet below the ground surface. All PCDD/PCDF isomers, except for PeCDD, were detected at boring RB-7 (0.000083 to 0.19 ppm).

4.2.2.2 Newell Street Parking Lot Borings

Between May 21 and December 10, 1991, Geraghty & Miller supervised the drilling of 12 soil borings in the Newell Street Parking Lot, three of which were completed as groundwater monitoring wells. This portion of the subsurface investigation was performed to better define the extent of fill material and any associated hazardous constituents, as well as to provide several additional locations for groundwater monitoring in the vicinity of the former oxbow. The drilling activities were performed by Clean Berkshires, Inc. (CBI) of Lanesboro, Massachusetts using a truck-mounted, hollow-stem auger rig.

As summarized in Table 4-2, NS-1A and NS-2A were advanced to a depth of 24 feet below grade. The base of the subsurface fill was determined to be at 9 feet below grade in NS-1A and at 11 feet below grade in NS-2A. Each of the remaining borings was advanced to a depth of at least 4 feet below the base of the fill unit. The base of

the fill was encountered at depths ranging from 7 to 12 feet below grade at the remaining borings (Table 4-2).

Soil samples were collected continuously in all 12 borings from grade to total depth, with visual observations recorded by the field hydrogeologist on the associated boring logs. Each 2-foot sample was submitted to ITAS for PCB analysis by USEPA Method 8080. A portion of each sample was screened with a PID as summarized in Table 4-3. The sample exhibiting the highest PID reading from each boring was submitted to CompuChem for analysis of Appendix IX+3 constituents. In addition to the sample submitted for Appendix IX+3 analysis, any sample exhibiting a PID reading of greater than 10 PID units was submitted to CompuChem for VOC analysis by USEPA Method 8240 and for 1,2,4-trichlorobenzene analysis by USEPA Method 8270.

PCB concentrations related to these 12 soil borings are summarized in Table 4-5 and on Figure 4-2. These data indicate that elevated PCB levels were detected in each of the 12 borings, with the highest PCB concentration (80,000 ppm) detected at NS-8 at 6- to 8-feet below grade. The overall average PCB concentration from these samples was approximately 3,500 ppm. Of the 117 soil samples analyzed for PCBs, seven samples exhibited PCB concentrations greater than 10,000 ppm. Thirty-two samples exhibited PCB concentrations greater than 1,000 ppm. Fifty-seven samples showed PCB levels greater than 100 ppm, and 84 samples had a PCB level of greater than 10 ppm. A total of thirty-three samples had PCB concentrations of less than 10 ppm.

The VOC data, summarized in Table 4-6, indicate that a total of 12 compounds were reported in the soil samples submitted for

laboratory analysis, of which seven were primarily found in the blank sample or detected below associated quantitation limits. Of these seven compounds, methylene chloride and acetone, two common laboratory artifacts, were detected in nearly all of the samples as well as the associated method blanks. The remaining five VOCs detected include chlorobenzene up to 16 ppm, xylenes up to 0.45 ppm, benzene up to 0.069 ppm, 1,2-dichloroethene up to 0.016 ppm, and trichloroethene up to 0.008 ppm.

The SVOC data are summarized in Table 4-7. These data indicate the presence of various SVOC constituents in subsurface materials in each of these borings. Of those constituents detected above associated quantitation limits, several polynuclear aromatic hydrocarbons (PAHs) and a few phthalate esters were present at somewhat elevated concentrations. These include phenanthrene up to 110 ppm, anthracene up to 27 ppm, fluoranthene up to 89 ppm, pyrene up to 71 ppm, chrysene up to 42 ppm, benzo(a)anthracene up to 77 ppm, and benzo(b)fluoranthene and benzo(k)fluoranthene up to 45 ppm.

Metals data for borings from the parking lot are shown in Table 4-8, and phenols, sulfide, and cyanide data are summarized in Table 4-9. Phenols were reported at relatively low concentrations in each of the borings except NS-1A, where it was not detected. Cyanide was reported at 0.63 ppm in NS-5 and at 0.99 ppm in NS-11. Sulfide was reported at concentrations slightly above the sample quantitation limits in four of the 12 samples submitted for analysis.

One organophosphorus pesticide compound (sulfotepp) was reported at 0.12 ppm for the 10- to 12-foot sample in NS-10 (Table

4-9). The duplicate sample, however, did not produce a detectable concentration of that compound. Appendix IX herbicides and organochlorine pesticides were not detected in any of the samples submitted for analysis.

The data on PCDDs and PCDFs from these borings are included in Table 4-10 and show the presence of all PCDD/PCDF isomers, except TCDD, in the parking lot area. Concentrations of these compounds ranged from non-detect to 0.139 ppm, with the highest concentrations generally detected in NS-6 and NS-13. The presence of PCDFs in soil samples with elevated PCB concentrations is not unexpected as PCDFs are a known contaminant within PCB mixtures.

4.2.2.3 Wooded Lot Borings

Soil borings were drilled in the wooded lot between the parking lot area and the adjacent property at the three locations depicted on Figure 4-1. The locations were selected to assist in defining the extent of the fill and the presence of hazardous constituents (if any). These borings, designated as GE-9 through GE-11, were advanced to their respective depths with a tripod-mounted, cathead-driven sampler provided by CBI. This method was chosen due to access restrictions for a truck-mounted rig and anticipated boring depths which potentially would have precluded hand auguring.

Borings GE-9 through GE-11 were advanced to the water table. The base of the fill unit was determined to be 2 feet below grade in GE-10; 4 feet below grade in GE-11; and 5 feet below grade in GE-9 (Table 4-2).

Soil samples were collected continuously in all borings from grade to total depth and logged in detail by the field hydrogeologist. Each

2-foot sample was submitted to ITAS for PCB analysis by USEPA SW-846 Method 8080. A portion of each sample was screened with a PID. The sample exhibiting the highest PID reading from each boring was submitted to CompuChem for analysis of Appendix IX+3 constituents. In addition to the sample submitted for Appendix IX+3 analysis, any sample exhibiting a PID reading of greater than 10 PID units was submitted to CompuChem for VOC analysis by USEPA SW-846 Method 8240 and for 1,2,4-trichlorobenzene analysis by USEPA SW-846 Method 8270.

With the exception of the 0- to 2-foot samples in GE-10 and GE-11, which contained 930 ppm and 3,800 ppm total PCBs, respectively, the highest reported PCB concentration for the wooded lot samples was 10 ppm at the 2- to 4-foot interval in GE-9 (Table 4-5).

The VOC data (Table 4-6) indicate that methylene chloride was reported in three samples at concentrations of between 0.03 and 0.052 ppm and that acetone was reported in two of the samples at concentrations of 0.022 and 0.056 ppm. These constituents were also reported in the blank sample. These compounds are commonly used in laboratory extraction procedures and their existence in site soils is suspect.

The SVOC data for the wooded lot borings are included in Table 4-7. They indicate that a total of seven compounds were reported at concentrations less than their respective quantitation limits in the three samples.

As shown in Table 4-8, various metals were also detected in the wood lot soil boring samples. However, phenols, cyanide, and sulfide were not detected in these samples (see Table 4-9).

PCDD/PCDF data are shown in Table 4-10. None of these compounds were detected in GE-9 and only one (HxCDF at 0.000033 ppm) was detected in GE-10. However, a number of PCDD/PCDF compounds were detected above associated quantitation limits at GE-11 at concentrations ranging from 0.000065 to 0.00078 ppm.

4.3 Surficial Soils Investigations

4.3.1 Pre-MCP Surficial Soils Investigations

The pre-MCP surficial soil data from the Newell Street Parking Lot Site are limited to one set of riverbank samples (collected as part of an investigation of former Oxbow Area I in May 1988). Samples RB-1-3, RB-1-6, and RB-1-9 were collected from the first 12 inches of soil at locations 3, 6, and 9 feet from the top of the riverbank as measured toward the river edge (Figure 4-1). Samples were submitted to ITAS for PCB analysis. Results for RB-1-3, RB-1-6, and RB-1-9 were 130 ppm, 160 ppm, and 110 ppm, respectively as shown on Figure 4-3. The analytical data sheets are included in Appendix F in an organized way.

4.3.2 MCP Surficial Soils Investigations

As part of the MCP Phase II investigation performed between May 1991 and January 1992, one surficial soil sample (GE-8) was collected from within the Newell Street Parking Lot Site as shown on Figure 4-3. GE-8 was collected by compositing surficial soils from an area of approximately 3-feet by 3-feet and from a depth of approximately 4 inches within this area. The sample was then screened with a PID and submitted to CompuChem for analysis of Appendix IX metals. These analytical data are presented in Table 4-11. The analytical data sheet is included in Appendix

F. These data also indicate the presence of varied concentrations of a number of metal constituents.

Separate from the MCP Phase II investigations performed between May 1991 and January 1992, additional surficial soil sampling activities were performed between October 1993 and January 1994. Based on the results of subsurface data collected in the Newell Street Parking Lot as part of the MCP Phase II investigations and a field reconnaissance conducted by MDEP personnel, the MDEP issued a letter to GE on August 25, 1993. That letter required GE to submit a proposal for conducting surficial soil sampling at the very southern end of the Newell Street Parking Lot adjacent to a fence bordering the property at 153 Newell Street. The data were requested by the MDEP to facilitate the MDEP's performance of an "imminent hazard evaluation" of this area.

On September 13, 1993, GE submitted a proposal to collect soil samples in accordance with the MDEP's August 25, 1993 letter. The MDEP provided conditional approval of the proposed sampling plan in a letter dated September 23, 1993. On behalf of GE, Blasland & Bouck implemented the proposed sampling plan, amended in accordance with the MDEP's September 23, 1993 letter. These activities were performed on October 6, 1993. A total of four soil samples (NS-21 through NS-24) were collected from within a grassy area adjacent to the very southern end of the Newell Street Parking Lot (Figure 4-3). The samples were collected and analyzed using protocols outlined in the SAP.

In general, discrete soil samples were collected from 0- to 6-inches below the ground surface. Prior to sample collection, the grass and approximately one-half inch of root matter were removed and set aside. A sufficient volume of soil was then collected from the 0- to 6-inch depth

interval. Prior to mixing, the physical characteristics of each sample were recorded, and a subsample from each sample was removed and screened using a PID. After mixing, the soil samples were placed into appropriate sample containers, with a subsample of each being removed and screened for PCBs at the OBG Laboratories' facility located within the GE facility. (The purpose of this screening was to identify the sample with the highest PCB concentration.) The sample exhibiting the highest PCB screening concentration (NS-24) was then submitted to CompuChem for analysis of Appendix IX+3 constituents. All four samples were also submitted to ITAS for PCB and total organic carbon (TOC) analysis.

PCB concentrations of the four soil samples collected ranged from 0.47 to 9.6 ppm as shown on Figure 4-3. TOC results ranged from approximately 2.6 to 6.5 percent. The Appendix IX+3 analysis of sample NS-24 indicated the presence of methylene chloride at 0.022 ppm; however, this analyte, a common laboratory artifact, was also found in the associated method blank. Various SVOCs were noted in sample NS-24; however, with the exception of total phenols at 0.38 ppm, each of the SVOCs found was indicated to be at a level below the Contract Laboratory Protocol quantitation limit. Various metal constituents were also detected.

A report prepared on behalf of GE by Blasland & Bouck was submitted to the MDEP on November 19, 1993 and included a narrative, data summary table, soil description, PID monitoring results, and analytical data sheets (Appendix G). The analytical data sheets are also included in Appendix F in an organized way.

Based on its review of the summary report, the MDEP instructed GE to collect surficial soil samples from the residential property located at 153 Newell Street (Figure 4-1). Using the same collection and PID screening

methods used for surficial samples NS-21 through NS-24, four additional surficial soil samples were collected by Blasland, Bouck & Lee from the residential property on January 4, 1993 (NS-25 through NS-28). These samples were submitted to ITAS for PCB and TOC analysis. Two samples were collected from the garden area and two were collected from the northeastern portion of the residential lot. These latter two samples were located to address the area near previous sampling locations NS-23 and NS-24 where the concentrations of PCBs along the property line were the greatest (8.1 and 9.6 ppm, respectively). The results of this activity were reported to the MDEP in a letter dated February 7, 1994 (Appendix H) and indicated that PCBs were present at concentrations ranging from 4.0 to 5.3 ppm. TOC concentrations ranged from approximately 4.3 to 8.7 percent. The PCB results are also shown on Figure 4-3 and the analytical data sheets are also included in Appendix F in an organized way.

On February 18, 1994, the MDEP wrote to the owners of the property at 153 Newell Street, informing them that this recent sampling had detected PCBs at concentrations up to 5.3 ppm. The MDEP's letter further stated that "[t]he Department has determined that no imminent hazard currently exists on your property and that no immediate action is required at this time."

4.4 Groundwater Investigations

4.4.1 Pre-MCP Groundwater Investigations

Prior to the commencement of MCP Phase II activities in May 1991, only two monitoring wells (GE-3 and NS-1) were present in the Newell Street Parking Lot Site (Figure 4-1). Monitoring well GE-3 was installed in

May 1988 and NS-1 was installed in August 1989. Both wells were installed under the direction of Geraghty & Miller.

At each well location, an 8-inch diameter borehole was drilled with hollow-stem augers to a depth approximately 8 feet below the water table. The boreholes were advanced by collecting continuous split-barrel samples at 2-foot intervals. The soil samples were logged in detail for lithology, evidence of odor, staining, color, and texture (boring logs are included in Appendix E).

Two-inch diameter, 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 2 feet above the top of the well screen. A bentonite/cement slurry was placed in the remaining annular space to within 2 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. Table 4-12 provides well construction details associated with these wells. Appendix I provides the well construction logs.

Well GE-3 was sampled in May 1988 and analyzed for PCBs and VOCs. It was sampled again in February 1989 and analyzed for PCBs, VOCs, and chlorinated hydrocarbons. Well NS-1 was sampled for VOCs, PCBs, and base/neutral organics in August 1989. The analytical data sheets are included in Appendix F in an organized way.

At well GE-3, no constituents were detected above laboratory detection limits during either of the two sampling events (May 1988 and February 1989). However, as shown in Table 4-12, the August 1989 sampling and analysis of well NS-1 identified detectable concentrations of several volatile

and semi-volatile constituents ranging from an estimated concentration of 0.002 ppm to 2 ppm. In addition, total PCBs were detected at 0.017 ppm. well NS-1 was subsequently re-sampled as part of the MCP investigations summarized below.

4.4.2 MCP Groundwater Investigations

4.4.2.1 Well Installation and Sampling Procedures

Following the subsurface boring and sampling program performed at the Newell Street Parking Lot Site in May through December 1991 (as described in Section 4.2.2.2), three of the 12 borings were completed as monitoring wells to facilitate the investigation of groundwater conditions at the site.

These three wells (NS-9, NS-10, and NS-11) were chosen, together with existing well NS-1, to provide an upgradient groundwater monitoring location and several downgradient locations. The historical location of the former oxbow area was also utilized in selecting the well locations.

Each well was constructed of 4-inch diameter, Schedule 40 PVC and set at 20 feet below grade. The 0.010-inch slotted well screens were set from 5 to 20 feet below grade so as to bridge the water table, which is approximately 10 feet below grade in the area. A No. 2 graded sand pack was placed in the borehole annulus around each well screen to a depth of approximately 3 feet below grade, then sealed with a 1.5- to 2-foot thick pelleted bentonite seal and grouted to grade with a cement/bentonite slurry. The wells were fitted with locking caps and finished at grade with flush-mount curb boxes. After installation, the wells were developed with a bladder pump and the

development water was placed in labeled, 55-gallon drums for subsequent disposal.

Hill Engineers of Dalton, Massachusetts, surveyed the grade and top-of-casing elevations relative to the 1929 National Geodetic Vertical Datum (mean sea level) on January 29, 1992. Table 4-13 includes a summary of well construction details of the newly-installed wells. The well construction logs are included in Appendix I.

Groundwater from the three newly installed monitoring wells (NS-9, NS-10, and NS-11) and pre-existing well NS-1 was sampled by Geraghty & Miller in December 1991 or January 1992 and analyzed for Appendix IX+3 constituents. This sampling was performed to confirm the results of previous groundwater sampling (at NS-1) and to determine the potential source and extent of groundwater quality impacts in the area. The sampling procedures followed those outlined in the SAP.

4.4.2.2 Analytical Groundwater Results

A number of constituents were detected in groundwater as a result of this investigation. The groundwater analytical data are presented in Tables 4-14 (pesticides/PCBs), 4-15 (VOCs), 4-16 (SVOCs), 4-17 (inorganics), and 4-18 (cyanide, PCDDS/PCDFs, and sulfide). The analytical data sheets are included in Appendix F in an organized way.

As shown in Table 4-14, PCBs were detected in only one well (well NS-1 at 0.52 ppm) and only one pesticide (aldrin) was detected in one well (well NS-11 at 0.00018 ppm).

The VOC data (Table 4-15) indicate that chlorobenzene was detected in well NS-9 at 0.013 ppm and in well NS-1 at 0.35 ppm,

and that total xylenes were detected at 0.021 ppm in well NS-10. Vinyl chloride was detected at 2.4 ppm at well NS-1. Several other VOCs detected in the August 1989 sampling (ethylbenzene, toluene, trichloroethene) were not detected during this sampling round. The reported concentration of 1,2-dichloroethene in well NS-1 was higher than that reported for the August 1989 sampling (0.21 ppm vs. 0.007 ppm). Benzene and 1,1,1-trichloroethane were reported at concentrations below their respective sample quantitation limits. With the exception of methylene chloride, a common laboratory artifact which was detected in the method blank as well as in the sample from each well, the remaining VOCs detected were reported at estimated concentrations less than their respective sample quantitation limits.

SVOC results (Table 4-16) indicate concentrations of 1,4-dichlorobenzene at 0.039 ppm in well NS-10 and at 0.08 ppm in well NS-1. A concentration of 0.024 ppm of 1,3-dichlorobenzene was reported for the sample from well NS-1 and 1,2,4-trichlorobenzene was reported in the well at a concentration below the sample quantitation limit. For comparison, the August 1989 sampling reported similar concentrations for these same constituents in well NS-1 (1,3-dichlorobenzene at 0.017 ppm, 1,4-dichlorobenzene at 0.06 ppm, and 1,2,4-trichlorobenzene at 0.012 ppm). Several other analytes are reported at estimated concentrations which are below their respective sample quantitation limits.

Metals data for the groundwater samples are shown in Table 4-17 indicating the presence of varied concentrations of several metal constituents.

A summary of cyanide, PCDDs/PCDFs, phenols, and sulfide data is presented in Table 4-18. These analytes were not detected in wells NS-9 and NS-10. Several PCDD/PCDF compounds were detected in well NS-1 at concentrations ranging from 0.0000016 ppm to 0.0000351 ppm, and one dioxin isomer (OCDD) was detected in well NS-11 at 0.0000041 ppm. Low levels of sulfide were reported for wells NS-1 and NS-11, phenols (total) was reported in well NS-1 at 0.025 ppm, and cyanide was reported in well NS-11 at 0.0253 ppm.

4.5 Summary of Soil Gas Data

As discussed above, during the installation of the various soil borings at this site, headspace screening of split-spoon soil samples has been performed with a PID. PID headspace readings give a qualitative estimate of the concentration of volatile constituents present in the soil gas. The PID readings from the various borings at the site are included in Table 4-3.

PID readings obtained at the site ranged from 0 to 70.5 PID units. Samples with elevated PID readings were generally found at depth, and were generally associated with samples also containing detectable concentrations of VOCs either in or near the former oxbow. The vertical profile of PID readings in most borings in these areas shows an increase from background levels (less than 1 PID unit) near the surface to higher levels at a depth of 4- to 6-feet or greater below grade, as illustrated in Table 4-3. This PID information indicates that volatile constituents may be present in subsurface materials, but that vertical migration of constituents in subsurface gas to the ground surface does not appear to be occurring to any appreciable extent.

The PID data indicate further that the extent of materials with elevated PID readings is generally limited to those areas of the site containing the former

oxbow and the immediately surrounding area. PID data collected in the eastern portion of the Newell Street Parking Lot (e.g., borings GE-1, GE-2, and GE-3) and the wooded lot (borings GE-9, GE-10, and GE-11) were similar to background levels despite the presence of fill material in these areas.

4.6 Overall Hydrogeologic Assessment

The information summarized in Sections 4.2 through 4.5 has been utilized to develop an overall assessment of current hydrogeologic conditions at the Newell Street Parking Lot Site. Based on the qualitative and quantitative information that is available for the site, including historic photography and mapping, analytical data, and other investigation-related documentation, an assessment of the site soils/geology and site groundwater has been prepared. This assessment provides both an understanding of current conditions associated with the site, and an indication of potential data needs (based on a comparison with MCP Phase II and Permit-based RFI requirements).

4.6.1 Assessment of Subsurface Conditions

Subsurface conditions at the Newell Street Parking Lot Site have been significantly influenced by the presence of the former Housatonic River oxbow/low-lying area (Oxbow Area G). The presence of this oxbow/low-lying area, and the placement of various fill materials in this area following the rechannelization of the Housatonic River, have resulted in the surface topography and near-surface geology that is evident today. A summary of the site geology, presence/extent of fill, and information related to soil/fill is presented below.

4.6.1.1 Site Geology

Site investigations indicate that fill materials (consisting of sorted silt, sand, and gravel with occasional fragments of wood, metal,

cinders, glass, concrete, brick, and other ceramic materials) are present at the site. Fill materials of this type have been observed (in varying depths and composition) at all locations within the site, with the exception of the two riverbank borings RB-6 and RB-7 (Table 4-2).

All of the soil borings drilled within the Newell Street Parking Lot Site as part of the MCP investigations extended to a depth of at least 4 feet below the bottom of the field-identified fill material, with the exception of boring NS-1. For the portion of each boring that was advanced beneath the fill, information from the boring logs indicates a soil composition consisting of fine to coarse sand, gravel, and, to a lesser extent, silt and clay. This type of soil composition is comparable to the type of alluvial deposition patterns that would be associated with historical flooding events.

The deepest soil borings that have been advanced at the site extend to a depth of approximately 24 feet below grade (NS-1A, NS-2A, and NS-9). At these depths, bedrock has not been encountered. However, based on subsurface investigations performed at GE's Lyman Street Parking Lot Site (also known as USEPA Area 5a), the presence of bedrock was detected at approximately 50 feet below land surface. It is anticipated that a similar depth to bedrock would encountered for the Newell Street Parking Lot Site, based on its close proximity to the Lyman Street Site (800 feet to the northwest) and the similar land surface elevations between the two sites.

Although not confirmed by actual investigation results, it is expected that the alluvial deposition pattern observed beneath the fill materials extends vertically, possibly to the bedrock surface. Alternatively, it is possible that, similar to the Lyman Street Parking

Lot Site, the subsurface geology may include a confining layer consisting of silts, clays, or sand, or possibly an area historically impacted by glacial deposition and therefore consisting of tightly packed till. Evidence of a possible impermeable layer beneath the fill material occurs at NS-2A, where the geologic boring log reported silt material at a depth of 20 to 22 feet below grade.

4.6.1.2 Extent of Fill Material

The soil borings that have been advanced in the Newell Street Parking Lot Site to date have provided substantial information on the extent of subsurface fill materials, although they have not delineated that extent at all locations. In terms of the vertical extent of fill material, all but one of the borings advanced within the site (NS-1) have detected the bottom of the observed fill material. At NS-1, the soil boring was advanced to a depth of 18 feet below grade, but the presence of fill material was noted at this depth. As a result, it is currently unknown to what extent the fill material is present at this location. However, it is thought that the extended depth of fill in this area may be an isolated occurrence, as three other borings that were advanced within approximately 30 feet of NS-1 (NS-1A, NS-2A, and RB-7) detected the bottom of fill material at depths of 9 feet and 11 feet for NS-1A and NS-2A, respectively, while no fill material was noted at RB-7.

To further illustrate the vertical limits of fill material within the site, geologic cross-sections have been prepared. A plan view of the cross-section locations is provided on Figure 4-4, while the cross-sections are shown on Figure 4-5. Figure 4-5 also illustrates the soil

types detected beneath the fill material, as well as the results of associated PCB soil analyses.

The horizontal limits of fill material have been partially defined. Subsurface information from borings RB-6 and RB-7 (to the north) and GE-9 through GE-11 (to the east) indicates either no fill or a lessening presence of fill material. Additional information will be required to delineate the western and southern limits of subsurface fill material, as described in Section 9.

4.6.1.3 Chemical Information on Soils and Fill

Subsurface soil/fill at the site has been sampled and analyzed in numerous borings. The sampling results show the presence of PCBs, VOCs, SVOCs, select PCDDs/PCDFs, pesticides, and metals. An interpretation of the soil analytical data collected to date is presented below:

- PCBs have been detected in the subsurface soils. PCB concentrations ranged from not detectable to 80,000 ppm. PCB Aroclor 1254 and, to a lesser extent, Aroclor 1260 were the PCB Aroclors detected. Figure 4-2 presents the PCB results for all the subsurface soil samples that have been collected and analyzed.
- The available PCB data provide some insight into the presence and distribution of hazardous materials in the subsurface soils. During the performance of MCP Phase II activities, PCB data were collected for each soil boring within the Newell Street Parking Lot Site at 2-foot depth increments. As a result of this activity, there is a broad distribution of PCB data both spatially and vertically within the subsurface soils. PCB data from the subsurface fill

material and the native soils underlying the fill have been compared. This comparison indicates that higher PCB levels were generally present in the fill material (up to 80,000 ppm), while generally lower PCB concentrations were present in the underlying native soil materials beneath the fill materials. However, even though the PCB levels in the native soils were generally less than in the fill materials, the reported concentrations in the native soils (up to 4,500 ppm) are still elevated.

- A review of the PID, VOC, and SVOC soils data for the Newell Street Parking Lot Site indicates that several volatile or semi-volatile constituents are present in the native soils beneath the fill materials at concentrations comparable to or exceeding concentrations detected in the fill materials. Thus, the presence and extent of the observed fill materials do not necessarily correlate to the presence and extent of hazardous constituents detected within the Newell Street Parking Lot Site.
- Generally low concentrations of VOCs have been detected in the soil at the site. Chlorobenzene at a concentration of 16 ppm in NS-13 (14- to 16-feet) was the only VOC detected above a concentration of 0.5 ppm. Relatively higher levels of VOCs were detected either in or very near the former oxbow. The highest levels of VOCs present in the soil appear to be related to the material present in the former oxbow at the site (as evidenced by the VOC results from borings NS-2A, NS-8, NS-9, NS-10, and NS-13).
- The presence and extent of SVOCs in fill/soil at the site are similar, in general, to the VOCs. However, the SVOCs were

detected at slightly higher concentrations. SVOCs were detected at concentrations of greater than 10 ppm in four borings (NS-6, NS-10, NS-12, and NS-13). The constituents detected at concentrations greater than 10 ppm included anthracene, pyrene, phenanthrene, fluoranthene, 1,2,4-trichlorobenzene, 1,4-dichlorobenzene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, and benzo(k)fluoranthene, which may be related to coal gasification byproducts from the Berkshire Gas Company, which operated nearby until the early 1970s. Similar to the VOCs, the presence of the higher concentrations of SVOCs appears to be related to the material present in the former oxbow at the site (as evidenced by SVOC results from borings NS-2A, NS-5, NS-6, NS-10, NS-12, NS-13, RB-6, and RB-7).

- Soil samples from 17 soil borings were analyzed for PCDDs and PCDFs. Select PCDDs were detected in 14 of the 17 samples and select PCDFs were detected in 16 of the 17 samples. In general, the higher concentrations of PCDDs/PCDFs were associated with soil samples with elevated PCB concentrations.

4.6.2 Groundwater Assessment

4.6.2.1 Groundwater Flow

A total of five wells are currently present within the limits of the Newell Street Parking Lot Site, as shown on Figure 4-1. Groundwater elevation data from these wells indicate that the phreatic water table is located at approximately 10 feet below ground surface. Based on a review of boring logs and available groundwater elevation data, it is evident that fill materials are present both above and below the water table.

In June 1988, groundwater elevation data were collected from eight wells in the Newell Street area (only one well, GE-3, was within the current limits of the Newell Street Parking Lot Site). These data are presented in Table 4-19. From the data, a groundwater contour map was prepared and presented (Appendix J). These groundwater elevations indicate that the groundwater flow direction is generally toward the Housatonic River (from south to north) The groundwater gradient ranges from 0.037 on the west side of the commercial/industrial area (based on groundwater elevation data for wells MW-1 and MW-2) to 0.012 on the east side of the commercial/industrial area (based on groundwater elevation data for wells SZ-1 and SZ-3). Groundwater gradients would be expected to be similar for the Newell Street Parking Lot Site.

As part of MCP Phase II activities, groundwater elevation data were collected from the wells located in the vicinity of the Newell Street Parking Lot. These data confirm the June 1988 findings pertaining to shallow groundwater flow at the site. Groundwater elevation data from this event are also summarized in Table 4-19, and the groundwater contour map based on these data is provided in Figure 4-6. The groundwater gradient in the Newell Street Parking Lot is estimated to be 0.008 (based on groundwater elevation for wells NS-10 and NS-9). There currently is no information concerning the hydraulic conductivity of the upper groundwater zone or the potential for vertical groundwater movement within the site. Section 9 further discusses these data gaps.

4.6.2.2 Information on Groundwater Quality and Impacts

Groundwater monitoring was performed at the site on several occasions. These activities were conducted at well GE-3 in May 1988 and February 1989, at well NS-1 in August 1989, and at wells NS-1, NS-9, NS-10 and NS-11 in December 1991. These monitoring efforts have shown the presence of a few VOCs, SVOCs, select PCDDs/PCDFs, PCBs, inorganics, and a pesticide.

A preliminary interpretation of the available groundwater analytical data generally indicates that, similar to the soil/fill analytical results, limited volatile Appendix IX+3 constituents are present in groundwater at the site. A total of six VOCs (vinyl chloride, 1,2-dichloroethene, trans-1,2-dichloroethene, benzene, chlorobenzene, and total xylenes) were detected above quantitation limits (and not in associated method blanks) in the wells, with only chlorobenzene detected in more than one well. Only three SVOCs (1,3- and 1,4-dichlorobenzene and 1,2,4-trichlorobenzene) were detected above quantitation limits (and not in the associated method blanks), with only 1,4-dichlorobenzene detected in more than one well.

Groundwater sampled from the downgradient well NS-1 contained the greatest number and concentration of constituents in groundwater at the site. In addition to the VOCs and SVOCs described above, a number of PCDFs were detected at this location (including 2,3,7,8-tetrachlorodibenzofuran) and one PCDD (octachlorodibenzodioxin). The sole PCB detection in groundwater was also found at this location.

Groundwater sampled at well NS-10, near the upgradient edge of the Newell Street Parking Lot, was found to contain a number of constituents generally below quantitation limits. Exceptions include

total xylenes (0.021 ppm) and 1,4-dichlorobenzene (0.039 ppm). Information on groundwater quality further upgradient of NS-10 is not currently available, but will be addressed as a data need as discussed in Section 9.

Finally, as discussed above and in Section 2.8, groundwater from the Newell Street Parking Lot Site discharges to the Housatonic River. Analytical groundwater data from the site indicate the presence of PCBs and a number of VOCs, SVOCs, select PCDFs, and one PCDD. While these constituents may be entering the Housatonic River with groundwater, previous sampling and Appendix IX+3 analysis of surface water samples from the Housatonic River both upstream and downstream of the Newell Street Parking Lot Site were conducted, as discussed in Section 5.4.4 of the MCP Interim Phase II Report/CAS for Housatonic River (Blasland & Bouck, December 1991). The results of this sampling activity, presented in Table 5-6 of that report, did not indicate any significant contribution of PCBs, VOC/SVOC, or PCDD/PCDF constituents to the river water column from the Newell Street Parking Lot Site. Those constituents were not detected in the water column at the Lyman Street Bridge (just downstream of the site) at concentrations above their quantitation limits, except for chlorobenzene, which was not found at a significantly higher concentration than in upstream samples.

SECTION 5 - AIR MONITORING

From August 1991 through August 1992, GE conducted a facility air monitoring program to quantify levels of PCBs in the ambient air at and near its Pittsfield facility. This activity was performed in accordance with the "Facility Air Monitoring MCP Scope of Work" (Blasland & Bouck, August 1990). In addition to the collection of meteorological information, air samplers were placed at certain locations based on an initial siting study. While air monitoring was not conducted at the Newell Street Parking Lot Site, the Oxbow Area I Site, located immediately east of the Newell Street Parking Lot Site, was included in this program, with an ambient air monitoring station located in the rear portion of the 191 Newell Street property. The year-long program was performed by Zorex Environmental Engineers (Zorex), of Pittsfield, Massachusetts, and involved the collection of air samples every 12 days with analysis for PCBs. The results of this program were submitted to the MDEP and USEPA on a quarterly basis and were presented in a final report which was submitted in November 1992 (Zorex, November 1992). Those results are summarized in Table 2 of that report, which is reproduced as Table 5-1 of this report. (In this table, "NWL" refers to the monitor located at 191 Newell Street in Oxbow Area I.) As shown in Table 5-1, ambient air PCB concentrations measured at the Newell Street Site (Oxbow Area I) averaged 0.0062 micrograms per cubic meter (ug/m^3) during the year-long study.

Based on the results of the 1991-1992 ambient air monitoring program, it was determined that additional ambient air PCB data were necessary to more accurately identify suspected sources of airborne PCBs observed at certain air monitoring stations. Oxbow Area I was determined to be an area for which such additional air monitoring was needed. A Scope of Work, which proposed

activities to obtain the additional air data, was submitted to the MDEP on January 29, 1993 (Zorex, January 1993) and was revised in early March 1993. In a letter dated March 17, 1993, the MDEP conditionally approved that plan.

The additional ambient air monitoring activities were conducted between May 4, 1993 and August 17, 1993. The activities conducted in Oxbow Area I included the monitoring of high-elevation (2 to 6 meters above the ground) air at locations in the northern and southern portions of the 191 Newell Street property and at a downwind location at the 261 Newell Street property (see Appendix K for an illustration of these sampling locations). In addition, monitoring of low-elevation (near ground) air was performed at the location in the southern portion of the 191 Newell Street property.

The results of these additional monitoring activities were summarized and evaluated in a report submitted to the MDEP (with a copy to USEPA) on November 8, 1993 (Zorex, November 1993). Book 1 of 3 of that report is included with this document as Appendix K. For Oxbow Area I, the results of these activities, as discussed in Section 6.3.1 of Appendix K, indicated that the ground surface in the northern portion of the 191 Newell Street property is a likely principal source of PCBs in the ambient air in the surrounding area. It was also noted, however, that emission rates could not be determined with any precision, although they are clearly higher in warmer periods. Further, the data indicated that there is a rapid dispersion of PCB concentrations with elevation above the assumed source area, and that ambient PCB concentrations also decrease rapidly with distance from the source. The report also pointed out that the method used to obtain the low-elevation samples (a low-volume sampling technique) differed from the method used for the high-elevation samples (a high-volume sampler), and that there was some question about the validity of the low-volume method and the comparability of the two methods. Hence, it

proposed additional air sampling (at the Silver Lake sampling location) to evaluate the validity of the low-volume sampling method and its consistency with the high-volume method (see Section 8 of Appendix K).

In an appendix to the report (also included in Appendix K), GE's risk assessment consultant, ChemRisk, demonstrated that, even using standard MDEP exposure assumptions and toxicity values, the PCB concentrations in the ambient air at the Oxbow Area I Site do not present any imminent hazard or significant risk to individuals in the area, including nearby residents and students at the nearby Hibbard School.

The results from the foregoing ambient air monitoring study at the Oxbow Area I Site can be considered to represent an overly conservative estimate of the potential PCB concentrations in the ambient air at the Newell Street Parking Lot Site, since this site is mostly paved and is generally upwind of the Oxbow Area I Site.

SECTION 6 - SUMMARY OF MITIGATION AND INTERIM MEASURE ACTIVITIES

6.1 General

This section summarizes activities that have been performed at or proposed for the Newell Street Parking Lot Site to address known, suspected, or potential sources of environmental concern with respect to human health and/or the environment. Section 6.2 describes activities by GE in 1992 to remove a former phenols metering station that was located within the Newell Street Parking Lot. Section 6.3 describes a proposal by GE to implement an interim measure to address the presence of elevated levels of PCBs in the surficial soils at the site. The proposal is entitled "Interim Measure Proposal - PCB Containing Surficial Soils in the Newell Street - GE Parking Lot Site" (Blasland, Bouck & Lee, February 1994) and has been submitted for USEPA review and approval pursuant to the Permit.

6.2 Former Phenols Metering Station

Approximately 20 years ago, GE, with the approval of the City of Pittsfield, conducted a pilot test for wastewater containing phenol that originated at a resin manufacturing area within the GE facility. The purpose of the pilot test was to determine if the wastewater could be metered into the sewer system without impact to the Pittsfield Publicly-Owned Treatment Works (POTW). The pilot facility consisted of two 3,000-gallon above-ground storage tanks and a pump metering system. This equipment was installed within a diked area at the Newell Street Parking Lot Site. The diked area was located within an enclosed wooden structure, separately fenced, and provided with heat to prevent freezing. The wastewater was routed via a combination below-grade and above-grade pipeline from Building 36 at the GE facility on the north side of the Housatonic River

(Building 36 was demolished in approximately 1980) to the metering station where it was ultimately discharged to the POTW (via the city sanitary piping system). Based on the results of pilot testing, the City of Pittsfield and GE entered into an agreement which allowed GE to discharge a metered volume of the phenol-containing wastewater stream to the POTW. Within 6 to 12 months, a permanent treatment facility closer to the process was constructed at the GE facility, and use of the metering station adjacent to the parking lot was discontinued.

During a routine facility-wide security inspection performed by GE in January 1992, a deteriorated section of pipe insulation associated with an above-grade portion of the transfer piping (adjacent to the parking lot) was observed. This observation resulted in the initiation of final decommissioning activities for the former phenols metering station.

The decommissioning of the former phenols metering station was accomplished through a series of activities performed by GE between January and October 1992. Initially, actions were performed to remove approximately 260 linear feet of above-grade piping connecting the former metering station to the below-grade portion of the system piping (located near GE Building 61 on the north side of the Housatonic River). The above-grade piping (primarily located along the northern edge of the parking lot and across the pedestrian foot bridge), associated insulation materials, and various pipe supports were removed and taken off-site for disposal. Appendix L to this document contains a sketch indicating the extent of above-grade pipeline that was removed as part of this activity.

In February 1992, additional assessment activities were performed involving the two 3,000-gallon tanks contained within the phenols metering station building. Visual inspection of these tanks indicated that only one contained liquids. Two

samples of the liquid materials from this tank were collected on February 6, 1992 and analyzed for phenols. Results of laboratory analyses indicated phenols concentrations of 456 ppm and 507 ppm for the two samples. The laboratory data sheets for these analyses are included in Appendix L. Liquid samples were also collected in February 1992 for Toxicity Characteristic Leaching Procedure (TCLP) testing and in July 1992 for TOC analysis. The results of these analyses are included in Appendix L. From these analyses, it was determined that the remaining tank liquids would require removal, transport, and disposal as a RCRA-regulated hazardous waste.

In August 1992, GE prepared and submitted a Notice of Intent (NOI) to the Pittsfield Conservation Commission for the demolition of the former metering station building (the NOI was necessary since the building was located in a regulated Wetlands Resource Area). The scope of the proposed activity included the removal of the wooden structure from its foundation, the removal and off-site disposal of water and any sludge from the existing tanks, and the removal of miscellaneous piping, pumps, and other equipment associated with the former metering station operation. Several ancillary activities were specified in the NOI, including the protection of the wetlands area, security measures, cleaning activities, and site restoration efforts. Exhibit D and Drawing No. GE-946-1 from the NOI are included in Appendix L to provide additional information concerning the scope of the demolition activities. In October 1992, GE received approval from the Pittsfield Conservation Commission to conduct the work proposed in the NOI. Shortly thereafter, GE initiated the demolition activities following notification to the MDEP in a letter dated August 27, 1992 (included in Appendix L).

Demolition activities were performed in accordance with the NOI. In connection with the removal and decommissioning of the two 3,000-gallon steel

tanks, GE removed and containerized the tank contents for subsequent off-site disposal. Approximately twelve 55-gallon drums of phenol-containing liquids (both the original tank contents and subsequent cleaning water) and approximately thirteen 55-gallon drums of phenol-containing debris (e.g., process piping, metering pumps, used personal protective equipment, and other cleaning/adsorbent materials) were transported off-site by Clean Harbors of Braintree, MA under manifest number MA6084844. Once the phenol-containing liquids were removed from these tanks, the interior surface of the tank initially containing liquids was sampled for phenols. Appendix L contains the results. Once emptied, the tanks were transferred to the GE equipment-cleaning area where the tanks were cut into sections, cleaned using high-pressure water, and wipe-sampled for PCBs to identify appropriate disposal locations. PCB wipe sampling results of the tank sections indicated residual PCB levels to be less than 100 micrograms per 100 square centimeters (maximum 3.4 ug/100 cm^2 -- see Appendix L), and therefore these tank sections were taken off site for disposal as scrap metal. As for the concrete pad associated with the former building and tanks, sampling of the concrete material was performed on May 28, 1993 to assist in determining appropriate decommissioning actions. Concrete samples were collected and submitted to OBG Laboratories, Inc., Syracuse, New York, for analysis for total phenols and TCLP for cadmium. Results indicated a phenols concentration of 330 ppm (dry weight) and a TCLP cadmium level of less than 0.01 ppm. Appendix L provides the field sampling report associated with this effort.

The activities performed between January 1992 and October 1992 have resulted in the physical removal of the major portions of the former system, eliminating the possibility of future releases associated with the former metering station. The only portion of this system that currently remains in place includes

a flexible 2-inch pipeline within an existing 16- to 18-inch diameter sanitary sewer line within the GE facility (see Appendix L: GE Drawing No. 113D6018). The former system components at each end of this pipeline have been dismantled and properly disposed of. There are no plans to remove the remaining pipeline section.

The potential impacts to the soil and groundwater in the Newell Street Parking Lot Site due to the past operation of the phenols metering station have been evaluated based on data reported in Section 4. For soils, the presence of low levels of phenols (0.20 ppm to 0.67 ppm) in the samples collected at locations RB-6 and RB-7 (on Figure 4-1) indicate a limited presence of phenols in shallow soils adjacent to the metering station. However, phenols were also detected at higher concentrations and at deeper depths at several locations within the parking lot, presumably due to the placement of fill materials in this area. Therefore, specific soil impacts due to the former metering station are unlikely. For the monitoring wells within the parking lot limits, groundwater sampling and analysis detected the presence of phenols in well NS-1 only. Further, two of the existing wells (NS-10 and NS-11) were installed and screened in areas/depth where the subsurface soil samples indicated phenols at 0.29 ppm to 1.2 ppm. Thus, it is also unlikely that the former metering station has impacted the groundwater at the site.

In addition, phenols were not detected as part of the Housatonic River surface water sampling and analysis performed in 1990 (Blasland & Bouck, December 1991 -- Tables 5-6A and 5-6B), nor were they detected in sediments of the Housatonic River immediately downstream of the Newell Street Parking Lot Site (Blasland & Bouck, December 1991 -- Table 4-6). As a result, it is concluded that the phenols metering station has not had an impact on the adjacent river system.

6.3 Proposed Interim Measure to Address Surficial Soils

Special Condition II.O of the Permit required GE to propose a plan to address elevated concentrations of PCBs in the surficial soils of the Newell Street Parking Lot Site. That requirement also applied to a GE-owned strip of land located between the commercial/industrial area in Oxbow Area I and the Housatonic River. (USEPA retained jurisdiction over that strip of land for purposes of the interim measure requirement. As noted above, the general investigation and remedial-action assessment of that strip will be undertaken in connection with the commercial/industrial area, and will thus be subject to regulation by the MDEP under the MCP as part of its regulation of former Oxbow Area I.)

On February 1, 1994, GE submitted a document entitled "Interim Measure Proposal - PCB-Containing Surficial Soil in the Newell Street-GE Parking Lot Site" (Blasland, Bouck & Lee, February 1994), which detailed the components of GE's proposed interim measures for these areas. A summary of the proposed activities is presented below (a detailed description can be found in the above-referenced document).

As discussed in Section 4.3 above, limited data are available on PCB concentrations in the surficial soils of the site. The only areas where PCB surficial soil data exist are a portion of the strip of riverbank, the southern edge of the parking lot, and the yard and garden area of the adjacent residential property at 153 Newell Street (see Figure 1 of the Interim Measure Proposal). The surficial soil samples from the riverbank identified certain areas where elevated levels of PCBs exist in surficial soils (up to 160 ppm). However, PCB levels were not found to be elevated in the southern end of the parking lot (up to 9.6 ppm) or in the property at 153 Newell Street (up to 5.3 ppm). In addition, subsurface soil borings have identified elevated levels of PCBs in the

0- to 2-foot depth samples from the riverbank area north of the parking lot (up to 1,400 ppm) and the wooded area adjacent to the parking lot (up to 3,800 ppm).

Since these results suggest the potential presence of elevated PCB levels in the surficial soil of the entire riverbank area and in the wooded area adjacent to the parking lot, GE has proposed an interim measure for these areas.

With respect to the riverbank strip, to supplement the existing fencing that currently exists along part of its southern side, GE has proposed to add 6-foot-high chain-link fencing along the southern border of the riverbank strip in all locations that are not currently fenced, including the parking lot. In addition, GE has proposed to install warning signs in the riverbank strip, both north of the commercial/industrial area and north of the parking lot. These warning signs would read: "No Trespassing by Order of the U.S. Environmental Protection Agency -- PCBs Present in Soil", and would be installed at approximately 75-foot intervals along the edge of the Housatonic River as well as on the fencing itself.

As for the wooded area adjacent to the parking lot, this area (which is owned by GE and is vacant and not being used) is also partially fenced, with fencing along the northern, western, and a portion of the eastern boundaries. That fencing, together with the wooded nature of the area, limits use of the area and thus the potential for contact with surficial soil. To further restrict use of the area and to prevent access by trespassers, GE has proposed to fence the remaining boundaries of the wooded area with a 6-foot-high chain-link fence.

SECTION 7 - FATE AND TRANSPORT CHARACTERISTICS

7.1 General

Various chemical constituents have been detected in the soils and groundwater at the Newell Street Parking Lot Site. The information presented in this section provides a general characterization of the environmental fate and transport properties associated with the constituents observed in one or both of these media. This section discusses only those compounds that were found at levels above the quantitation limit or contract-required detection limit, and excludes those which were also found in associated blank samples (thus indicating laboratory contamination). Information concerning the detected concentrations and areas of distribution for compounds observed in soils and groundwater is presented in Section 4. The fate and transport discussions which follow are intended to be general in nature for the various constituent groups and are not site-specific fate and transport characteristics. Therefore, this section of the report is not intended to identify those processes actually occurring at the Newell Street Parking Lot Site, but only to provide information on potential fate and transport mechanisms.

7.2 Characterization of Detected Hazardous Materials

Due to the number of constituents detected, discussions of compound-specific environmental fate and transport properties address representative groups of chemicals. These groups of chemicals and the constituents within each group exhibit specific properties that determine their potential behavior in the environment.

VOCs detected at the Newell Street Parking Lot Site include ketones, aromatics, and halogenated compounds. Semivolatile organic compounds detected include polychlorinated benzenes, phenols, amines, PAHs, and phthalate

esters. In addition, PCBs, PCDDs/PCDFs, pesticides, sulfides, and metals were detected and are discussed in the following sections.

Table 7-1 presents the water solubility, log octanol/water partitioning coefficient (log K_{ow}), vapor pressure, and Henry's Law Constant for the organic compounds detected in the soils and groundwater at the Newell Street Parking Lot Site. These properties provide considerable insight into the fate and transport of a compound in the environment. Depending on their vapor pressure, highly water-soluble chemicals are less likely to volatilize and are generally more likely to biodegrade (Howard, 1989). Water solubility can also affect adsorption and desorption on soils. Compounds which are more soluble are more likely to desorb from soils. Water solubility can also affect possible transformation by hydrolysis, photolysis, oxidation, and reduction (Verchueren, 1983). The log octanol/water partition coefficient correlates well with a compound's tendency to bioconcentrate and adsorb to soil (Howard, 1989). Generally, the higher the compound's log octanol/water partitioning coefficient, the higher the compound's affinity for adsorption and the lower its mobility in groundwater. Henry's Law Constant provides an indication of the tendency of a compound to volatilize, and thus provides a means for ranking the relative volatilities of chemicals from water (Verchueren, 1983). Henry's Law Constants can be obtained directly from literature or can be calculated by dividing a compound's vapor pressure by its water solubility. The Henry's Law Constant can be used to calculate the rate of evaporation from water. The information presented in Table 7-1 will be referenced, as appropriate, during the discussion of the various groups of compounds detected.

7.2.1 Volatiles

VOCs detected at the Newell Street Parking Lot Site include ketones, aromatics, and halogenated compounds. As indicated in Table 7-1, the

water solubilities and vapor pressures of these compounds range from moderate to high and their log K_{ow} values are relatively low.

7.2.1.1 Ketones

Ketones are one class of volatile organics present at the Newell Street Parking Lot Site. Investigations have detected low concentrations of acetone in site soils. As a chemical class, ketones are characterized by high water solubility and high volatility.

In surface soils, ketones are subject to competing processes of dissolution, photolysis, and volatilization. As such, these substances are prone to dissolve into infiltrating precipitation and move into underlying soils or volatilize to the atmosphere (Howard, 1990). Transport in the soil-gas phase from deeper soils will be substantially limited, however, by partitioning of the gas phase into the soil water, biodegradation, and the general heterogeneous nature of soils (USEPA, 1989).

In subsurface environments, acetone tends to be highly mobile. In moist environments or during heavy precipitation events, acetone is prone to leaching. Downward migration may occur as it dissolves into the soil water which may be transported through the soil column. However, aerobic and anaerobic biodegradation and possibly adsorption to clay particles may limit transport of acetone to groundwater (Howard, 1990).

7.2.1.2 Aromatics

Aromatic compounds detected at the Newell Street Parking Lot Site include benzene, toluene, and xylenes. In the upper soil, the competing processes of volatilization to the atmosphere and downward migration with infiltrating precipitation (both of which would be limited by the presence of pavement) are the dominant fate processes.

Generally, aromatics are highly mobile (as liquid or gas) in soil (ATSDR, March 1989; 1990; Swann et al., 1983). However, upward migration from subsurface soils in the soil-gas phase and subsequent volatilization to the atmosphere will be substantially limited by partitioning of the gas phase into the soil water, adsorption (to a small extent), biodegradation, and the general heterogeneous nature of soils (USEPA, 1989).

In deeper soil, the most likely transport mechanism is dissolution into soil water and downward migration through the soil. Competing processes of biodegradation and limited adsorption to soil organic matter may decrease the quantities of the chemicals released to groundwater. Aromatics are generally capable of biodegrading under both aerobic and anaerobic conditions. Soil adsorption is expected to be moderate for xylenes, and low for benzene and toluene (Howard, 1989 and 1990).

7.2.1.3 Halogenated Compounds

Halogenated VOCs detected at low concentrations at the Newell Street Parking Lot Site include chlorobenzene, chloroform, methylene chloride, trichloroethene, 1,2-dichloroethene, and vinyl chloride. These halogenated VOCs are characterized by their volatility and relatively high water solubility. In the surficial soil, volatilization into the atmosphere may occur. Due to their high solubility in water, these compounds may leach downward through the soil column with percolating soil water. Biodegradation of the halogenated VOCs under aerobic conditions is generally regarded as being very slow to nonexistent. Biotransformation of halogenated organic compounds via reductive dehalogenation has been demonstrated under anaerobic conditions (Wilson et al., 1986). Slow biodegradation may occur under

anaerobic conditions where acclimated microorganisms exist (Howard, 1990).

7.2.2 Semivolatiles

Semivolatiles detected at the Newell Street Parking Lot Site include phenols, amines, polychlorinated benzenes, PAHs, and phthalate esters.

7.2.2.1 Polychlorinated Benzenes

The polychlorinated benzenes detected at the Newell Street Parking Lot Site include 1,2-, 1,3-, and 1,4-dichlorobenzene, 1,2,3- and 1,2,4-trichlorobenzene, and 1,2,3,5- and 1,2,4,5-tetrachlorobenzene.

Polychlorinated benzenes exhibit moderate volatility. In surface soils, volatilization into the atmosphere is expected to occur. Adsorption to soil particles and residence within the soil matrix is also a dominant fate of polychlorinated benzenes. The potential for dissolution of these compounds into soil water and possible transport to underlying soils or groundwater may occur under certain circumstances (CHEMFATE, 1989). In sandy or mineral soils with low organic content, polychlorinated benzenes are more likely to leach through the soil, whereas in organic soils mobility should be greatly reduced. Biodegradation in soil and water is generally expected to be quite slow, but loss via this route may be significant in situations where acclimation of the microbial population has taken place (HSDB, April 1990a).

7.2.2.2 Phenols

Phenols (total) and pentachlorophenol were detected at low concentrations at the Newell Street Parking Lot. The environmental fate and transport of phenol and pentachlorophenol differ. Phenol readily biodegrades under aerobic and anaerobic conditions, but the rate of degradation is generally slower under aerobic conditions.

Laboratory biodegradation studies give varying results for pentachlorophenol. This compound has been found to biodegrade under both aerobic and anaerobic conditions, but at a rate much slower than phenol. Based on its water solubility and low adsorption to soil, phenol has the potential to be quite mobile in soil; whereas pentachlorophenol has moderately low mobility. Rapid degradation generally prevents phenol from migrating to groundwater. Phenol and pentachlorophenol in surface and near surface soils may also volatilize (Howard, 1989).

7.2.2.3 Amines

At the Newell Street Site aniline, 2-nitroaniline, and dimethylphenylethylamine were detected at low concentrations in the soil. In soil, loss of amines occurs through a combination of aerobic biodegradation, oxidation, and chemical binding with soil components. Amines are readily biodegraded under aerobic conditions, and substantial loss can be expected by this means (Howard, 1989).

In the terrestrial environment, amines exhibits low to moderate sorption to soils, especially to lower pH, and undergo slow oxidation. This is a significant fate process in soils with high organic content. The amount of amines entering groundwater by desorption from soils is limited by biodegradation in the soil column. Once in groundwater, amines are fairly mobile and degrades slowly (HSDB, 1989). Releases to the atmosphere via volatilization from soil are expected to be minimal (HSDB, 1989).

7.2.2.4 PAHs

At the Newell Street Parking Lot Site, a variety of PAHs were detected in soils. PAHs are semivolatile compounds that have low water solubilities (Table 7-1). PAHs have a strong tendency to adsorb

to soil particles and organic matter. The PAHs with higher molecular weights tend to be less water soluble and have higher affinity for adsorption to soil. Within the soil environment, biodegradation of PAHs is also related to molecular weight. PAHs with lower molecular weights tend to undergo microbial degradation more rapidly than the PAHs with higher molecular weights. The lower molecular weight PAHs may also be subject to volatilization, but to a much lesser extent than VOCs.

7.2.2.5 Phthalate Esters

Phthalate esters detected at low concentrations at the Newell Street Parking Lot Site include bis(2-ethylhexyl)phthalate in soils. The relatively low solubility and low volatility of bis(2-ethylhexyl)phthalate should limit its mobility in soils (USEPA, April 1986). Adsorption onto organic soil constituents is reported to be especially strong for bis(2-ethylhexyl)phthalate. Biodegradation screening studies indicate that bis(2-ethylhexyl)phthalate readily biodegrades in soil under aerobic conditions; however, under anaerobic conditions degradation is much slower (USEPA, 1989)

7.2.3 PCBs

The fate and transport of PCBs in the environment are greatly influenced by their low water solubility and high affinity for soil organic matter. This generally limits aqueous-phase concentrations to low parts-per-billion levels unless significant amounts of solvents, oils, or colloids are present (Baker et al., 1986; Dragun, 1989). In general, the adsorption of PCBs to soils increases with increasing soil organic content, decreasing soil particle size, and increasing congener chlorination (Lyman et al., 1982; Pignatello, 1989). PCBs could potentially volatilize from soil, but strong adsorption to soils tends to limit the extent of volatilization (ATSDR, 1993).

PCBs are fairly persistent in the environment, and degradation via chemical oxidation and hydrolysis in soil is generally insignificant. PCBs may, however, be subject to loss via photolysis, biotransformation, and biodegradation (ATSDR, 1993). Experimental evidence indicates that PCBs are susceptible to biodegradation under both aerobic and anaerobic conditions. In general, the degradability of PCB congeners under aerobic conditions increases as the degree of chlorination decreases. Variations in this trend exist and are attributed to preferential degradation determined by chlorine substitution patterns (ATSDR, 1993).

Laboratory research has shown that the lesser chlorinated PCB congeners are subject to aerobic biodegradation by microorganisms indigenous to soils. Aerobic biodegradation results in a complete breakdown of the PCBs, causing a net decrease in total molar PCB concentration. Various breakdown products have been identified and include chlorinated catechol, chlorobenzoic acid, and carbon dioxide (Bedard et al., 1987; Hankin and Sawhney, 1984; Fries and Morrow, 1984).

As with aerobic biodegradation, preferential degradation of meta- and para-substituted congeners has been observed under anaerobic conditions, although biotransformation is apparently also related to the chlorination pattern on the congeners (Rhee et al., June 1993, April 1993; Quensen et al., 1988). Laboratory research has shown that PCBs undergo reductive dechlorination under anaerobic conditions by indigenous microorganisms; however, the extent and rate of dechlorination varies among congeners and soil collection locales (Rhee et al., June 1993, April 1993; Nies and Vogel, 1990). Study results indicate that the more highly chlorinated PCBs are transformed to less chlorinated congeners by anaerobes (Quensen et al., 1988) and that the lower chlorinated PCBs may be further degraded to

carbon dioxide, water, and chloride by aerobes (Chen et al., 1988; Quensen et al., 1990).

7.2.4 PCDDs/PCDFs

At the Newell Street Parking Lot Site, PCDDs were detected in soil, and one PCDD isomer was detected in groundwater. In addition, PCDF congeners were detected at low levels in a soil and groundwater samples.

The majority of the information available on the fate and transport of PCDDs and PCDFs relates to 2,3,7,8-tetrachlorodibenzodioxin (TCDD), while some information is also available for 2,3,7,8-tetrachlorodibenzofuran (TCDF). Although there are significant differences in toxicity between these congeners and other PCDD/PCDF congeners, the environmental fate and transport data on 2,3,7,8-TCDD and 2,3,7,8-TCDF may be regarded as generally representative of the entire class of PCDDs and PCDFs due to similarities in physical/chemical properties.

This information indicates that, based on their very low water solubilities and consequently high organic carbon adsorption coefficients (K_{oc} values), PCDDs and PCDFs are expected to strongly adsorb to most soils, thereby limiting migration of the compounds (HSDB, April 1990b).

7.2.5 Pesticides

Pesticides detected at the Newell Street Parking Lot Site include aldrin and sulfotepp. The fate and transport properties of these compounds are likely to vary due to differences in their chemical and physical properties. Aldrin, is an organochlorine insecticide, and sulfotepp is an organophosphate insecticide.

Aldrin and sulfotepp bind strongly to soil. Aldrin is essentially immobile in soil, and degrades slowly to dieldrin (Howard, 1991). Sulfotepp has limited mobility in soil, and degrades to diethyl phosphate, monoethyl phosphate, and phosphoric acid (Hartley and Kidd, 1987). Aldrin and

sulfotepp could potentially volatilize from surface soil but the rate of volatilization would be slow (Howard, 1991; HSDB, February 1994).

7.2.6 Metals

A number of naturally occurring metals were detected in the soils and groundwater at the Newell Street Parking Lot Site. Metals are cycled within the environment, forming various species with different physical and chemical properties. Metal species may be transformed from one inorganic or organometallic species to another, but the inorganic element itself does not degrade.

Certain inorganic species are highly water soluble, while others are extremely insoluble. The movement of a particular metal into and within groundwater is determined by the amount and form of the metal, the groundwater's chemical and physical properties, and the composition of the soil or waste solution with which the metal is associated (USEPA, 1988). The soil properties affecting metal retention/release and transport include bulk density, surface area, particle-size distribution, pH, redox conditions, ion exchange capacity, amount of organic matter, type and amount of metal oxides, and type and amount of clay minerals (USEPA, 1988). Adsorption to soil organic matter, at levels commonly found in surface soils and sediments, is one of the primary immobilizing processes for metals (USEPA, 1988). The form in which an inorganic element exists is highly dependent upon the chemical characteristics of the site such as pH, oxygen level, and ionic characteristics.

7.2.7 Sulfides

Sulfides were detected in the soil at the Newell Street Parking Lot Site. Sulfur is cycled within the environment, and sulfides are part of the sulfur biogeochemical cycle. Sulfides are produced by biological processes and other natural sources, and are common in the environment (Manahan,

1991). The fate of sulfides in the environment depends on site-specific conditions such as the presence of microbes, pH, and the availability of oxygen. Sulfide gases can be characterized as having an offensive odor (Grady and Lim, 1980). Sulfide gases (i.e., non-metal sulfides) are rapidly converted to sulfur dioxide and sulfate in the presence of oxygen and, therefore, do not persist in air. Insoluble metal sulfides are oxidized to relatively soluble metal sulfates upon exposure to air. The predominant metal sulfide found in the environment is iron sulfide (Manahan, 1991). Under anaerobic conditions, sulfides are relatively stable compounds.

7.2.8 Cyanide

Cyanide was detected at low concentrations in two soil borings and one monitoring well at the site. The occurrence of the free cyanide ion in the environment at measurable levels is uncommon. The cyanide ion is very reactive and reacts with a variety of metals to form insoluble metal cyanides. Thus, the low-concentration cyanides present at the Newell Street Site are most likely iron and sulfur complexes rather than free cyanide.

Cyanides are a diverse group of compounds whose fate in the environment varies widely (USEPA, 1979). Cyanide is a weak acid which occurs at extremely low concentrations in its dissociated form (CN-) in the environment. Hydrogen cyanide is the most common form of undisassociated cyanide. It is subject to biodegradation and volatilization processes. Weak adsorption of cyanide onto soils and high solubility in water accounts for its mobility in soil and groundwater systems.

Ferri- and ferrocyanide complexes are stable and normally release negligible amounts of cyanide ion. If the cyanide ion is present in excess, complex metallocyanides may be formed. These compounds are soluble and can be transported in solution. The metallocyanides are not likely to volatilize, but will biodegrade.

SECTION 8 - POTENTIAL MIGRATION PATHWAYS AND EXPOSURE POTENTIAL INFORMATION

8.1 General

This section discusses potential migration pathways for the hazardous constituents that have been detected in the surficial soil, subsurface soils/fill, and groundwater at the site. In addition, information is presented on the potential for exposure of human and environmental receptors to hazardous constituents at the site.

8.2 Potential Migration Pathways

In order for exposure to occur, a transport pathway by which a constituent will migrate from its source to a point of potential exposure must be established. There are three conditions that must exist for migration of a given constituent to occur: 1) a source of the constituent; 2) a potential mechanism of release from the source; and 3) a transport medium by which the constituent will migrate to a potential receptor. Identification of migration pathways allows for an overall understanding of the exposure potential associated with the site and serves to direct the scope of subsequent exposure evaluations.

Prior sections of this report have described the investigations that have been performed at the site to characterize the presence, quantity, and concentration of constituents in various site media. The fate and transport characteristics of the chemicals identified in the above media have been previously discussed in Section 7 of this report. This information, as well as the physical characteristics and environmental setting of the site, influence the potential for migration of these constituents.

Based upon the available information, the following potential migration pathways have been identified for hazardous constituents detected at the site:

- Volatilization, dust migration, and surface runoff from surficial soil;
- Leaching or direct releases from soil/fill to groundwater; and
- Subsurface transport via groundwater flow.

These potential migration pathways are discussed in more detail in the following subsections.

8.2.1 Migration from Surficial Soils

The investigations performed to date have identified the presence of PCBs and certain metals in site surface soils. Data describing the chemical constituents found in the surficial soils are presented in Section 4.3, and the physical characteristics of the site have been described in Section 2. On-site characteristics that influence the potential migration pathways for these materials include areal extent of the site, surface cover, topography and slope, land use, and human and environmental activities at the site.

Since the known constituents found in the surficial soils, PCBs and certain metals, do not readily volatilize into the air, their potential migration via volatilization from the surficial soils would not appear to be a significant migration pathway at this site. In addition, as noted in Section 4.5, available PID information indicates that while volatile constituents may be present in subsurface materials, vertical migration of these constituents in subsurface gas to the ground surface does not appear to be occurring to any appreciable extent. Site-specific conditions which negate or further decrease the potential for volatilization from surficial soils include the fact that large areas of the site are covered by pavement or heavy vegetation. If limited volatilization should occur at the site, the eventual fate of these chemicals is largely dependent upon dispersion within the atmosphere. During the dispersion phase, it is conceivable that a limited potential would

exist for on-site and off-site receptor exposure to chemical constituents. The site characteristics, however, are likely to significantly minimize or negate the volatilization of chemicals in surficial soil.

The generation of dust on-site will be influenced most strongly by the type and extent of surface soil cover and the level of activity in the vicinity of exposed surfaces where hazardous materials have been detected. As PCBs and most metals are expected to bind tightly to the soil matrix, the principal migration mechanisms affecting these substances will be soil-mediated. Natural dust generation (i.e., wind uplift) at the site is reduced due to the limited areas of exposed surficial soil. Site activities, however, may contribute to increased generation of dust, although a large part of these activities will likely be restricted to paved areas and are subject to GE's control.

Another potential migration pathway for hazardous constituents detected in the surficial soils of the site is precipitation runoff. Surface drainage from the site is promoted by the existence of paved areas. Rainfall runoff discharges into the Housatonic River either directly as sheet flow or as conveyed by the drainage swale identified in Section 2.4. Thus, the fate of runoff- or drainage-induced migration of hazardous materials from surface soils at the site is limited to their eventual discharge to the Housatonic River. It should be noted that, as previously discussed in Section 4.6.2.2, analytical results for the river water column upstream and downstream of the site during low and high flow indicate an insignificant (if any) contribution of hazardous constituents from the site to the water column of the river.

Another water-borne migration pathway involves the possibility of erosion and transport of surficial soils during flooding events. Evaluations

of the flooding potential at the site (Section 2.5) indicate that portions of the site lie within the 10-year floodplain, and that the entire site lies within the 100-year floodplain. As such, a potential exists for the migration of hazardous materials present in surface soils during flooding events. However, this potential is limited by the heavy vegetation and pavement at the site.

8.2.2 Migration from Subsurface Soils/Fill

The results of the subsurface soil/fill investigations completed to date have identified the presence of PCBs and certain VOCs, SVOCs, PCDDs/PCDFs, cyanide, and metals in site soils. Data describing the chemical constituents found in the subsurface soil/fill material are presented in Section 4.2, and a discussion of the relative distribution of these substances at the site is presented in Section 4.6.1.

The potential migration of hazardous constituents from the subsurface materials at the site would occur as a result of dissolution in groundwater via direct contact and/or as a result of leaching via infiltrating precipitation. Current conditions at the site (i.e., presence of pavement and dense vegetation) limit the extent to which precipitation can infiltrate soil/fill at the majority of the site. The groundwater data for the site (Section 4.4) indicate the presence of low levels of various constituents which could have possibly leached from subsurface materials.

In addition, volatilization of organics and/or generation of dusts from subsurface materials could potentially occur during disturbances (e.g. excavations) of the subsurface soils. Such instances would be related to construction or repair activities (e.g. utilities) and as such would be limited in frequency and duration and would be unlikely to contribute significantly to the migration of hazardous materials within or from the site. This

likelihood is further diminished since the area is or will be fenced and GE controls any excavation activities necessary for this area.

8.2.3 Migration Via Groundwater

The results of the groundwater investigation have identified the presence of low concentrations of PCBs, VOCs, SVOCs, and inorganics in localized areas of site groundwater. Data describing the chemical content of on-site groundwater are presented in Section 4.4, and a discussion of the relative distribution of impacted groundwater across the site is presented in Section 4.6.2.

As previously discussed, a potential source of the hazardous materials detected in groundwater is the presence of fill material at depths which place it in contact with the groundwater. Subsurface investigations at the site suggest that leaching of hazardous materials from subsurface soils and fill above the water table by infiltrating rainfall is also a possible source of hazardous materials to on-site groundwater.

The fate of hazardous materials released to groundwater at the site could possibly include one or all of the following: 1) permanent "containment" within the groundwater system as a result of adsorption onto the subsurface soils; 2) permanent "containment" within the groundwater system in those instances where groundwater flow is negligible; and 3) possible subsurface transport into a receiving surface water body.

Movement of groundwater beneath the site is primarily in a northward direction toward the Housatonic River. Groundwater affected by the site ultimately discharges to the Housatonic River. However, while the transport of PCBs and other hazardous materials via groundwater is considered a potential migration pathway, the available analytical data from the Housatonic River indicate that the migration (if any) of these chemicals in

groundwater does not result in significant contributions of hazardous constituents to the Housatonic River.

310 CMR 40.0835(4)(c)(3) requires that a Phase II Report contain an evaluation of the potential for groundwater at the site to be a source of vapors to the indoor air of occupied structures. While various constituents have been detected in groundwater at the site, the potential for groundwater to be a source of vapors to the indoor air of occupied structures seems likely to be negligible as the known area of impacted groundwater does not have any structures of any kind present above it. After the additional groundwater investigations described in the Supplemental Phase II SOW/RFI Proposal have been completed, the potential groundwater impacts, via vapors, on the indoor air of nearby occupied structures will be re-evaluated.

8.3 Potential for Human Exposure

The present site conditions and foreseeable future site uses result in a low potential for human exposure at the Newell Street Parking Lot Site. Specifically, as indicated previously in Section 2.9, the majority of the site is covered with pavement and once served as a parking lot for GE employees. This parking lot is no longer in use and is surrounded by a fence except along a portion of the riverbank, where access is limited by the steep, and heavily vegetated nature of the riverbank itself. The wooded area is fenced on the northern and western sides as well as on a portion of the eastern side, and this area is also heavily vegetated, primarily with brush and trees. Moreover, as described in Section 6.3 above, GE has proposed to complete the fencing of the parking lot and the wooded area, so that access to those areas will be completely restricted.

The potential for human exposure to hazardous constituents at the Newell Street Parking Lot Site is discussed in Section 2.3 of the Preliminary Health and

Environmental Assessment (HEA) Proposal which is being submitted concurrently with this report. As shown there, potential human receptors include trespassers and workers at the site who may be exposed to contaminated media at the site during the brief periods when they are present at the site. In addition, since PCBs have been detected at low levels in surficial soils in the southern portion of the parking lot near residential properties and at one of those properties (see Section 4.3.2), potential residential exposures at those properties will be considered in the HEA/Risk Assessment. Finally, people living or working near the site may be exposed to air that could be affected by constituents at the site.

8.4 Potential Impacts to Environmental Receptors

The only portions of the Newell Street Parking Lot Site which could be of any value to wildlife are the vegetated portions of the riverbank and the small wooded area to the east of the parking lot, as the rest of the site is either paved or barren. Although individual small mammals, song birds, amphibians, and reptiles may be present within these areas, these areas are too small to support communities of wildlife. As discussed in Section 2.4 of the Preliminary HEA Proposal being submitted concurrently with this report, it would not make sense to conduct a complete separate ecological risk assessment for these limited areas. The HEA/Risk Assessment for the Housatonic River Site should be sufficient to address potential environmental exposures (if any) in these limited areas. However, as also noted in the Preliminary HEA Proposal, a qualitative habitat assessment will be conducted at these areas to verify that they do not present any particular environmental issues that would warrant an independent ecological risk assessment.

SECTION 9 - IDENTIFICATION OF DATA NEEDS

Results from the prior site investigations summarized in Section 4 of this document have significantly increased GE's overall understanding of the hydrogeology of the Newell Street Parking Lot Site. This information has also satisfied many of the requirements for an MCP Phase II - Comprehensive Site Assessment. In addition, the existing information documented herein fulfills many of the requirements for an RFI for USEPA Area 5b pursuant to the Corrective Action Permit.

Several data needs have been identified based on comparison of existing site information with the remaining MCP Phase II requirements and the RFI requirements of the USEPA Permit. These data needs are discussed below.

9.1 Subsurface Soils

As discussed in Sections 4.2 and 4.6.1.2 and as shown on Table 4-2 and Figure 4-5, the vertical extent of the fill materials at the site has generally been well defined. In 29 of the 30 soil borings at the site, the thickness of the fill was successfully determined. However, at boring NS-1 in the northwest corner of the parking lot, fill materials were still detected at 18 feet below grade, the deepest sample taken at that boring. Further, borings subsequently performed at two nearby locations, NS-1A and NS-2A, showed fill materials of considerably lesser thickness (9 and 11 feet below grade, respectively), thus making it impossible to use those borings to estimate the maximum depth of fill materials at location NS-1. Thus, a data gap remains as to the depth of fill materials in the northwest corner of the parking lot, near to boring NS-1.

The vertical extent of PCB-impacted soils/fill materials has also been defined in much of the site, as shown on Table 4-1 and 4-5 and Figures 4-2 and 4-5.

In the northwest corner of the parking lot, however, three borings (NS-1, NS-2, and NS-1A) showed elevated PCB concentrations in their deepest samples. Similarly, in the southern portion of the parking lot, four borings (NS-8, NS-12, NS-13, and NS-14) showed elevated PCB concentrations in their deepest samples. Accordingly, a data gap remains as to the vertical extent of impacted soils/fill materials in the northwest and southern portions of the parking lot.

In addition, the subsurface soil sampling to date has not established the extent of PCB-containing soils/fill materials in certain horizontal directions. The extent of fill materials to the north of the site is defined by the river, and the extent of fill materials to the east has been established by existing borings that extend across the site to its eastern edge, where it adjoins the Newell Street Oxbow Area I Site (see Figures 4-4 and 4-5). However, as shown on Figures 4-2 and 4-5, PCB-containing fill materials were detected at each of the westerly-most borings in the parking lot (NS-1, NS-1A, NS-5, and NS-8). Further, as shown on Table 4-5 and Figures 4-2 and 4-5, PCB-containing fill materials were detected in the southerly-most boring in the parking lot (NS-10). Accordingly, a data gap remains as to the horizontal extent of PCB-containing fill materials to the west and to the south. In fact, given that the existing borings are near the western and southern borders of the site, it appears possible that fill materials may extent beyond the site boundaries in those directions.

Finally, a data gap exists with respect to an estimate of the volume of fill materials and other impacted subsurface soils at the site. Once the vertical and horizontal limits of the fill materials and impacted soils have been defined, such an estimate can be derived.

9.2 Groundwater

As discussed in Section 4.4 above, existing groundwater investigations have not fully established the horizontal extent of impacted groundwater at the site. The horizontal extent of impacted groundwater to the north is delimited by the river, and the extent of impacted groundwater to the east has been defined by monitoring wells GE-3 (where no constituents were detected, as shown on Table 4-12) and NS-11 (where very few constituents were detected, as shown on Tables 4-14 through 4-18). However, as shown on Tables 4-12 and 4-14 through 4-18, a number of Appendix IX+3 constituents were detected in the groundwater in the westerly-most well at the site (NS-1) in both samples taken from that location (1988 and 1992). Accordingly, there is a data gap with respect to the horizontal extent of impacted groundwater at the western edge of the site. Likewise, as shown on Tables 4-15 through 4-17, a limited number of Appendix IX+3 constituents were detected in the groundwater at the most upgradient well at the site (NS-10). Thus, there is a data gap with respect to the upgradient limits of the impacted groundwater at the site. Further, because the upgradient limits of impacted groundwater have not yet been established, there is also a current data gap with respect to the quality of site-specific background (i.e., non-impacted) groundwater at the Newell Street Parking Lot Site.

In addition, in its March 18, 1993 letter reviewing the Newell Street Interim Phase II Report, the MDEP indicated that the supplemental Phase II activities should include a proposal for determining the vertical extent of impacted groundwater in the vicinity of well NS-1, located in the northwest corner of the parking lot. (As noted in Section 9.1, the lack of information concerning the depth of fill at that location also represents a current data gap.) Additional information would also be desirable on the distribution and potential vertical

migration of constituents in the groundwater at the site, particularly at the downgradient edge.

To further characterize hydrogeologic conditions at the site, it would also be useful to obtain additional information on groundwater elevation, groundwater flow patterns, and seasonal variations (if any) in groundwater elevation and flow patterns at the site. As discussed in Section 4.6.2.1 and shown on Table 4-19 and Figure 4-6, groundwater elevation data have been collected from four wells in the Newell Street Parking Lot Site. Because these data were obtained only once from each of those locations, they do not permit a determination of potential seasonal changes in groundwater elevation and flow patterns. Further, additional sample locations are needed to verify the flow patterns that have been estimated from the four existing wells and from the additional wells at the adjacent Newell Street Oxbow Area I Site. This represents a current groundwater data gap.

Finally, as noted in Section 4.6.2.1, there is currently no information concerning the hydraulic conductivity of the upper groundwater zone at the Newell Street Parking Lot Site. This represents an additional current groundwater data gap.

9.3 Surficial Soils

The extent of surficial soils at the site is limited due to the presence of a paved parking lot over much of the site, but surficial soils do exist in three locations within the site. The surficial soils near the southern edge of the parking lot have been fully characterized by prior investigations, which have included four samples from the parking lot itself (one analyzed for all Appendix IX+3 constituents and the other three analyzed for PCBs) and four samples (analyzed for PCBs) in the adjacent residential property at 153 Newell Street

(see Section 4.3.2 and Figure 4-3). In the wooded area to the east of the parking lot, however, the only surficial soil sample to date was analyzed solely for Appendix IX metals (see Section 4.3.2 and Figure 4-3). Accordingly, a data gap exists with respect to the potential presence and concentrations of PCBs and other Appendix IX+3 constituents in the surficial soils of the wooded area. With respect to the riverbank north of the parking lot, a set of three surficial soil samples, collected at the very eastern edge of the Newell Street Parking Lot Site, was analyzed for PCBs (see Section 4.3.1 and Figure 4-3). Accordingly, a data gap exists with respect to the presence and concentration of PCBs in the surficial soils of other portions of the riverbank, and with respect to the possible presence and concentration of other Appendix IX+3 constituents in the surficial soils of the riverbank.

9.4 Risk Assessment

The data described in this document and the additional data to be generated by the Supplemental Phase II/RFI activities will be evaluated to determine the potential risks to human health and the environment, given the current and reasonably foreseeable uses of the site and the surrounding areas. A more detailed overview concerning this evaluation is provided in the separately bound document entitled "Preliminary Health and Environmental Assessment Proposal for the Newell Street Parking Lot Site," which is being submitted concurrently with this document.

9.5 Proposal to Fill Data Gaps

These data needs will be addressed through the activities described in the separately bound MCP Supplemental Phase II SOW/RFI Proposal for the Newell

Street Parking Lot and the Preliminary HEA Proposal being submitted concurrently with this document.

SECTION 10 - CONCLUSIONS AND FUTURE ACTIVITIES

10.1 Conclusions

As discussed in the previous sections of this report, numerous investigative activities have been conducted at the Newell Street Parking Lot Site. The following is a summary of the key findings from the work that has been completed to date:

- The Newell Street Parking Lot Site currently includes the paved Newell Street Parking Lot, the portion of the Housatonic River riverbank adjacent to the parking lot, and the wooded area adjacent to and east of the parking lot. All of these areas are currently owned by GE.
- The site limits include a former oxbow/low-lying area of the Housatonic River (Oxbow G). The filling of this oxbow/low-lying area in the late 1930s and/or early 1940s (as part of the river rechannelization effort) with various materials is considered the primary source of environmental impacts to the various site media.
- The horizontal and vertical limits of the former oxbow/low-lying area have been largely delineated through the performance of several subsurface investigations. These investigations have identified the presence and to a degree the extent of fill materials, which, in turn, can be considered to represent the limits of the former oxbow/low-lying area. There currently remain certain areas where the extent of subsurface fill material has not been delineated. This data need has been identified in Section 9.
- In addition to delineating the presence of fill materials, efforts have been undertaken to define the presence and extent of PCBs in the subsurface soils. PCB concentrations ranging up to 80,000 ppm have

been detected. Generally, the higher PCB concentrations have been detected in the fill materials; however, there are elevated PCB concentrations in the underlying soils as well. It will thus be necessary to further delineate the extent of PCB-impacted subsurface soils at the site, as noted in Section 9. Specifically, the vertical and/or horizontal extent of impacted soils needs to be further assessed along the western boundary of the site, including the area in the vicinity of well NS-1, and at the southern boundary of the site.

- Other hazardous constituents (besides PCBs) have been detected at various locations, depths, and concentrations within the site. Along with the further delineation of PCBs, a further characterization of the presence and concentrations of the other constituents in the subsurface is needed in the same general areas.
- The surficial soils at the site are limited due to the presence of the paved parking lot. The limited sampling and analysis that have been conducted indicate the presence or likely presence of PCBs in the surficial soils in the unpaved portions of the site, particularly in the riverbank to the north of the parking lot and in the small wooded area to the east of the parking lot. Since access to the majority of the site is restricted by fencing or otherwise limited due to steep topography and/or heavy vegetative growth, only a limited exposure potential exists. Moreover, as discussed in Section 6.3, GE has proposed the installation of additional access restrictions as an interim measure to further reduce this potential. Nevertheless, as noted in Section 9, additional data are needed on the presence and concentrations of PCBs and other Appendix IX+3 constituents in surficial soils along the riverbank and within the small wooded area.

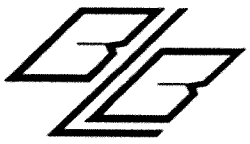
- Groundwater sampling has detected the presence of various constituents in the site groundwater. The location of the monitoring wells and the sampling results available to date are not sufficient to delineate the western and southern (i.e., upgradient) limits of impacted groundwater. A need for additional data has been identified to address the horizontal and vertical limits of impacted groundwater in those directions.
- The characterization of hydrogeologic conditions is somewhat limited at this time. Additional information regarding seasonal groundwater elevations, in-situ hydraulic conductivity, and groundwater flow in response to the surface water elevation of the Housatonic River will, along with the collection of additional groundwater analytical data, assist in further characterizing hydrogeologic conditions at the site.
- As discussed in Section 4.6.2, groundwater from the Newell Street Parking Lot Site discharges to the Housatonic River. It is thus possible that some constituents present within the site groundwater may be entering the Housatonic River. Previous sampling and Appendix IX+3 analysis of surface water samples from the Housatonic River both upstream and downstream of the site was conducted as part of prior MCP Phase II activities (Blasland & Bouck, December 1991). The results of this sampling activity did not indicate any significant contribution of PCBs, VOCs, SVOCs, or PCDD/PCDF constituents to the river water column from the site. Those constituents were not detected in the water column at the Lyman Street Bridge (just downstream of the site) at concentrations above their quantitation limits, except for chlorobenzene, which was not found at a significantly higher concentration than in upstream samples.

- Although ambient air monitoring has not been specifically conducted at this site, air monitoring for PCBs was performed at the adjacent Oxbow Area I Site to the east, as discussed in Section 5. This monitoring program included a monitor at an area with both limited surface cover and elevated PCB concentrations in the surficial soils. Thus, the results of that program can be considered to represent a very conservative estimate of potential PCB concentrations in the ambient air at the Newell Street Parking Lot Site, since this site is mostly paved and is generally upwind of the Oxbow Area I Site. Moreover, based on an evaluation of the results of the air monitoring program, it has been determined that PCB levels in the ambient air in the Newell Street area do not pose a significant health risk to individuals in the area, including nearby residents.

10.2 Future Activities

Section 9 of this document has identified several data needs concerning the presence and extent of hazardous constituents at the Newell Street Parking Lot Site. The separately bound Supplemental Phase II SOW/RFI Proposal for this site describes activities intended to address the identified data needs. Following MDEP/USEPA approval of that proposal, and after obtaining necessary local permits, the field activities described in that document will be performed. After the performance of these activities, all data will be compiled, presented, and interpreted in a MCP Supplemental Phase II Report/RFI Report, which will be submitted for MDEP/USEPA review and approval. At the same time, a Risk Assessment Scope of Work/Supplemental HEA Proposal (which will be more detailed than the Preliminary HEA Proposal being submitted concurrently with this document) will be submitted for MDEP/USEPA review and approval. If, upon

review of the Supplemental Phase II Report/RFI Report, it should be determined that additional field investigations are necessary, these investigations will be proposed and (after approval) carried out, and an Addendum to the Supplemental Phase II Report/RFI Report will be submitted (to present the results of those investigations), prior to performance of the risk assessment. After performance of the risk assessment activities, a MCP Final Phase II Report (including the risk assessment) and Health and Environmental Assessment Report will be submitted, together with a Media Protection Standards Proposal for this site.



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Tables

TABLE 1-1

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND
CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF STUDIES CONDUCTED RELATED TO THE NEWELL STREET
PARKING LOT SITE: 1987 - 1994

Author	Title and Date of Study/Report
G&M	Investigation of Soil Conditions in the Vicinity of Newell Street, Interim Report, Draft - July 1987
G&M	Investigation of Soil and Ground-Water Conditions at the Newell Street Site, July 1988
B&B	Analysis of Potential Remedial Measures (Feasibility Study) at the Newell Street Site, September 1988
G&M	Supplemental Investigation of Soil and Ground-Water Conditions at the Newell Street Site, April 1989
G&M	Risk Assessment for the Newell Street Site, May 1989
G&M	Hydrogeological Investigation of Old Oxbow Areas, August 1989
B&B	Newell Street - MCP Phase II Supplemental Data Summary, June 1990
B&B	MCP Interim Phase II Report for the Newell Street Site, February 1992
B&B	Supplemental Surficial Soil Sampling - Newell Street II Site, November 1993
GE	GE Newell Street, Area II, Imminent Hazard Evaluation; Results of Sampling, 153 Newell Street, February 1994

Abbreviations:

G&M = Geraghty & Miller, Inc., Plainview, NY
B&B = Blasland & Bouck Engineers, P.C., Syracuse, NY
GE = General Electric Company, Pittsfield, MA

TABLE 2-1

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PROPERTY OWNERS ADJACENT TO THE NEWELL STREET PARKING LOT SITE

Property Identification	Owner/Address
J9-23-8	Western Massachusetts Electric Company* PO Box 2010 West Springfield, MA 01101
J9-23-9	Antonio Aiello 153 Newell Street Pittsfield, MA 01201
J8-23-10	Antonio Diprimio 161 Newell Street Pittsfield, MA 01201
J9-23-11	Norman S. Haines 163 Newell Street Pittsfield, MA 01201
J9-23-13	Moldmaster Engineering, Inc. 187 Newell Street Pittsfield, MA 01201
J9-23-16	General Electric Company ** 100 Woodlawn Avenue Pittsfield, MA 01201

Notes:

1. Property ownership information was obtained from the City of Pittsfield Tax Assessors' office and is current through December 31, 1991.
2. Refer to Figure 2-1 for illustration of parcel locations.
3. * - Although City of Pittsfield tax information presents parcel J9-23-8 as being owned by Western Massachusetts Electric Company, other available information indicates this parcel to be owned by Northeast Utilities Service Co., 33 West Street, Pittsfield, MA 01201.
4. ** - Formerly owned by Quality Printing - purchased by GE in November 1988. Parcel address 191 Newell Street.

TABLE 2-2

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND
CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF HISTORICAL AERIAL PHOTOGRAPHS TAKEN WHICH
DEPICT THE NEWELL STREET PARKING LOT

Date	Photographer	Approximate Scale of Photos
July 13, 1942**	National Archives, Washington, D.C.	1:16,300
November 24, 1956	Col-East, Inc., North Adams, MA	1:9,600
October 3, 1957*	Col-East, Inc., North Adams, MA	1:25,000
July 3, 1960*	Col-East, Inc., North Adams, MA	1:2,400
April 14, 1969**	Col-East, Inc., North Adams, MA	1:4,800
July 1, 1974*	Col-East, Inc., North Adams, MA	1:2,400
March 21, 1979*	Col-East, Inc., North Adams, MA	1:6,000
November 3, 1981*	Col-East, Inc., North Adams, MA	1:2,400
April 13, 1983	Quinn Associates, Inc., Horsham, PA	1:12,000
November 1, 1987	Col-East, Inc., North Adams, MA	1:19,200
April 23, 1990**	Lockwood Mapping, Inc., Rochester, NY	1:6,000
August 8, 1990*	Col-East, Inc., North Adams, MA	1:6,000

Note:

1. * = Photograph included in Appendix B.
2. ** = Photograph included in Figures 2-2 through 2-4.

TABLE 4-1

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PRE-MCP SUBSURFACE SOIL PCB DATA
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Soil Boring ID.	Sample Collection Date	Sample Depth (Feet)	PCB Concentration			
			Aroclor 1016, 1232, 1242* and/or 1248	Aroclor 1254	Aroclor 1260	Total PCBs
QP-10	5/8/87	0-8	ND(1)	71	23	94
		8-12	ND(0.05)	0.06	ND(0.05)	0.06
QP-11	5/8/87	0-2	ND(0.05)	0.95	0.78	1.7
		2-12	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
GE-1	5/4/88	0-2	ND(0.11)	3.6	5.1P	8.7
		2-4	ND(0.18)	18	4.2	22
		4-6	ND(0.05)	0.05	ND(0.05)	0.05
GE-2	5/4/88	0-4	ND(1.8)	120	24P	140
		4-8	ND(3.3)	150	19	170
GE-4	2/6/89	0-2	ND(0.05)	0.11	0.06	0.17
		2-4	ND(0.05)	5.2	3.7	8.9
		4-6	ND(0.05)	5.7	2.2	7.9
		6-8	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
GE-5	2/6/89	0-2	ND(0.05)	0.4	0.17	0.57
		2-4	ND(2.4)	240	13	250
		4-6	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
		6-8	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
GE-6	2/6/89	0-2	ND(0.06)	6.3	1.1	7.4
		2-4	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
		4-6	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
GE-7	2/6/89	0-2	ND(0.05)	1.1	0.26	1.4
		2-4	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
		4-6	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
NS-1	8/29/89	0-4	ND(100)	8,500	ND(400)	8,500
		4-8	ND(200)	12,000	ND(400)	12,000
		8-12	ND(4)	310	ND(10)	310
NS-2	8/29/89	0-4	ND(2)	220	ND(7)	220
		4-8	ND(2)	200	ND(10)	200
		8-12	ND(3)	260	ND(10)	260
NS-3	8/29/89	0-4	ND(2)	240	ND(10)	240
		4-8	ND(0.1)	16	4.4	20
		8-12	ND(0.05)	1.1	0.2	1.3
NS-4	8/29/89	0-4	ND(0.2)	29	1.7	31
		4-8	ND(0.05)	0.55	0.05	0.6
		8-12	ND(0.05)	1.5	0.13	1.6

(See notes on Page 2)

TABLE 4-1
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PRE-MCP SUBSURFACE SOIL PCB DATA
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Notes:

1. Samples were collected by Geraghty & Miller, Inc. and submitted to IT Analytical Services, Inc., Knoxville, TN for PCB analysis.
2. ND(1) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
3. * - Aroclor pattern was identified and/or calculated as Aroclor 1242.
4. P - Indicates an alteration of standard Aroclor pattern.

TABLE 4-2

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND
CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

THICKNESS OF FILL MATERIAL

Site Location	Boring ID.	Thickness of Fill (Feet)	Depth Drilled (Feet)
GE Parking Lot and Wooded Area	NS-1	18	18
	NS-2	4	12
	NS-1A	9	24
	NS-2A	11	24
	NS-3	8	12
	NS-4	4	12
	NS-5	9	14
	NS-6	8	14
	NS-7	10	16
	NS-8	10	14
	NS-10	10	20
	NS-11	11	20
	NS-12	11	16
	NS-13	12	16
	NS-14	7	14
	QP-10	8	12
	QP-11	2	12
	GE-2	4	10
	GE-3	7	18.8
	GE-4	3	8
	GE-5	3.5	8
	GE-6	1.5	6
	GE-7	1	6
	GE-9	5	12
	GE-10	2	12
	GE-11	4	12
Riverbank	NS-9	10	24
	RB-6	0	4
	RB-7	0	4
	GE-1	2.5	6

Notes:

1. All borings were installed under the direction of Geraghty & Miller, Inc.
2. Thickness of fill determined by visual observations (see soil boring logs in Appendix E).

TABLE 4-3

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PHOTOIONIZATION DETECTOR (PID) READINGS

Boring ID.	Sample Depth Interval (Feet) and Corresponding PID Reading (PID Units)											
	(0-2)	(2-4)	(4-6)	(6-8)	(8-10)	(10-12)	(12-14)	(14-16)	(16-18)	(18-20)	(20-22)	(22-24)
NS-1	4		4		4		3		NS	NS	NS	NS
NS-2	0		0		0		NS		NS	NS	NS	NS
NS-3	1		1		1		NS		NS	NS	NS	NS
NS-4	1		1		1		NS		NS	NS	NS	NS
NS-1A	0.1	0.0	0.2	1.9	0.3	0.2	1.8	9.0	4.2	16.2	3.1	0.4
NS-2A	0.4	0.0	0.0	0.0	0.0	0.0	10.5	12.4	55.7	60.4	12.6	54.2
NS-5	0.2	0.2	0.2	0.2	0.1	0.0	0.0	NS	NS	NS	NS	NS
NS-6	0.3	0.1	5.1	2.8	1.5	0.4	0.6	NS	NS	NS	NS	NS
NS-7	1.8	0.3	0.0	NR	0.0	0.0	0.9	3.3	NS	NS	NS	NS
NS-8	0.1	0.5	2.6	3.4	5.9	5.5	9.9	NS	NS	NS	NS	NS
NS-9	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.1	1.0	0.0	0.0	0.3
NS-10	0.0	0.8	3.3	9.7	31.0	70.5	60.9	35.7	22.7	29.9	NS	NS
NS-11	0.0	0.0	0.0	0.8	16.0	10.2	NR	3.6	0.0	0.0	NS	NS
NS-12	0.0	0.2	8.6	4.4	4.3	3.8	4.6	17.3	NS	NS	NS	NS
NS-13	0.0	0.1	7.9	NR	7.5	9.2	8.2	19.5	NS	NS	NS	NS

(See notes on Page 2)

TABLE 4-3
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PHOTOIONIZATION DETECTOR (PID) READINGS

Boring ID.	Sample Depth Interval (Feet) and Corresponding PID Reading (PID Units)											
	(0-2)	(2-4)	(4-6)	(6-8)	(8-10)	(10-12)	(12-14)	(14-16)	(16-18)	(18-20)	(20-22)	(22-24)
NS-14	0.0	0.3	0.4	0.3	5.6	5.7	8.2	NS	NS	NS	NS	NS
RB-6	0.0	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
RB-7	0.0	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GE-1	<1	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
GE-2	<1	<1	<1	<1	<1	NS	NS	NS	NS	NS	NS	NS
GE-3	<1	<1	<1	<1	2.0	<1	<1	1.2	<1	<1	NS	NS
GE-9	0.0	0.0	0.0	0.0	0.0	NS	NS	NS	NS	NS	NS	NS
GE-10	0.0	0.0	0.0	0.0	0.0	0.0	NS	NS	NS	NS	NS	NS
GE-11	0.0	0.0	0.0	0.0	0.0	0.0	NS	NS	NS	NS	NS	NS

Notes:

1. All PID readings were obtained by Geraghty & Miller, Inc., as part of boring installations.
2. These results are qualitative only and do not represent the absolute concentrations of any volatile organic compound in soil, whether the compound is natural or man-made.
3. NR - No sample recovery.
4. NS - Not sampled. Boring did not extend to this depth.

TABLE 4-4

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PRE-MCP SUBSURFACE SOIL DATA FOR VOCs AND SVOCs
(Results are Presented in Dry-Weight Parts Per Million, ppm)

ANALYTE	BORING ID.:	NS-1				NS-2			NS-3			NS-4		
	SAMPLE DEPTH (Feet):	(0-4)	(4-8)	(8-12)	(12-16)	(0-4)	(4-8)	(8-12)	(0-4)	(4-8)	(8-12)	(0-4)	(4-8)	(8-12)
Volatile Organic Compounds														
Benzene		0.005	ND(0.005)	ND(0.005)	NA	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Bromodichloromethane		ND(0.005)	ND(0.005)	ND(0.005)	NA	ND(0.005)	0.003J	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Chloroform		ND(0.005)	ND(0.005)	ND(0.005)	NA	ND(0.005)	0.009	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Methylene Chloride		0.007	0.007	0.005J	NA	0.014	ND(0.005)	ND(0.005)	0.006	0.012	0.008	0.01	0.006	0.011
Tetrachloroethene		ND(0.005)	0.002J	ND(0.005)	NA	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Toluene		0.013	0.027	0.001J	NA	0.003J	0.004J	ND(0.005)	0.001J	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Trichloroethene		0.009	0.015	ND(0.005)	NA	ND(0.005)	0.003J	ND(0.005)	ND(0.005)	0.001J	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Base/Neutral Organic Compounds														
Acenaphthylene		0.51J	0.48J	ND(0.98)	NA	0.18J	1.8J	ND(0.99)	ND(3.9)	2.9J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Anthracene		ND(4)	ND(3)	ND(0.98)	NA	ND(0.98)	0.54J	ND(0.99)	ND(3.9)	0.85J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Benzo(a)anthracene		ND(4)	ND(3)	ND(0.98)	NA	0.16J	1.1J	ND(0.99)	0.58J	2.2J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Benzo(b)fluoranthene		0.58J	0.47J	ND(0.98)	NA	0.14J	1.1J	ND(0.99)	0.42J	2.1J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Benzo(k)fluoranthene		0.47J	0.49J	ND(0.98)	NA	0.13J	1.1J	ND(0.99)	ND(3.9)	ND(3.9)	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Benzo(a)pyrene		0.56J	0.41J	ND(0.98)	NA	0.2J	1.4J	ND(0.99)	0.55J	1.8J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Benzo(g,h,i)perylene		ND(4)	ND(3)	ND(0.98)	NA	ND(0.98)	1.6J	ND(0.99)	ND(3.9)	2.1J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Bis(2-ethylhexyl)phthalate		ND(4)	ND(3)	0.14J	NA	ND(0.98)	ND(4)	ND(0.99)	ND(3.9)	ND(3.9)	0.098J	ND(1.9)	0.14J	0.28J

(See Notes on Page 2)

TABLE 4-4
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PRE-MCP SUBSURFACE SOIL DATA FOR VOCs AND SVOCs
(Results are Presented in Dry-Weight Parts Per Million, ppm)

ANALYTE	BORING ID.:	NS-1				NS-2			NS-3			NS-4		
	SAMPLE DEPTH (Feet):	(0-4)	(4-8)	(8-12)	(12-16)	(0-4)	(4-8)	(8-12)	(0-4)	(4-8)	(8-12)	(0-4)	(4-8)	(8-12)
Base/Neutral Organic Compounds (Continued)														
Chrysene		ND(4)	ND(3)	ND(0.98)	NA	0.16J	1.2J	ND(0.99)	0.48J	1.7 J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Dibenzo(a,h)anthracene		ND(4)	ND(3)	ND(0.98)	NA	ND(0.98)	ND(4)	ND(0.99)	ND(3.9)	0.57J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Fluoranthene		ND(4)	ND(3)	ND(0.98)	NA	0.24J	1.1J	ND(0.99)	0.78J	1.5J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Indeno(1,2,3-cd)pyrene		0.44J	0.35J	ND(0.98)	NA	0.11J	1.1J	ND(0.99)	ND(3.9)	1.6J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Phenanthrene		ND(4)	ND(3)	ND(0.98)	NA	0.21J	0.69J	ND(0.99)	0.71J	0.66J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
Pyrene		ND(4)	ND(3)	ND(0.98)	NA	0.38J	1.8J	ND(0.99)	(0.91)	3.2J	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)
1,2,4-Trichlorobenzene		1.7J	2.5J	ND(0.98)	NA	ND(0.98)	ND(4)	ND(0.99)	ND(3.9)	ND(3.9)	ND(0.97)	ND(1.9)	ND(0.98)	ND(1.9)

Notes:

1. Samples were collected by Geraghty & Miller, Inc., during August 1989 and submitted to IT Analytical Services, Inc. Knoxville, TN for analysis of priority pollutant volatile and semivolatile constituents.
2. Only detected analytes are shown.
3. ND(0.005) - Compound was analyzed, but not detected. The number in parentheses is the detection limit.
4. J - Indicates an estimated value less than the CLP-required quantitation limit.
5. NA - Not Analyzed.

TABLE 4-5

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCBs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Boring ID.	Sample Collection Date	Sample Depth (Feet):	PCB Concentration			
			Aroclor 1016, 1232, 1242, and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors+
NS-1A	05/22/91	0-2	ND(47)	3,700	ND(230)	3,700
	05/22/91	2-4	ND(75)	8,400	ND(340)	8,400
	05/22/91	4-6	ND(94)	9,900	ND(470)	9,900
	05/22/91	6-8	ND(101)	12,000	ND(500)	12,000
	05/22/91	8-10	ND(0.79)	33	ND(3.6)	33
	05/23/91	10-12	ND(31)	3,400	ND(140)	3,400
	05/23/91	12-14	ND(25)	1,300	ND(110)	1,300
	05/23/91	14-16	ND(24)	1,500	ND(110)	1,500
	05/23/91	16-18	ND(0.19)	11	ND(0.86)	11
	05/23/91	18-20	ND(0.054)	3.8 [19]	ND(0.24)	3.8
	05/23/91	20-22	ND(0.11)	9.5	ND(0.50)	9.5
	05/23/91	22-24	ND(0.54)	29	ND(2.3)	29
NS-2A	11/12/91	0-2	ND(0.05)	0.64	ND(0.08)	0.64
	11/12/91	2-4	ND(150)	9,100	ND(510)	9,100
	11/12/91	4-6	ND(53)	2,000	ND(140)	2,000
	11/12/91	4-6**	ND(0.65)	25	ND(1.5)	25
	11/12/91	6-8	ND(43)	2,800	ND(130)	2,800
	11/12/91	8-10	ND(4.6)	320	ND(16)	320
	11/12/91	10-12	ND(0.05)	1.8	ND(0.07)	1.8
	11/12/91	12-14	ND(0.10)	6.3	ND(0.27)	6.3
	11/12/91	14-16	ND(17)	1,000	ND(59)	1,000
	11/12/91	16-18	ND(17)	1,100	ND(59)	1,100
	11/12/91	18-20	ND(0.90)	60 [24]	ND(2.7)	60
	11/12/91	20-22	ND(0.05)	0.53	ND(0.05)	0.53
	11/12/91	20-22 RE	ND(0.05)	0.40	ND(0.05)	0.67
	11/12/91	22-24	ND(0.18)	8.5	ND(0.55)	8.5
NS-5	05/22/91	0-2	ND(36)	1,200	ND(90)	1,200
	05/22/91	2-4	ND(0.53)	48 [19]	ND(3.7)	48
	05/22/91	4-6	ND(45)	2,100	ND(110)	2,100
	05/22/91	6-8	ND(21)	590	ND(52)	590

(See notes on Page 6)

TABLE 4-5
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCBs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Boring ID.	Sample Collection Date	Sample Depth (Feet):	PCB Concentration			
			Aroclor 1016, 1232, 1242, and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors+
NS-5 (cont'd)	05/22/91	6-8**	ND(51)	5,700	ND(250)	5,700
	05/22/91	8-10	ND(0.05)	0.55	ND(0.05)	0.55
	5/21/91	8-10 RE	ND(0.05)	0.67	ND(0.05)	0.67
	05/22/91	10-12	ND(0.24)	29	ND(1.2)	29
	05/22/91	12-14	ND(0.06)	3.5	ND(0.26)	3.5
NS-6	11/12/91	0-2	ND(7.2)	280 P	ND(25)	280
	11/12/91	2-4	ND(280)	17,000	ND(1,500)	17,000
	11/12/91	4-6	ND(910)	53,000 [330]	ND(2,700)	53,000
	11/12/91	6-8	ND(120)	3,400	ND(280)	3,400
	11/12/91	8-10	ND(66)	2,700	ND(280)	2,700
	11/12/91	10-12	ND(0.54)	24	ND(1.4)	24
	11/12/91	12-14	ND(0.10)	4.0	ND(0.30)	4.0
NS-7	05/24/91	0-2	ND(4.7)	190	ND(21)	190
	05/24/91	2-4	ND(5.1)	500	ND(22)	500
	05/24/91	6-8	ND(2.5)	130	ND(11)	130
	05/24/91	8-10	ND(5.5)	280	ND(24)	280
	05/24/91	10-12	ND(0.21)	20	ND(1.5)	20
	05/24/91	12-14	ND(0.05)	0.53	ND(0.05)	0.53
	05/24/91	14-16	ND(0.05)	0.65	ND(0.05)	0.65
NS-8	05/21/91	0-2	ND(0.05)	1.1	ND(0.08)	1.1
	5/21/91	0-2 RE	ND(0.05)	1.5	0.32	1.8
	05/21/91	2-4	ND(0.59)	46	ND(2.6)	46
	05/21/91	4-6	ND(56)	5,200	ND(230)	5,200
	05/21/91	6-8	ND(970)	80,000	ND(4,400)	80,000
	05/21/91	8-10	ND(0.15)	13	ND(0.69)	13
	05/21/91	10-12	ND(24)	850	ND(59)	850
	05/21/91	12-14	ND(120)	4,500 [1,100]	ND(300)	4,500

(See notes on Page 6)

TABLE 4-5
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCBs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Boring ID.	Sample Collection Date	Sample Depth (Feet):	PCB Concentration			
			Aroclor 1016, 1232, 1242, and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors+
NS-9	10/24/91	0-2	ND(0.47)	19	ND(2.5)	19
	10/24/91	2-4	ND(0.50)	19	9.3	28
	10/24/91	4-6	ND(0.05)	0.06	ND(0.05)	0.06
	10/24/91	4-6**	ND(0.52)	8.8	6.4	15
	10/24/91	4-6 RE	ND(0.05)	0.14	ND(0.05)	0.14
	10/24/91	6-8	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
	10/24/91	8-10	ND(0.05)	2.0	0.65	2.6
	10/24/91	10-12	ND(0.05)	0.60	0.34	0.94
	10/25/91	12-14	ND(0.12)	8.6	2.0[0.16]	11
	10/25/91	14-16	ND(0.05)	0.89	ND(0.23)[0.77]	0.89
	10/25/91	16-18	ND(0.27)	11	ND(1.7)	11
	10/25/91	18-20	ND(0.05)	0.26	0.11	0.37
	10/25/91	20-22	ND(0.06)	6.9	1.3	8.2
	10/25/91	22-24	ND(0.30)	10	ND(2.1)	10
NS-10	11/15/91	0-2	ND(0.05)	0.21	0.07	0.28
	11/15/91	0-2 RE	ND(0.49)	4.1	44	48
	11/15/91	2-4	ND(0.05)	3.4	1.3	4.7
	11/15/91	4-6	ND(1.2)	8.3	3.9	12.1
	11/15/91	6-8	ND(2.3)	49	ND(2.9)	49
	11/15/91	8-10	ND(27)	250	ND(32)	250
	11/15/91	10-12	ND(23)	420 [20]	ND(29)	420
	11/15/91	10-12**	ND(22)	520 [6.5]	ND(26)	520
	11/15/91	12-14	ND(16)	380	ND(27)	380
	11/15/91	14-16	2.5	42	ND(2.9)	44
	11/15/91	16-18	ND(0.15)	2.1	ND(0.28)	2.1
	11/15/91	18-20	0.22	3.8	ND(0.27)	4.0
	11/15/91	18-20 RE	ND(0.20)	2.7	ND(0.28)	2.7

(See notes on Page 6)

TABLE 4-5
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCBs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Boring ID.	Sample Collection Date	Sample Depth (Feet):	PCB Concentration			
			Aroclor 1016, 1232, 1242, and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors+
NS-11	12/10/91	0-2	ND(0.05)	1.8 P	ND(0.12)	1.8
	12/10/91	2-4	ND(2.4)	110 P	ND(15)	110
	12/10/91	4-6	ND(50)	3,700	ND(130)	3,700
	12/10/91	6-8	ND(200)	8,800	ND(690)	8,800
	12/10/91	8-10	ND(160)	790 P	ND(62)	790
	12/10/91	10-12	ND(9.1)	470 P	ND(27)	470
	12/10/91	14-16	ND(0.15)	5.5 P	ND(0.29)	5.5
	12/10/91	16-18	ND(0.05)	0.18	ND(0.05)	0.18
	12/10/91	18-20	ND(0.05)	0.12 P	ND(0.05)	0.12
	12/10/91	18-20 RE	ND(0.05)	0.11 P	ND(0.05)	0.11
NS-12	05/22/91	0-2	ND(0.19)	7.3	3.3	11
	05/22/91	2-4	ND(0.20)	9.5	2.2	12
	05/22/91	4-6	ND(0.39)	19	3.9	23
	05/22/91	6-8	ND(48)	4,400	ND(240)	4,400
	05/22/91	8-10	ND(2.2)	91	13	104
	05/22/91	10-12	ND(2.4)	140	ND(11)	140
	05/22/91	12-14	ND(19)	1,400	ND(93)	1,400
	05/22/91	14-16	ND(11)	680 [1,600]	ND(81)	680
NS-13	05/21/91	0-2	ND(89)	2,100	ND(310)	2,100
	05/21/91	2-4	ND(0.19)	26	ND(0.95)	26
	05/21/91	4-6	ND(201)	4,500	ND(500)	4,500
	05/21/91	8-10	ND(360)	32,000	ND(3,000)	32,000
	05/21/91	10-12	ND(120)	42,000	ND(500)	42,000
	05/21/91	10-12**	ND(204)	76,000	ND(910)	76,000
	05/21/91	12-14	ND(5.7)	460	ND(34)	460
	05/21/91	14-16	ND(38)	1,200 [1,300]	380	1,600

(See notes on Page 6)

TABLE 4-5
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCBs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Boring ID.	Sample Collection Date	Sample Depth (Feet):	PCB Concentration			
			Aroclor 1016, 1232, 1242, and/or 1248	Aroclor 1254	Aroclor 1260	Total Aroclors+
NS-14	05/23/91	0-2	ND(5.2)	210	ND(23)	210
	05/23/91	2-4	ND(2.0)	92	ND(11)	92
	05/23/91	4-6	ND(5.4)	320	ND(24)	320
	05/23/91	6-8	ND(2.4)	120	ND(13)	120
	05/23/91	8-10	ND(21)	320	ND(73)	320
	05/24/91	10-12	ND(10)	480	ND(47)	480
	05/24/91	12-14	ND(4.1)	310 [92]	ND(19)	310
RB-6	05/21/91	0-2	[ND(0.12)]	[53]	[ND(0.12)]	NR
	05/21/91	2-4	[ND(0.023)]	[ND(0.023)]	[4.7]	NR
RB-7	05/21/91	0-2	[ND(1.13)]	[1,400]	[ND(1.13)]	NR
	05/21/91	2-4	[100]	[77]	[ND(0.12)]	NR
GE-9	12/12/91	0-2	ND(0.08)	2.3 P	1.0 P	3.3
	12/12/91	2-4	ND(0.45)	8.0 P	2.0 P	10.0
	12/12/91	4-6	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
	12/12/91	6-8	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
	12/12/91	8-10	ND(0.05)	0.12 P	ND(0.05)	0.12
GE-10	12/11/91	0-2	ND(11)	930	ND(54)	930
	12/11/91	2-4	ND(0.06)	3.9	2.5	6.4
	12/11/91	4-6	ND(0.05)	0.07	ND(0.05)	0.07
	12/11/91	6-8	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
	12/11/91	8-10	ND(0.05)	0.68 P	ND(0.12)	0.68
	12/11/91	10-12	ND(0.05)	1.9	ND(0.17)	1.9
GE-11	12/12/91	0-2	ND(43)	3,800 P	ND(120)	3,800
	12/12/91	2-4	ND(0.05)	1.7	ND(0.13)	1.7
	12/12/91	4-6	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
	12/12/91	6-8	ND(0.05)	1.8 P	ND(0.12)	1.8
	12/12/91	8-10	ND(0.06)	5.1 P	ND(0.23)	5.1
	12/12/91	10-12	ND(0.05)	0.49 P	ND(0.05)	0.49

(See notes on Page 6)

TABLE 4-5
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCBs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Notes:

1. Samples were collected by Geraghty & Miller, Inc. and submitted to IT Analytical Services, Knoxville, TN for PCB analysis, unless otherwise indicated.
2. ND(47) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
3. [19] - Concentrations in brackets are from analyses performed by CompuChem Laboratories.
4. P - Indicates an alternation of standard Aroclor pattern.
5. ** - Field duplicate sample.
6. + - Rounded totals are as reported on laboratory data sheets.
7. NR - Not reported.
8. RE - Indicates re-extraction and reanalysis.

TABLE 4-6

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF VOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-1A	NS-2A	NS-2A	NS-2A	NS-2A	NS-2A	NS-2A	NS-5	NS-6	NS-7	NS-8	NS-9
	Sample Depth (Feet):	18-20	12-14	14-16	16-18	18-20	20-22	22-24	2-4	4-6	14-16	12-14	12-14
	Sample Collection Date:	05/23/91	11/12/91	11/12/91	11/12/91	11/12/91	11/12/91	11/12/91	05/22/91	11/12/91	05/24/91	05/21/91	05/28/91
Vinyl chloride		ND(0.011)	ND(0.012)	ND(0.013)	ND(0.013)	ND(0.016)	0.002J	ND(0.012)	ND(0.011)	ND(0.011)	ND(0.011)	0.008J	ND(0.013)
Methylene chloride		0.015B	0.051B	0.023B	0.044B	0.048B	0.055B	0.058B	0.028B	0.03B	0.063B	0.029B	0.048B
Acetone		0.017B	0.019B	0.037B	0.039B	0.037B	0.037B	0.011BJ	0.009BJ	0.035B	0.14B	0.052B	0.039B
1,2-Dichloroethene (total)		0.013	ND(0.012)	ND(0.006)	0.008	0.03	0.012	0.011	ND(0.005)	0.003J	ND(0.006)	0.016	ND(0.006)
Chlorobenzene		0.003J	ND(0.012)	ND(0.006)	0.017	0.053	0.002J	0.009	ND(0.005)	ND(0.006)	ND(0.006)	0.21	ND(0.006)
1,1,2-Trichloro-1,2,2-trifluoroethane		ND(0.011)	ND(0.006)	ND(0.013)	ND(0.013)	ND(0.008)	ND(0.013)	ND(0.012)	0.001BJ	ND(0.011)	0.002BJ	ND(0.014)	0.003BJ
Benzene		ND(0.006)	ND(0.012)	ND(0.006)	ND(0.007)	0.002J	ND(0.006)	ND(0.006)	ND(0.005)	ND(0.006)	ND(0.006)	0.069	ND(0.006)
Ethylbenzene		ND(0.006)	ND(0.012)	ND(0.006)	0.003J	0.005J	ND(0.006)	ND(0.006)	ND(0.005)	ND(0.006)	ND(0.006)	0.003J	ND(0.006)
Xylene (total)		ND(0.006)	ND(0.012)	ND(0.006)	ND(0.007)	ND(0.016)	ND(0.006)	ND(0.006)	ND(0.005)	ND(0.006)	ND(0.006)	0.01	ND(0.006)
Trichloroethene		ND(0.006)	ND(0.012)	ND(0.006)	ND(0.007)	ND(0.016)	ND(0.006)	ND(0.006)	ND(0.005)	0.002J	ND(0.006)	0.008	ND(0.006)
Toluene		ND(0.006)	ND(0.012)	ND(0.006)	ND(0.007)	0.002J	ND(0.006)	ND(0.006)	ND(0.005)	ND(0.006)	ND(0.006)	ND(0.007)	ND(0.006)
1,1,1-Trichloroethane		ND(0.006)	ND(0.012)	ND(0.006)	ND(0.007)	ND(0.016)	ND(0.006)	ND(0.006)	ND(0.005)	ND(0.006)	ND(0.006)	ND(0.007)	ND(0.006)

(See Notes on Page 4)

TABLE 4-6
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF VOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-9	NS-10	NS-10	NS-10**	NS-10	NS-10	NS-10	NS-10	NS-11	NS-11	NS-12
	Sample Depth (Feet):	14-16	8-10	10-12	10-12	12-14	14-16	16-18	18-20	8-10	10-12	14-16
	Sample Collection Date:	10/25/91	11/15/91	11/15/91	11/15/91	11/15/91	11/15/91	11/15/91	11/15/91	12/10/91	12/10/91	05/22/91
Vinyl chloride		ND(0.013)	ND(0.068)	ND(0.012)	ND(0.017)	ND(0.065)	ND(0.03)	ND(0.061)	ND(0.012)	ND(0.014)	ND(0.014)	ND(0.059)
Methylene chloride		0.049B	0.27B	0.053B	0.056B	0.44B	0.082B	0.29B	0.048B	0.038B	0.053B	0.22B
Acetone		0.087B	0.26B	0.029B	0.091B	0.92B	0.095B	0.19B	0.034B	0.042	0.051	0.19B
1,2-Dichloroethene (total)		ND(0.006)	0.016J	ND(0.012)	ND(0.017)	ND(0.032)	0.006J	ND(0.061)	ND(0.012)	ND(0.007)	ND(0.007)	ND(0.029)
Chlorobenzene		ND(0.006)	0.029J	ND(0.013)	0.013J	ND(0.032)	0.019J	0.013J	ND(0.012)	0.017	0.054	0.46
1,1,2-Trichloro-1,2,2-trifluoroethane		ND(0.012)	ND(0.034)	ND(0.006)	ND(0.009)	0.015J	ND(0.015)	0.014J	ND(0.006)	ND(0.014)	ND(0.014)	ND(0.059)
Benzene		ND(0.006)	ND(0.068)	ND(0.012)	ND(0.017)	ND(0.032)	ND(0.03)	ND(0.061)	ND(0.012)	ND(0.007)	ND(0.007)	ND(0.029)
Ethylbenzene		ND(0.006)	0.02J	0.006J	0.006J	0.016J	0.006J	0.008J	0.001J	ND(0.007)	ND(0.007)	0.008J
Xylene (total)		ND(0.006)	0.42	0.17	0.22	0.45	0.16	0.23	0.026	ND(0.007)	0.004J	0.015J
Trichloroethene		ND(0.006)	0.032J	0.007J	0.007J	ND(0.032)	0.017J	0.016J	ND(0.012)	ND(0.007)	ND(0.007)	ND(0.029)
Toluene		ND(0.006)	0.01J	0.002J	ND(0.017)	ND(0.032)	0.004J	ND(0.061)	ND(0.012)	ND(0.007)	ND(0.007)	ND(0.029)
1,1,1-Trichloroethane		ND(0.006)	ND(0.068)	0.002J	ND(0.017)	ND(0.032)	ND(0.03)	ND(0.061)	ND(0.012)	ND(0.007)	ND(0.007)	ND(0.029)

(See Notes on Page 4)

TABLE 4-6
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF VOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-13	NS-14	RB-6	RB-6	RB-7	RB-7	GE-9	GE-10	GE-11
	Sample Depth (Feet):	14-16	12-14	0-2	2-4	0-2	2-4	8-10	10-12	10-12
	Sample Collection Date:	05/21/91	05/24/91	05/21/91	05/21/91	05/21/91	05/21/91	12/12/91	12/11/91	12/12/91
Vinyl chloride		ND(3.6)	ND(0.012)	ND(0.012)	ND(0.012)	ND(0.011)	ND(0.012)	ND(0.012)	ND(0.012)	ND(0.012)
Methylene chloride		3.2BJ	0.052B	0.023B	0.04B	0.03B	0.027B	0.048B	0.03B	0.052B
Acetone		ND(3.6)	0.075B	0.005BJ	0.038B	0.004BJ	ND(0.012)	0.056B	0.022B	ND(0.012)
1,2-Dichloroethene (total)		ND(1.9)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)
Chlorobenzene		16	0.16	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)
1,1,2-Trichloro-1,2,2-trifluoroethane		ND(3.6)	0.002BJ	0.002BJ	0.003BJ	0.002BJ	0.001BJ	ND(0.012)	ND(0.012)	ND(0.012)
Benzene		0.45J	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)
Ethylbenzene		ND(1.9)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)
Xylene (total)		1.6J	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)
Trichloroethene		ND(1.9)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)
Toluene		ND(1.9)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)
1,1,1-Trichloroethane		ND(1.9)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)	ND(0.006)

(See Notes on Page 4)

TABLE 4-6
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF VOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX+3 Volatile Organic Constituents (VOCs).
2. Only analytes detected in at least one sample are shown.
3. ND(0.011) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
4. B - Compound was also found in the associated blank sample.
5. J - Indicates an estimated value less than the CLP - required quantitation limit.
6. ** - Field duplicate sample.

TABLE 4-7

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET
PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR
USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-1A	NS-2A	NS-2A	NS-2A	NS-2A	NS-2A	NS-2A
	Sample Depth (Feet):	18-20	12-14	14-16	16-18	18-20	20-22	22-24
	Sample Collection Date:	5/23/91	11/12/91	11/12/91	11/12/91	11/12/91	11/12/91	11/12/91
Phenol		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Aniline		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
3 Methylphenol		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
4-Methylphenol		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
2,4-Dimethylphenol		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Acenaphthylene		ND(0.38)	0.048 J	ND(0.42)	0.049 J	0.17 J	ND(0.42)	0.21 J
Phenanthrene		ND(0.38)	0.17 J	0.25 J	0.18 J	1.7	ND(0.42)	2.1
Anthracene		ND(0.38)	ND(0.41)	0.051 J	ND(0.44)	0.29 J	ND(0.42)	0.38 J
Di-n-butylphthalate		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Fluoranthene		0.056 J	0.091 J	ND(0.42)	ND(0.44)	0.42 J	ND(0.42)	0.56
Pyrene		0.087 J	0.11 J	ND(0.42)	ND(0.44)	0.86	ND(0.42)	1.0
Benzo(a)anthracene		ND(0.38)	0.069 J	0.13 J	0.12 J	0.32 J	ND(0.42)	0.38 J
Chrysene		0.042 J	0.072 J	0.097 J	0.095 J	0.38 J	ND(0.42)	0.31 J
Bis(2-ethylhexyl)phthalate		0.37 BJ	0.095 J	0.063 J	0.08 J	0.15 J	ND(0.42)	0.087 J
Benzo(b)fluoranthene		0.047 JX	0.11 JX	0.2 JX	0.19 JX	0.28 JX	ND(0.42)	0.37 JX
Benzo(k)fluoranthene		0.047 JX	0.11 JX	0.2 JX	0.19 JX	0.28 JX	ND(0.42)	0.37 JX
Benzo(a)pyrene		ND(0.38)	0.076 J	0.11 J	0.13 J	0.24 J	ND(0.42)	0.3 J
Indeno(1,2,3-cd)pyrene		ND(0.38)	ND(0.41)	0.066 J	0.079 J	0.088 J	ND(0.42)	0.1 J
Dibenz(a,h)anthracene		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Benzo(g,h,i)perylene		ND(0.38)	0.046 J	0.089 J	0.11 J	0.12 J	ND(0.42)	0.13 J
1,2,4-Trichlorobenzene		0.13 J	ND(0.41)	0.11 J	0.078 J	0.06 J	ND(0.42)	0.081 J
1,4-Dichlorobenzene		ND(0.38)	ND(0.41)	ND(0.42)	0.36 J	0.22 J	ND(0.42)	0.28 J
1-Methylnaphthalene		ND(0.38)	ND(0.41)	0.063 J	ND(0.44)	0.26 J	ND(0.42)	0.28 J
Fluorene		ND(0.38)	ND(0.41)	0.045 J	ND(0.44)	0.33 J	ND(0.42)	0.4 J
1,3-Dichlorobenzene		ND(0.38)	ND(0.41)	ND(0.42)	0.076 J	0.054 J	ND(0.42)	0.052 J
1,2-Dichlorobenzene		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Benzyl chloride		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Naphthalene		ND(0.38)	0.2 J	0.075 J	0.12 J	0.46 J	ND(0.42)	0.54

(See notes on Page 11)

TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-1A	NS-2A	NS-2A	NS-2A	NS-2A	NS-2A	NS-2A
	Sample Depth (Feet):	18-20	12-14	14-16	16-18	18-20	20-22	22-24
	Sample Collection Date:	5/23/91	11/12/91	11/12/91	11/12/91	11/12/91	11/12/91	11/12/91
1,2,3-Trichlorobenzene		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
2-Methylnaphthalene		ND(0.38)	0.086 J	ND(0.42)	ND(0.44)	0.23 J	ND(0.42)	0.26 J
1,2,3,4-Tetrachlorobenzene		ND(0.38)	ND(0.41)	0.14 J	0.095 J	ND(0.52)	ND(0.42)	0.051 J
1,2,3,5-Tetrachlorobenzene		ND(0.38)	ND(0.41)	0.055 JX	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
1,2,4,5-Tetrachlorobenzene		ND(0.38)	ND(0.41)	0.055 JX	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Acenaphthene		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	0.056 J	ND(0.42)	0.052 J
Dibenzofuran		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
2-Methylphenol		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Benzoic acid		ND(3.8)	ND(4.1)	ND(4.2)	ND(4.4)	ND(5.2)	ND(4.2)	ND(4.1)
7,12-Dimethylbenzanthracene		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
2-Nitroaniline		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Methapyrilene		ND(0.76)	ND(0.82)	ND(0.84)	ND(0.88)	ND(1.0)	ND(0.84)	ND(0.82)
Dimethylphenylethylamine		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	0.87	ND(0.42)	ND(0.41)
Zinophos		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	0.06 J	ND(0.42)	ND(0.41)
Cyclophosphamide		ND(1.9)	ND(2.0)	ND(2.0)	ND(2.1)	0.089 J	ND(2.0)	ND(2.0)
Butylbenzylphthalate		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Dimethoate		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Acetophenone		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
2-Naphthylamine		ND(0.76)	ND(0.82)	ND(0.84)	ND(0.88)	ND(1.0)	ND(0.84)	ND(0.82)
2-Picoline		ND(0.76)	ND(0.82)	ND(0.84)	ND(0.88)	ND(1.0)	ND(0.84)	ND(0.82)
3-Nitroaniline		ND(0.76)	ND(0.41)	ND(0.84)	ND(0.88)	ND(1.0)	ND(0.84)	ND(0.82)
4-Nitrophenol		ND(0.38)	ND(0.41)	ND(0.84)	ND(0.44)	ND(0.52)	ND(1.6)	ND(0.41)
4-Aminobiphenyl		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Hexachloroethane		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
2,6-Dinitrotoluene		ND(0.38)	ND(0.41)	ND(0.42)	ND(0.44)	ND(0.52)	ND(0.42)	ND(0.41)
Pentachlorophenol		ND(0.76)	ND(0.82)	ND(0.84)	ND(0.88)	ND(1.0)	ND(0.84)	ND(0.82)

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TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-5	NS-6	NS-8	NS-9	NS-9	NS-10	NS-10
	Sample Depth (Feet):	2-4	4-6	12-14	12-14	14-16	8-10	10-12
	Sample Collection Date:	5/22/91	11/12/91	5/21/91	5/28/91	10/25/91	11/15/91	11/15/91
Phenol		0.17 J	ND(1.1)	ND(0.44)	0.088 J	ND(0.39)	ND(27)	ND(1.9)
Aniline		0.7	ND(1.1)	ND(0.44)	0.32 J	ND(0.39)	ND(27)	ND(1.9)
3-Methylphenol		0.097 JX	ND(1.1)	ND(0.44)	0.054 JX	ND(0.39)	ND(27)	ND(1.9)
4-Methylphenol		0.097 JX	ND(1.1)	ND(0.44)	0.054 JX	ND(0.39)	ND(27)	ND(1.9)
2,4-Dimethylphenol		0.061 J	ND(1.1)	ND(0.44)	0.061 J	ND(0.39)	ND(27)	ND(1.9)
Acenaphthylene		ND(0.36)	0.13 J	ND(0.44)	0.062 J	0.15 J	ND(27)	ND(1.9)
Phenanthrene		1.3	16	0.074 J	0.19 J	2.5	110	1.0 J
Anthracene		0.23 J	3.6	ND(0.44)	0.063 J	0.3 J	27	ND(1.9)
Di-n-butylphthalate		ND(0.36)	ND(1.1)	ND(0.44)	0.089 J	ND(0.39)	ND(27)	ND(1.9)
Fluoranthene		1.3	10	ND(0.44)	0.43	1.6	89	0.3 J
Pyrene		0.99	7.3	ND(0.44)	0.4 J	2.0	71	0.24 J
Benzo(a)anthracene		0.58	3.9	ND(0.44)	0.29 J	0.92	77	0.4 J
Chrysene		0.59	3.6	0.055 J	0.33 J	0.77	42	ND(1.9)
Bis(2-ethylhexyl)phthalate		0.16 BJ	0.36 J	0.075	0.28 BJ	0.067 J	ND(27)	0.58 J
Benzo(b)fluoranthene		1.1 X	5.1 X	ND(0.44)	0.22 J	1.1 X	45 X	ND(1.9)
Benzo(k)fluoranthene		1.1 X	5.1 X	ND(0.44)	0.57	1.1 X	45 X	ND(1.9)
Benzo(a)pyrene		0.44	2.2	ND(0.44)	0.35 J	0.67	25 J	ND(1.9)
Indeno(1,2,3-cd)pyrene		0.25 J	1.2	ND(0.44)	0.17 J	0.35 J	14 J	ND(1.9)
Dibenz(a,h)anthracene		0.14 J	0.64 J	ND(0.44)	0.073 J	0.11 J	4.8 J	ND(1.9)
Benzo(g,h,i)perylene		0.27 J	1.4	ND(0.44)	0.22 J	0.4	14 J	ND(1.9)
1,2,4-Trichlorobenzene		ND(0.36)	1.2	0.37 J	ND(0.42)	ND(0.39)	4.2 J	1.4 J
1,4-Dichlorobenzene		ND(0.36)	ND(1.1)	0.096 J	ND(0.42)	ND(0.39)	9 J	ND(1.9)
1-Methylnaphthalene		0.063 J	1.7	0.051 J	ND(0.42)	ND(0.39)	ND(27)	0.44 J
Fluorene		0.091 J	5.3	ND(0.44)	ND(0.42)	0.29 J	15 J	ND(1.9)
1,3-Dichlorobenzene		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
1,2-Dichlorobenzene		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
Benzyl chloride		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
Naphthalene		0.092 J	3.5	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	1.1 J

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TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-5	NS-6	NS-8	NS-9	NS-9	NS-10	NS-10
	Sample Depth (Feet):	2-4	4-6	12-14	12-14	14-16	8-10	10-12
	Sample Collection Date:	5/22/91	11/12/91	5/21/91	5/28/91	10/25/91	11/15/91	11/15/91
1,2,3-Trichlorobenzene		ND(0.36)	0.16 J	0.12 J	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
2-Methylnaphthalene		0.048 J	1.7	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	0.39 J
1,2,3,4-Tetrachlorobenzene		ND(0.36)	0.15 J	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
1,2,3,5-Tetrachlorobenzene		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
1,2,4,5-Tetrachlorobenzene		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
Acenaphthene		0.11 J	4.4	ND(0.44)	ND(0.42)	0.04 J	5.6 J	ND(1.9)
Dibenzofuran		0.083 J	2.8	ND(0.44)	ND(0.42)	ND(0.39)	9.6 J	ND(1.9)
2-Methylphenol		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
Benzoic acid		ND(3.6)	ND(11)	0.23 J	ND(4.2)	ND(3.9)	ND(260)	ND(19)
7,12-Dimethylbenzanthracene		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
2-Nitroaniline		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	0.43 J
Methapyrilene		ND(0.72)	ND(2.3)	ND(0.89)	ND(0.83)	ND(0.78)	ND(54)	ND(3.9)
Dimethylphenylethylamine		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
Zinophos		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	1.5 J
Cyclophosphamide		ND(1.7)	ND(5.5)	ND(2.1)	ND(2.0)	ND(1.9)	ND(130)	ND(9.4)
Butylbenzylphthalate		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	0.042 BJ	ND(27)	ND(1.9)
Dimethoate		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
Acetophenone		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	1.5 J
2-Naphthylamine		ND(0.72)	ND(2.3)	ND(0.89)	ND(0.83)	ND(0.78)	ND(54)	0.34 J
2-Picoline		ND(0.72)	ND(2.3)	ND(0.89)	ND(0.83)	ND(0.78)	ND(54)	0.59 J
3-Nitroaniline		ND(0.72)	ND(2.3)	ND(0.89)	ND(0.83)	ND(0.78)	ND(54)	0.49 J
4-Nitrophenol		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	1.5 J
4-Aminobiphenyl		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	1.5 J
Hexachloroethane		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	ND(1.9)
2,6-Dinitrotoluene		ND(0.36)	ND(1.1)	ND(0.44)	ND(0.42)	ND(0.39)	ND(27)	0.023 J
Pentachlorophenol		ND(0.72)	ND(2.3)	ND(0.89)	ND(0.83)	ND(0.78)	ND(54)	ND(3.9)

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TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-10**	NS-10	NS-10	NS-10	NS-10 RE	NS-10	NS-11
	Sample Depth (Feet):	10-12	12-14	14-16	16-18	16-18	18-20	8-10
	Sample Collection Date:	11/15/91	11/15/91	11/15/91	11/15/91	11/15/91	11/15/91	12/10/91
Phenol		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Aniline		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
3-Methylphenol		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
4-Methylphenol		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
2,4-Dimethylphenol		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Acenaphthylene		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Phenanthrene		ND(4.0)	0.85 J	1.4	22	22	0.15 J	3.3 J
Anthracene		ND(4.0)	ND(2.1)	0.22 J	4.9	4.6	ND(0.38)	0.81 J
Di-n-butylphthalate		ND(4.0)	ND(2.1)	ND(0.4)	0.71 J	ND(2.0)	ND(0.38)	ND(4.5)
Fluoranthene		ND(4.0)	0.31 J	ND(0.4)	14	16	0.096 J	5.8
Pyrene		ND(4.0)	0.45 J	ND(0.4)	10	11	0.098 J	4.0 J
Benzo(a)anthracene		ND(4.0)	ND(2.1)	ND(0.4)	7.0	12	0.074 J	3.2 J
Chrysene		ND(4.0)	0.58 J	ND(0.4)	5.7	5.8	0.13 J	4.7
Bis(2-ethylhexyl)phthalate		ND(4.0)	ND(2.1)	ND(0.4)	0.79 J	0.53 J	0.1 J	ND(4.5)
Benzo(b)fluoranthene		ND(4.0)	ND(2.1)	ND(0.4)	7.0 X	7.3 X	ND(0.38)	2.8 JX
Benzo(k)fluoranthene		ND(4.0)	ND(2.1)	ND(0.4)	7.0 X	7.3 X	ND(0.38)	2.8 JX
Benzo(a)pyrene		ND(4.0)	ND(2.1)	ND(0.4)	3.8	4.2	ND(0.38)	2.3 J
Indeno(1,2,3-cd)pyrene		ND(4.0)	ND(2.1)	ND(0.4)	2.1	1.8 J	ND(0.38)	0.81 J
Dibenz(a,h)anthracene		ND(4.0)	ND(2.1)	ND(0.4)	0.67 J	0.6 J	ND(0.38)	ND(4.5)
Benzo(g,h,i)perylene		ND(4.0)	ND(2.1)	ND(0.4)	1.9 J	1.6 J	ND(0.38)	0.85 J
1,2,4-Trichlorobenzene		ND(4.0)	ND(2.1)	0.21 J	0.4 J	0.38 J	ND(0.38)	1.9 J
1,4-Dichlorobenzene		ND(4.0)	3.0	ND(0.4)	ND(2.0)	1.2 J	ND(0.38)	4.6
1-Methylnaphthalene		ND(4.0)	0.48 J	ND(0.4)	3.0	3.0	ND(0.38)	1.0 J
Fluorene		ND(4.0)	ND(2.1)	0.25 J	ND(2.0)	4.7	ND(0.38)	0.46 J
1,3-Dichlorobenzene		ND(4.0)	ND(2.1)	0.85	ND(2.0)	ND(2.0)	ND(0.38)	1.0 J
1,2-Dichlorobenzene		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Benzyl chloride		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)

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TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-10**	NS-10	NS-10	NS-10	NS-10 RE	NS-10	NS-11
	Sample Depth (Feet):	10-12	12-14	14-16	16-18	16-18	18-20	8-10
	Sample Collection Date:	11/15/91	11/15/91	11/15/91	11/15/91	11/15/91	11/15/91	12/10/91
Naphthalene		ND(4.0)	0.72 J	0.67	8.9	8.1	ND(0.38)	0.72 J
1,2,3-Trichlorobenzene		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
2-Methylnaphthalene		ND(4.0)	0.36 J	0.23 J	2.9	2.6	ND(0.38)	0.59 J
1,2,3,4-Tetrachlorobenzene		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
1,2,3,5-Tetrachlorobenzene		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
1,2,4,5-Tetrachlorobenzene		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Acenaphthene		ND(4.0)	ND(2.1)	0.13 J	0.32 J	3.0	ND(0.38)	ND(4.5)
Dibenzofuran		ND(4.0)	ND(2.1)	0.19 J	ND(2.0)	4.3	ND(0.38)	ND(4.5)
2-Methylphenol		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Benzoic acid		ND(40)	ND(21)	ND(4.0)	ND(20)	ND(20)	ND(3.8)	ND(45)
7,12-Dimethylbenzanthracene		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
2-Nitroaniline		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Methapyrilene		2.8 J	ND(4.3)	ND(0.81)	ND(4.0)	ND(4.0)	ND(0.77)	ND(8.9)
Dimethylphenylethylamine		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Zinophos		0.5 J	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Cyclophosphamide		ND(20)	ND(10)	ND(2.0)	ND(9.8)	ND(9.8)	ND(1.9)	ND(22)
Butylbenzylphthalate		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Dimethoate		ND(4.0)	1.2 J	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Acetophenone		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
2-Naphthylamine		ND(8.1)	ND(4.3)	ND(0.81)	ND(4.0)	ND(4.0)	ND(0.77)	ND(8.9)
2-Picoline		ND(8.1)	ND(4.3)	ND(0.81)	ND(4.0)	ND(4.0)	ND(0.77)	ND(8.9)
3-Nitroaniline		ND(8.1)	ND(4.3)	ND(0.81)	ND(4.0)	ND(4.0)	ND(0.77)	ND(8.9)
4-Nitrophenol		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
4-Aminobiphenyl		0.65 J	1.2 J	ND(0.4))	1.1 J	1.0 J	ND(0.38)	ND(4.5)
Hexachloroethane		ND(4.0)	2.1 J	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
2,6-Dinitrotoluene		ND(4.0)	ND(2.1)	ND(0.4)	ND(2.0)	ND(2.0)	ND(0.38)	ND(4.5)
Pentachlorophenol		ND(8.1)	ND(4.3)	ND(0.81)	ND(4.0)	25	ND(0.77)	ND(8.9)

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TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-12	NS-12 DL	NS-13	NS-13 DL	NS-14	RB-6
	Sample Depth (Feet):	14-16	14-16	14-16	14-16	12-14	0-2
	Sample Collection Date:	5/22/91	5/22/91	5/21/91	5/21/91	5/24/91	5/21/91
Phenol		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	0.51
Aniline		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	1.5
3-Methylphenol		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	0.043 JX
4-Methylphenol		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	0.043 JX
2,4-Dimethylphenol		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
Acenaphthylene		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	0.19 J
Phenanthrene		ND(1.9)	ND(3.9)	0.94	1.2 DJ	0.8 J	0.28 J
Anthracene		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	0.066
Di-n-butylphthalate		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	0.35 J
Fluoranthene		ND(1.9)	ND(3.9)	0.55	ND(4.9)	0.43 J	0.45
Pyrene		ND(1.9)	ND(3.9)	0.54	ND(4.9)	0.36 J	0.56
Benzo(a)anthracene		ND(1.9)	ND(3.9)	0.31 J	0.61 DJ	ND(1.9)	0.33 J
Chrysene		ND(1.9)	ND(3.9)	0.63	1.1 DJ	ND(1.9)	0.44
Bis(2-ethylhexyl)phthalate		ND(1.9)	ND(3.9)	ND(0.49)	3.2 DJ	1.7 BJ	0.06 J
Benzo(b)fluoranthene		ND(1.9)	ND(3.9)	0.31 JX	0.62 DJX	ND(1.9)	0.75 X
Benzo(k)fluoranthene		ND(1.9)	ND(3.9)	0.31 JX	0.62 DJX	ND(1.9)	0.75 X
Benzo(a)pyrene		ND(1.9)	ND(3.9)	0.15 J	ND(4.9)	ND(1.9)	0.41
Indeno(1,2,3-cd)pyrene		ND(1.9)	ND(3.9)	0.071 J	ND(4.9)	ND(1.9)	0.25 J
Dibenz(a,h)anthracene		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	0.11 J
Benzo(g,h,i)perylene		ND(1.9)	ND(3.9)	0.098 J	ND(4.9)	ND(1.9)	0.32 J
1,2,4-Trichlorobenzene		14	18 D	9.6 E	14 D	ND(1.9)	ND(0.38)
1,4-Dichlorobenzene		38 E	38 D	25 E	44 D	1.2 J	ND(0.38)
1-Methylnaphthalene		ND(1.9)	ND(3.9)	0.6	0.81 DJ	0.21 J	ND(0.38)
Fluorene		ND(1.9)	ND(3.9)	0.23 J	ND(4.9)	0.22 J	0.057 J
1,3-Dichlorobenzene		3.7	4.1 D	5.1	6.5 D	ND(1.9)	ND(0.38)
1,2-Dichlorobenzene		3.8	4.5 D	0.52	0.67 DJ	ND(1.9)	ND(0.38)
Benzyl chloride		ND(1.9)	ND(3.9)	0.35 J	ND(4.9)	ND(1.9)	ND(0.38)
Naphthalene		ND(1.9)	ND(3.9)	0.76	1.0 DJ	ND(1.9)	0.041 J

(See notes on Page 11)

TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-12	NS-12 DL	NS-13	NS-13 DL	NS-14	RB-6
	Sample Depth (Feet):	14-16	14-16	14-16	14-16	12-14	0-2
	Sample Collection Date:	5/22/91	5/22/91	5/21/91	5/21/91	5/24/91	5/21/91
1,2,3-Trichlorobenzene		11	12 D	0.7	0.88 DJ	ND(1.9)	ND(0.38)
2-Methylnaphthalene		ND(1.9)	ND(3.9)	0.43 J	0.57 DJ	ND(1.9)	ND(0.38)
1,2,3,4-Tetrachlorobenzene		0.86 J	0.88 DJ	0.26 J	ND(4.9)	ND(1.9)	ND(0.38)
1,2,3,5-Tetrachlorobenzene		0.68 JX	0.65 DJ	0.67 X	0.98 DJX	ND(1.9)	ND(0.38)
1,2,4,5-Tetrachlorobenzene		0.68 JX	0.65 DJ	0.67 X	0.98 DJX	ND(1.9)	ND(0.38)
Acenaphthene		ND(1.9)	ND(3.9)	0.16 J	ND(4.9)	ND(1.9)	ND(0.38)
Dibenzofuran		ND(1.9)	ND(3.9)	0.14 J	ND(4.9)	ND(1.9)	ND(0.38)
2-Methyl phenol		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	0.06 J
Benzoic acid		ND(19)	ND(39)	ND(4.9)	ND(49)	ND(19)	0.1 J
7,12-Dimethylbenzanthracene		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
2-Nitroaniline		ND(1.9)	ND(3.9)	ND(0.49)	6.8 D	ND(1.9)	ND(0.38)
Methapyrilene		ND(3.9)	ND(7.8)	ND(0.97)	ND(9.7)	ND(3.8)	ND(0.76)
Dimethylphenylethylamine		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
Zinophos		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
Cyclophosphamide		ND(9.4)	ND(20)	ND(2.4)	ND(24)	ND(9.1)	ND(1.8)
Butylbenzylphthalate		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
Dimethoate		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
Acetophenone		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
2-Naphthylamine		ND(3.9)	ND(7.8)	ND(0.97)	ND(9.7)	ND(3.8)	ND(0.76)
2-Picoline		ND(3.9)	ND(7.8)	ND(0.97)	ND(9.7)	ND(3.8)	ND(0.76)
3-Nitroaniline		ND(3.9)	ND(7.8)	ND(0.97)	ND(9.7)	ND(3.8)	ND(0.76)
4-Nitrophenol		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
4-Aminobiphenyl		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
Hexachloroethane		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
2,6-Dinitrotoluene		ND(1.9)	ND(3.9)	ND(0.49)	ND(4.9)	ND(1.9)	ND(0.38)
Pentachlorophenol		ND(3.9)	ND(7.8)	ND(0.97)	ND(9.7)	ND(3.8)	ND(0.76)

(See notes on Page 11)

TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	RB-6	RB-7	RB-7	GE-9	GE-10	GE-11
	Sample Depth (Feet):	2-4	0-2	2-4	8-10	10-12	10-12
	Sample Collection Date:	5/21/91	5/21/91	5/21/91	12/12/91	12/11/91	12/12/91
Phenol		ND(0.38)	0.43	0.18 J	ND(0.4)	ND(0.39)	ND(0.39)
Aniline		0.29 J	0.61	0.5 J	ND(0.4)	ND(0.39)	ND(0.39)
3-Methylphenol		ND(0.38)	0.062 JX	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
4-Methylphenol		ND(0.38)	0.062 JX	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
2,4-Dimethylphenol		ND(0.38)	0.047 J	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Acenaphthylene		ND(0.38)	0.33 J	1.7	ND(0.4)	ND(0.39)	ND(0.39)
Phenanthrene		0.12 J	0.38	0.46 J	ND(0.4)	ND(0.39)	0.04 J
Anthracene		0.04 J	0.12 J	0.4 J	ND(0.4)	ND(0.39)	ND(0.39)
Di-n-butylphthalate		0.071 J	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Fluoranthene		0.13 J	ND(0.37)	1.5	ND(0.4)	ND(0.39)	0.056 J
Pyrene		0.16 J	ND(0.37)	2.5	ND(0.4)	0.044 J	0.078 J
Benzo(a)anthracene		0.079 J	0.52	1.9	ND(0.4)	ND(0.39)	ND(0.39)
Chrysene		0.1 J	0.76	2.4	ND(0.4)	ND(0.39)	0.05 J
Bis(2-ethylhexyl)phthalate		0.041 J	ND(0.37)	ND(0.76)	0.045 J	0.34 J	0.26 J
Benzo(b)fluoranthene		0.19 JX	1.3 X	5.5 X	ND(0.4)	ND(0.39)	0.06 JX
Benzo(k)fluoranthene		0.19 JX	1.3 X	5.5 X	ND(0.4)	ND(0.39)	0.06 JX
Benzo(a)pyrene		0.11 J	0.59	3.8	ND(0.4)	ND(0.39)	ND(0.39)
Indeno(1,2,3-cd)pyrene		0.067 J	0.4	1.9	ND(0.4)	ND(0.39)	ND(0.39)
Dibenz(a,h)anthracene		ND(0.38)	0.18 J	0.82	ND(0.4)	ND(0.39)	ND(0.39)
Benzo(g,h,i)perylene		0.088 J	0.47	2.9	ND(0.4)	ND(0.39)	ND(0.39)
1,2,4-Trichlorobenzene		ND(0.38)	0.38	0.096 J	ND(0.4)	ND(0.39)	ND(0.39)
1,4-Dichlorobenzene		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
1-Methylnaphthalene		ND(0.38)	0.052 J	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Fluorene		ND(0.38)	ND(0.37)	0.15 J	ND(0.4)	ND(0.39)	ND(0.39)
1,3-Dichlorobenzene		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
1,2-Dichlorobenzene		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Benzyl chloride		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Naphthalene		ND(0.38)	0.09 J	0.097 J	ND(0.4)	ND(0.39)	ND(0.39)

(See notes on Page 11)

TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	RB-6	RB-7	RB-7	GE-9	GE-10	GE-11
	Sample Depth (Feet):	2-4	0-2	2-4	8-10	10-12	10-12
	Sample Collection Date:	5/21/91	5/21/91	5/21/91	12/12/91	12/11/91	12/12/91
1,2,3-Trichlorobenzene		ND(0.38)	0.11 J	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
2-Methylnaphthalene		ND(0.38)	ND(0.37)	0.41 J	ND(0.4)	ND(0.39)	ND(0.39)
1,2,3,4-Tetrachlorobenzene		ND(0.38)	0.2 J	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
1,2,3,5-Tetrachlorobenzene		ND(0.38)	0.092 JX	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
1,2,4,5-Tetrachlorobenzene		ND(0.38)	0.092 JX	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Acenaphthene		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Dibenzofuran		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
2-Methyl phenol		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Benzoic acid		0.15 J	ND(3.7)	ND(7.6)	ND(4)	ND(3.9)	ND(3.9)
7,12-Dimethylbenzanthracene		ND(0.38)	ND(0.37)	0.08 J	ND(0.4)	ND(0.39)	ND(0.39)
2-Nitroaniline		0.039 J	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Methapyrilene		0.22 J	ND(0.75)	ND(1.5)	ND(0.79)	ND(0.78)	ND(0.77)
Dimethylphenylethylamine		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Zinophos		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Cyclophosphamide		ND(1.9)	ND(1.8)	ND(3.7)	ND(1.9)	ND(1.9)	ND(1.9)
Butylbenzylphthalate		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Dimethoate		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Acetophenone		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
2-Naphthylamine		ND(0.76)	ND(0.75)	ND(1.5)	ND(0.79)	ND(0.78)	ND(0.77)
2-Picoline		ND(0.76)	ND(0.75)	ND(1.5)	ND(0.79)	ND(0.78)	ND(0.77)
3-Nitroaniline		ND(0.76)	ND(0.75)	ND(1.5)	ND(0.79)	ND(0.78)	ND(0.77)
4-Nitrophenol		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
4-Aminobiphenyl		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Hexachloroethane		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
2,6-Dinitrotoluene		ND(0.38)	ND(0.37)	ND(0.76)	ND(0.4)	ND(0.39)	ND(0.39)
Pentachlorophenol		ND(0.76)	ND(0.75)	ND(1.5)	ND(0.79)	ND(0.78)	ND(0.77)

(See notes on Page 11)

TABLE 4-7
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP SOIL BORING SAMPLES
(Results are presented in Dry-Weight Parts Per Million, ppm)

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to Compuchem Laboratories, Research Triangle Park, NC for analysis of Appendix IX+3 Semivolatile Organic Constituents (SVOCs).
2. Only analytes detected in at least one sample are shown.
3. ** - Field duplicate sample.
4. ND(0.38) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
5. J - Indicates an estimated value less than the CLP-required quantitation limit.
6. X - Indicates coeluting indistinguishable isomers.
7. E - The compound concentration exceeded the calibration range of the GC/MS instrument for that specific analysis.
8. D or DL - Indicates that analysis was performed at a secondary dilution factor.
9. RE - Indicates a re-extraction and re-analysis.

TABLE 4-8

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF METALS DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-1A	NS-2A	NS-5	NS-6	NS-8	NS-9	NS-9	NS-10	NS-10**	NS-11	NS-12
	Sample Depth (Feet):	18-20	18-20	2-4	4-6	12-14	12-14	14-16	10-12	10-12	8-10	14-16
	Sample Collection Date:	5/23/91	11/12/91	5/22/91	11/12/91	5/21/91	10/25/91	10/25/91	11/15/91	11/15/91	12/10/91	5/22/91
Aluminum		7,480	8,300	8,140	10,700	11,400	8,620	8,830	7,400	7,750	9,180 S	10,200
Antimony		ND(3.8)	ND(5.6)	ND(2.7)	7.9 N	ND(3.3)	ND(4.2)	ND(4.4)	ND(4.2)	ND(4.3)	13.9 J*N	ND(2.8)
Arsenic		3.1 N	4.0 N	2.9	10.2 AN	7.1	3.4 AN	4.7	1.5 S	2.4 S	8.6 A	1.4
Barium		17.2 J*	24.3 J*	246 S	152	670 S	27.4	17 J*	10.6 J*NS	63.2 NS	240	31 S
Beryllium		0.16 J*	0.19 J*	0.20 J*	0.29 J*	0.55 J*	0.21 J*	ND(0.12)	0.21 J*	0.33 J*	0.57 J*	0.25 J*
Cadmium		ND(0.47)	ND(0.78)	1.2	5.6	ND(0.61)	ND(0.51)	ND(0.61)	ND(0.59)	ND(0.6)	2.6	ND(0.51)
Calcium		7,820	4,700	21,500 E	25,000	1,420 E	23,300	9,840S	707 ES	2,010 ES	9,190 E	25,500 E
Chromium		8.9	10.9	25.4	62.4	19.7	9.2	10	6.9 ENS	13.3 ENS	106	10.2
Cobalt		9.6	11.2	8.7	11.9	11.3	9.2	13.2	7.6 S	6.2 S	13.9	9.1
Copper		37.8	33.5	193	1,060	233	20.9	62.8 NS	36.9 S	336 S	980 N	17.3
Iron		16,800	18,700 E	18,300 E	28,400 E	23,100 E	19,400	21,200 E	15,600 ES	20,400 ES	32,600 S	20,600 E
Lead		21.1 A	20.7	271 S	520 N	235 S	13.8 A	64.5 N	33.2 E	469 E	968 S	2.4 AS
Magnesium		5,750	4,640	12,000	11,000	3,840	14,300	7,620 S	3,190	3,070	4,300	17,000
Manganese		422	413	405 ES	875	195 ES	415	668	177 ES	198 ES	473 NS	368 ES
Mercury		ND(0.012)	ND(0.16)	4.6	3.3 NS	0.16	ND(0.13)	ND(0.12)	ND(0.12)	ND(0.12)	3.7	ND(0.13)
Nickel		18.1	18.1	19.3	45	27.6	17.3	19.7	16.5 NS	15.2 NS	70.2	17.6
Potassium		528 J*	590 J*	484 J*	816	649 J*	1,040	307 J*	325 J*	458 J*	567 J*	1,150
Selenium		ND(0.46)	0.62 J*WN	ND(0.36)	ND(0.35)	ND(0.91)	ND(0.51)	ND(0.36)	ND(0.35)	0.50 J*N	ND(1.0)	ND(0.38)
Silver		ND(0.58)	ND(0.93)	ND(0.6)	1.4 S	ND(0.76)	ND(0.63)	ND(0.74)	ND(0.7)	ND(0.72)	3.4 N	ND(0.63)
Sodium		74.3 J*	140 J*	268 J*	280 J*	368 J*	192 J*	171 J*	97.4 J*	195 J*	451 J*	76.5 J*
Vanadium		7.1	9.3	17.1	12.4	19.2	8.6	8.3	7.2	9	21.9	13.7
Zinc		57.3	77.9 E	986 E	806 E	216 E	65.1	86.7 E	66.1 ES	275 ES	1,300	59.4 E

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TABLE 4-8
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF METALS DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-13	NS-14	RB-6	RB-6	RB-7	RB-7	GE-9	GE-10	GE-11
	Sample Depth (Feet):	14-16	12-14	0-2	2-4	0-2	2-4	8-10	10-12	10-12
	Sample Collection Date:	5/21/91	5/24/91	5/21/91	5/21/91	5/21/91	5/21/91	12/12/91	12/11/91	12/12/91
Aluminum		2,690	7,230	6,920	7,110	9,450	6,920	12,400 S	13,500 S	7,470 S
Antimony		ND(2.2)	ND(3.6)	ND(2.6)	ND(2.6)	ND(2.6)	ND(2.6)	ND(8.7)	ND(8.2)	11.1 J*N
Arsenic		2.6	3.3 N	3.8	4.6 A	7.9	3.7	37.4 A	4.9	4.5
Barium		54.9 S	34	46.5 S	40.7 S	35.6 S	93.4 S	37.5 J*	20.6 J*	22.0 J*
Beryllium		ND(0.1)	ND(0.11)	0.32 J*	0.26 J*	0.30 J*	0.24 J*	ND(0.24)	ND(0.23)	ND(0.23)
Cadmium		ND(0.4)	ND(0.44)	0.58 J*	ND(0.47)	ND(0.47)	0.94	ND(1.2)	ND(1.1)	ND(1.1)
Calcium		427 J*E	1,320	6,450 E	6,040 E	7,830 E	4,070 E	1,680 E	7,070 E	639 J*E
Chromium		8.2	9.2	23.5	16.8	9.3	25.5	13	15.2	9
Cobalt		2.9 J*	9.2	7.4	7.8	11.6	7.4	14.4	15.2	10.9 J*
Copper		1,440	68.4	81.4	23.1	17.8	184	22.7 N	39.1 N	45.5 N
Iron		5,410 E	18,300	15,200 E	15,200 E	24,400 E	15,400 E	32,500 S	30,600 S	18,000 S
Lead		108 S	32.1	60.2 S	50.2 S	15.3 S	123 S	8.9 S	65.4 S	22.5 AS
Magnesium		969	3,060	6,350	6,310	6,490	4,840	5,050	8,790	3,200
Manganese		51.1 ES	335	324 ES	431 ES	633 ES	269 ES	1,070 NS	747 NS	299 NS
Mercury		0.26	1.1	0.10	0.22	3	0.35	ND(0.12)	ND(0.11)	ND(0.11)
Nickel		16.1	17.4	13.9	13.5	19.6	16	23.9	26.1	15.6
Potassium		175 J*	348 J*	422 J*	405 J*	437 J*	446 J*	286 J*	318 J*	364 J*
Selenium		0.67 J*AN	ND(0.44)	ND(0.35)	ND(0.35)	ND(0.35)	ND(0.36)	ND(0.97)	ND(0.93)	ND(0.92)
Silver		ND(0.5)	ND(0.54)	ND(0.60)	ND(0.58)	ND(0.58)	ND(0.6)	ND(1.5)	ND(1.4)	ND(1.4)
Sodium		147 J*	82.9 J*	56.6 J*	67.5 J*	50.8 J*	132 J*	108 J*	119 J*	118 J*
Vanadium		3.6 J*	7	12.6	12.8	15.6	12.5	12.3	12.3	8.4 J*
Zinc		196 E	63.1	98.1 E	67.0 E	82.7 E	291 E	67.5	90.2	66.7

(See notes on Page 3)

TABLE 4-8
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF METALS DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Notes:

1. Samples were collected by Geraghty & Miller, Inc. and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX metals.
2. Only analytes detected in at least one sample are shown.
3. ** - Field duplicate sample.
4. S - Indicates sample matrix duplicate was outside control limits.
5. A - Results reported from single-point method-of-standard addition calculation.
6. J* - Indicates the reported value is less than the CLP-required detection limit (CRDL), but greater than the instrument detection limit (IDL).
7. E - Indicates the reported value is estimated because of the presence of interference.
8. N - Indicates sample matrix spike analysis was outside control limits.
9. Q - Indicates severe physical or chemical interference in the sample matrix.
10. W - Indicates slight matrix-related interference for the analyte.

TABLE 4-9
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PHENOLS, CYANIDE, SULFIDE, AND ORGANOPHOSPHOROUS PESTICIDES
DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-1A	NS-2A	NS-5	NS-6	NS-8	NS-9	NS-9	NS-10	NS-10**	NS-11
	Sample Depth (Feet):	18-20	18-20	2-4	4-6	12-14	12-14	14-16	10-12	10-12	8-10
	Sample Collection Date:	05/23/91	11/12/91	05/22/91	11/12/91	05/21/91	10/25/91	10/25/91	11/15/91	11/15/91	12/10/91
Phenols		ND(0.12)	0.31	0.19	0.35	0.42	ND(0.13)	0.3/0.34	1.0	0.29	1.2
Cyanide		ND(0.57)	ND(0.77)	0.63	ND(0.58)	ND(0.67)	ND(0.64)	ND(0.59)	ND(0.59)	ND(0.61)	0.99
Sulfide		ND(11.5)	ND(15.6)	13.0	ND(11.5)	ND(13.5)	ND(12.8)	15.4	38.9	ND(12.2)	ND(13.7)
OP Pesticides											
Sulfotepp		NA	ND(0.016)	NA	ND(0.012)	NA	NA	NA	0.12	ND(0.012)	NA

Analyte	Boring ID.:	NS-12	NS-13	NS-14	RB-6	RB-6	RB-7	RB-7	GE-9	GE-10	GE-11
	Sample Depth (Feet):	14-16	14-16	12-14	0-2	2-4	0-2	2-4	8-10	10-12	10-12
	Sample Collection Date:	05/22/91	05/21/91	05/24/91	05/21/91	05/21/91	05/21/91	05/21/91	12/12/91	12/11/91	12/12/91
Phenols		1.3	2	0.13	0.67	0.20	0.43	0.32	ND(0.12)	ND(0.12)	ND(0.12)/ ND(0.12)
Cyanide		ND(0.59)	ND(0.74)	ND(0.58)	ND(0.58)	ND(0.58)	ND(0.57)	ND(0.59)	ND(0.61)	ND(0.6)	ND(0.59)
Sulfide		ND(11.8)	ND(14.9)	ND(11.6)	23.2	ND(11.6)	ND(11.5)	ND(11.8)	ND(12.2)	ND(11.9)	ND(11.8)
OP Pesticides											
Sulfotepp		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX phenols and organophosphorus pesticides, as well as cyanide and sulfide.
2. Only analytes detected in at least one sample are shown.
3. ** - Field duplicate sample.
4. ND(0.12) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
5. NA - Not analyzed.
6. 0.3/0.34 - Indicates laboratory duplicate analyses.

TABLE 4-10

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCDD/PCDF COMPOUNDS DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID:	GE-9	GE-10	GE-11	NS-9	NS-9	NS-10	NS-10**	NS-11	NS-2A	NS-6
	Sample Depth (Feet):	8-10	10-12	10-12	12-14	14-16	10-12	10-12	8-10	18-20	4-6
	Sample Collection Date:	12/12/91	12/11/91	12/12/91	10/25/91	10/25/91	11/15/91	11/15/91	12/10/91	11/12/91	11/12/91
TCDD		ND(0.000011)	ND(0.000011)	ND(0.000012)	ND(0.000064)	ND(0.000011)	ND(0.000036) ND(0.000014)	ND(0.00006) ND(0.000092)	ND(0.00017) ND(0.00017) ND(0.00016)	ND(0.000029)	ND(0.00024) M(0.00024)
PeCDD		ND(0.000015)	ND(0.000023)	ND(0.000018)	ND(0.0002)	ND(0.000021)	ND(0.000039) ND(0.000012)	ND(0.000084) ND(0.00083)	ND(0.000097) ND(0.00016) ND(0.00027)	ND(0.000026)	0.0011 M(0.0011)
HxCDD		ND(0.000032)	ND(0.000028)	ND(0.000084)	ND(0.00016)	ND(0.000047)	ND(0.000049) ND(0.000032)	ND(0.000076) ND(0.00088)	0.00069 M(0.001) 0.0013	M(0.00011)	0.0025 0.0028
HpCDD		ND(0.000015)	ND(0.00003)	ND(0.000079)	ND(0.00022)	ND(0.000048)	0.00013 ND(0.000056)	ND(0.00013) ND(0.00037)	0.0011 M(0.003) 0.002	M(0.000067)	0.0022 0.0027
OCDD		ND(0.000051)	ND(0.000046)	0.000065	ND(0.00078)	0.000061	0.00023 0.000078	0.00037 ND(0.0011)	0.0028 0.0070 0.0057	0.00011	0.0016 0.0019
2,3,7,8 TCDF		ND(0.0000087)	ND(0.000016)	0.00013	ND(0.000048)	0.00007	ND(0.000095) ND(0.000016)	ND(0.00012) ND(0.00013)	0.0019 0.0047 0.0029	0.0002	0.0061 0.0089
TCDF		ND(0.000041)	ND(0.000034)	0.00072	ND(0.00006)	0.00035	ND(0.00028) ND(0.000056)	ND(0.00068) ND(0.00036)	0.019 0.0217 0.0145	0.00098	0.0208 0.0366
PeCDF		ND(0.0000088)	ND(0.000019)	0.00078	ND(0.000077)	0.00044	M(0.00016) 0.000083	M(0.00016) ND(0.0001)	0.0074 0.0257 0.0116	0.0018	0.0327 0.0484
HxCDF		ND(0.000012)	0.000033	0.00078	ND(0.000085)	0.0004	0.0011 0.00044	0.0016 0.0014	0.0098 0.0207 0.0183	0.0016	0.0376 0.0464
HpCDF		ND(0.000025)	ND(0.000024)	0.00033	ND(0.00016)	M(0.000089)	0.0029 0.00096	0.0045 0.0038	0.0058 0.0121 0.011	0.00054	0.0165 0.0205
OCDF		ND(0.000022)	ND(0.000041)	0.00019	ND(0.00031)	0.00011	0.0009 0.00032	0.0015 M(0.0012)	0.0027 0.0091 0.0064	0.00033	0.0101 0.0123

(See notes on Page 2)

TABLE 4-10
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCDD/PCDF COMPOUNDS DETECTED IN MCP SOIL BORING SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Boring ID.:	NS-1A	NS-5	NS-7	NS-8	NS-12	NS-13	NS-14	RB-6	RB-6	RB-7	RB-7
	Sample Depth (Feet):	18-20	2-4	14-16	12-14	14-16	14-16	12-14	0-2	2-4	0-2	2-4
	Sample Collection Date:	05/23/91	05/22/91	05/24/91	05/21/91	05/22/91	05/21/91	05/24/91	05/21/91	05/21/91	05/21/91	05/21/91
TCDD		ND(0.000044)	ND(0.00017)	ND(0.000065)	ND(0.00012)	ND(0.000072)	ND(0.00034)	ND(0.000054)	ND(0.000057)	ND(0.00005)	0.00034	0.000083
PeCDD		ND(0.00015)	ND(0.00017)	0.000076	ND(0.00014)	M(0.00023)	0.001	ND(0.00012)	ND(0.000092)	ND(0.00011)	M(0.00089)	ND(0.0002)
HxCDD		ND(0.00016)	ND(0.00014)	0.00016	ND(0.00028)	0.0015	0.0053	0.00044	ND(0.00018)	ND(0.00015)	0.0035	0.00096
HpCDD		ND(0.00019)	0.00040	0.00028	ND(0.00058)	0.0028	0.0067	0.001	ND(0.00024)	ND(0.00015)	0.0028	0.00077
OCDD		0.00024	0.00059	0.00024	M(0.0003)	0.0177	0.0239	0.0043	0.00047	ND(0.00052)	0.0016	0.00058
2,3,7,8 TCDF		0.00016	0.00037	0.0012	0.001	0.00013	0.0012	0.00006	0.0001	ND(0.00007)	0.0217	0.0014
TCDF		0.00084	0.00070	0.0053	0.0056	0.001	0.0091	0.00037	0.00066	ND(0.00007)	0.134	0.0085
PeCDF		0.0021	0.0018	0.004	0.0136	0.0046	0.0383	0.00057	0.00049	ND(0.000047)	0.19	0.0154
HxCDF		0.0032	0.0042	0.0035	0.024	0.0099	0.139	0.0022	0.0007	ND(0.000059)	0.188	0.0126
HpCDF		0.0011	0.0019	0.0017	0.0082	0.0059	0.0974	0.002	0.00052	ND(0.00013)	0.0599	0.0042
OCDF		0.00039	0.00081	0.0011	0.0034	0.0026	0.0892	0.00075	0.00031	ND(0.00036)	0.0192	0.0017

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs).
2. Only analytes detected in at least one sample are shown.
3. ** - Field duplicate sample.
4. ND(0.000044) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
5. M(0.00024) - Analyte presence was noted, but not at a level that the laboratory could provide a definitive identification or quantity. The number in parentheses is the detection limit.
6. Multiple results for a particular sample indicates multiple extractions and analyses were performed for quality control reasons.

TABLE 4-11

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF METALS DETECTED IN MCP SURFICIAL SOIL SAMPLES
(Results are Presented in Dry-Weight Parts Per Million, ppm)

Analyte	Location ID.:	GE-8
	Sample Collection Date:	11/20/91
Aluminum		15,300
Antimony		ND(4.8)
Arsenic		6.9 N
Barium		75.9
Beryllium		0.43J*
Cadmium		1.3
Calcium		3,000
Chromium		24.1
Cobalt		15.7
Copper		198
Iron		30,800 E
Lead		235 N
Magnesium		6,260
Manganese		910
Mercury		0.25 SN
Nickel		34.9
Potassium		1,470
Selenium		0.70QN
Silver		ND(0.8)
Sodium		136J*
Vanadium		24.2
Zinc		300 E

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX metals.
2. Sample was collected by compositing surficial soils from an area of approximately 3-feet by 3-feet and from a depth of approximately 4 inches within this area.
3. Only detected analytes are shown.
4. S - Indicates sample matrix duplicate was outside control limits.
5. J* - Indicates the reported value is less than the CLP-required detection limit (CRDL), but greater than the instrument detection limit (IDL).
6. ND(4.8) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
7. E - Indicates the reported value is estimated because of the presence of interference.
8. N - Indicates sample matrix spike analysis was outside control limits.
9. Q - Indicates severe physical or chemical interference in the sample matrix.

TABLE 4-12

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PRE-MCP GROUNDWATER DATA
(Results are Presented in Parts Per Million, ppm)

Analyte	Well ID.:	GE-3	GE-3	NS-1
	Sample Collection Date:	5/11/88	2/16/89	8/31/89
Benzene		ND(0.005)	ND(0.0005)	0.039
Chlorobenzene		ND(0.005)	ND(0.0005)	0.6 D
t-1,2-Dichloroethene		ND(0.005)	ND(0.0005)	0.007
Ethyl Benzene		ND(0.005)	ND(0.0005)	0.004 J
Toluene		ND(0.005)	ND(0.0005)	0.003 J
Trichloroethene		ND(0.005)	ND(0.0005)	0.002 J
Vinyl Chloride		ND(0.01)	ND(0.0005)	2 E
1,2-Dichlorobenzene		NA	ND(0.0005)	0.003 J
1,3-Dichlorobenzene		NA	ND(0.0005)	0.017
1,4-Dichlorobenzene		NA	ND(0.0005)	0.06
Naphthalene		NA	NA	0.002 J
1,2,4-Trichlorobenzene		NA	ND(0.01)	0.012
Aroclor 1254		ND(0.0003)	ND(0.001)	0.017 P
Aroclor 1260		ND(0.0003)	ND(0.001)	ND(0.001)
Total Aroclors+		ND(0.0004)	NR	0.017

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to IT Analytical Services, Knoxville, TN for analysis.
2. Sample GE-3 was analyzed for priority pollutant volatile organics and PCBs during May 1988 and for halogenated volatile organics, aromatic volatile hydrocarbons, chlorinated hydrocarbons, and PCBs during February 1989, while sample NS-1 was analyzed for priority pollutant volatile organics and base/neutral extractable organics and PCBs during August 1989.
3. Only analytes detected in at least one sample are shown.
4. ND(0.005) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
5. NA - Not analyzed.
6. NR - Not reported.
7. D - Indicates that analysis was performed at a secondary dilution factor.
8. J - Indicates an estimated value less than the CLP-required quantitation limit.
9. E - Compound exceeded calibration range, but is within linear range.
10. P - Sample exhibits alteration of standard Aroclor pattern.
11. + - Rounded totals are as reported on laboratory data sheets.

TABLE 4-13

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

WELL CONSTRUCTION DETAILS

Well ID.	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)
GE-3	5/05/88	2	19.5	9.5 - 19.5	7 - 19.5	6 - 7	0 - 6	984.26
NS-1	8/30/89	2	17.5	7.5 - 17.5	5 - 17.5	3 - 5	0 - 3	Not Available
NS-9	10/25/91	4	20.0	5.0 - 20.0	3.5 - 24	2 - 3.5	0 - 2	982.31
NS-10	11/15/91	4	20.0	5.0 - 20.0	3.0 - 20	1 - 3	0 - 1	984.45
NS-11	12/10/91	4	20.0	5.0 - 20.0	3.5 - 20	2 - 3.5	0 - 2	984.37

TABLE 4-14

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF ORGANOCHLORINE PESTICIDES/PCBs
DETECTED MCP GROUNDWATER SAMPLES
(Results are Presented in Parts Per Million, ppm)

Analyte	Well ID.:	NS-1	NS-9	NS-9**	NS-10	NS-11
	Sample Collection Date:	01/31/92	12/19/91	12/19/91	12/19/91	12/19/91
Aldrin		ND(0.00015)	ND(0.00003)	ND(0.00003)	NA	0.00018
PCB-1254		0.520	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX organochlorine pesticides/PCBs.
2. Only analytes detected in at least one sample are shown.
3. ** - Field duplicate sample.
4. ND (0.00015) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
5. NA - Not analyzed.

TABLE 4-15

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF VOCs DETECTED IN MCP GROUNDWATER SAMPLES
(Results are Presented in Parts Per Million, ppm)

Analyte	Well ID.:	NS-1	NS-9	NS-9**	NS-10	NS-11
	Sample Collection Date:	01/31/92	12/19/91	12/19/91	12/19/91	12/19/91
Vinyl Chloride		2.4	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Methylene Chloride		0.86 B	0.008 BJ	0.02 B	0.009 BJ	0.01 B
1,2-Dichloroethene (total)		0.21	0.003 J	0.002 J	0.002 J	ND(0.005)
1,1,1-Trichloroethane		0.024 J	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Benzene		0.041 J	0.001 J	0.001 J	0.002 J	ND(0.005)
Chlorobenzene		0.35	0.013	0.011	0.003 J	ND(0.005)
Xylene (total)		ND(0.1)	ND(0.005)	ND(0.005)	0.021	ND(0.005)
Trichloroethene		ND(0.1)	0.004 J	ND(0.005)	ND(0.005)	ND(0.005)

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX+3 volatile organic compounds (VOCs).
2. Only analytes detected in at least one sample are shown.
3. ND(0.1) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
4. ** - Field duplicate sample.
5. B - Indicates the compound was found in the associated blank as well as in the sample.
6. J - Indicates an estimated value less than the CLP - required quantitation limit.

TABLE 4-16

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF SVOCs DETECTED IN MCP GROUNDWATER SAMPLES
(Results are Presented in Parts Per Million, ppm)

Analyte	Well ID.:	NS-1	NS-9	NS-9**	NS-10	NS-11
	Sample Collection Date:	01/31/92	12/19/91	12/19/91	12/19/91	12/19/91
2-Picoline		ND(0.02)	ND(0.02)	ND(0.02)	0.001 J	ND(0.02)
1,2-Dichlorobenzene		0.004 J	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
1,3-Dichlorobenzene		0.024	ND(0.01)	0.001 J	0.007 J	ND(0.01)
1,4-Dichlorobenzene		0.08	0.001 J	0.002 J	0.039	0.001 J
1,2,4-Trichlorobenzene		0.002 J	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Benzoic Acid		ND(0.1)	ND(0.1)	0.001 J	ND(0.1)	0.001 J
Bis-(2-Ethylhexyl)phthalate		0.003 J	0.003 J	0.004 BJ	0.002 BJ	0.001 BJ
Acetophenone		ND(0.01)	ND(0.01)	ND(0.01)	0.003 J	ND(0.01)
Naphthalene		ND(0.01)	ND(0.01)	ND(0.01)	0.002 J	ND(0.01)

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX+3 semivolatile organic compounds (SVOCs).
2. Only analytes detected in at least one sample are shown.
3. ND(0.1) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
4. ** - Field duplicate sample.
5. B - Indicates the compound was found in the associated blank as well as in the sample.
6. J - Indicates an estimated value less than the CLP-required quantitation limit.

TABLE 4-17

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF METALS DETECTED IN MCP GROUNDWATER SAMPLES
(Results are Presented in Parts Per Million, ppm)

Analyte	Well ID.:	NS-1	NS-9	NS-9**	NS-10	NS-11
	Sample Collection Date:	01/31/92	12/19/91	12/19/91	12/19/91	12/19/91
Aluminum		0.136 J*	1.76 NS	2.03 NS	3.17 NS	5.2 NS
Arsenic		ND(0.003)	0.0061 J*	0.0048 J*	0.0062 J*	0.0103 W
Barium		0.0712 J*	0.0649 J*	0.0673 J*	0.287	0.0855 J*
Calcium		89.3	72.6	73.7	48.5	66
Cobalt		ND(0.006)	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)
Copper		ND(0.012)	0.0189 J*	0.0196 J*	0.0315	0.0391
Iron		2.37	3.67	3.98	28.6	14.5
Lead		ND(0.002)	0.0058 NS	0.006 WNS	0.0367 NS	0.0212 NS
Magnesium		35.7	30.5	30.8	8.69	28.5
Manganese		0.502	0.841	0.854	0.68	0.731
Mercury		ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	0.00036 N
Nickel		ND(0.03)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)
Potassium		5.48	4.54 J*	5.24	5.67	4.98 J*
Sodium		36.8 E	162 E	162 E	119 E	38.1 E
Vanadium		ND(0.006)	ND(0.006)	ND(0.006)	0.007 J*	0.0074 J*
Zinc		0.0389	0.0494	0.0538	0.0661	0.082

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX metals.
2. Only analytes detected in at least one sample are shown.
3. ND(0.003) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
4. ** - Field duplicate sample.
5. S - Indicates sample matrix duplicate was outside control limits.
6. J* - Indicates the reported value is less than the CLP-required detection limit (CRDL), but greater than the instrument detection limit (IDL).
7. E - Indicates the reported value is estimated because of the presence of interference.
8. N - Indicates sample matrix spike analysis was outside control limits.
9. W - Indicates slight matrix-related interference for the analyte.

TABLE 4-18

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING
LOT AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF PCDDs/PCDFs, SULFIDE, CYANIDE, AND PHENOLS DETECTED IN MCP GROUNDWATER SAMPLES
(Results are Presented in Parts Per Million, ppm)

Analyte	Well ID.:	NS-1	NS-9	NS-9**	NS-10	NS-11
	Sample Collection Date:	01/31/92	12/19/91	12/19/91	12/19/91	12/19/91
PCDDs/PCDFs						
OCDD		0.0000016	ND(0.000001)	ND(0.00000089)	ND(0.00000063)	0.0000041
2,3,7,8 TCDF		0.0000016	ND(0.00000031)	ND(0.00000015)	ND(0.00000015)	ND(0.00000035)
TCDF		0.000008	ND(0.00000063)	ND(0.00000049)	ND(0.00000032)	ND(0.00000058)
PeCDF		0.0000216	ND(0.00000074)	ND(0.00000032)	ND(0.00000027)	ND(0.0000007)
HxCDF		0.0000351	ND(0.00000044)	ND(0.00000029)	M(0.00000081)	M(0.0000014)
HpCDF		0.0000118	ND(0.00000070)	ND(0.00000055)	M(0.0000015)	M(0.0000011)
OCDF		0.000005	ND(0.0000012)	ND(0.000001)	ND(0.000001)	ND(0.0000024)
Sulfide		5.1	ND(1)	ND(1)	ND(1)	3.2
Cyanide		ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	0.0253
Phenols (Total)		0.025	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)

Notes:

1. Samples were collected by Geraghty & Miller, Inc., and submitted to CompuChem Laboratories, Research Triangle Park, NC for analysis of Appendix IX polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) as well as phenols, sulfides, and cyanide.
2. Only analytes detected in at least one sample are shown.
3. ** - Field duplicate sample.
4. ND(0.01) - Compound was analyzed for, but not detected. The number in parentheses is the detection limit.
5. M(0.0000014) - Analyte presence was noted, but not at a level that the laboratory could provide a definitive identification or quantity. The number in parenthesis is the detection limit.

TABLE 4-19

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT AND
CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF GROUNDWATER ELEVATIONS

Well ID.	Measuring Point (Feet Above Mean Sea Level)	6/7/88 Elevation of Water (Feet Above Mean Sea Level)	12/19/91 Elevation of Water (Feet Above Mean Sea Level)
GE-3	984.96	973.66	--
MW-1*	987.37	975.85	--
MW-2*	986.45	972.88	--
MW-3*	985.94	974.85	973.49
IA-9*	984.20	972.75	--
SZ-1*	981.87	977.10	--
SZ-3*	986.40	973.03	--
FW-16*	983.29	972.38	--
NS-9	982.31	--	972.31
NS-10	984.45	--	974.48
NS-11	984.37	--	974.03

Notes:

1. Monitoring wells MW-1, MW-2, and MW-3 were installed by O'Brien & Gere Engineers at this site prior to work performed by Geraghty & Miller, Inc.; Geraghty & Miller installed the remaining wells.
2. * - These wells are in the Newell Street Oxbow Area I Site. They are included in this table because they have been used in an area-wide groundwater flow interpretation.
3. -- - Not measured.

TABLE 5-1

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

SUMMARY OF AMBIENT AIR PCB CONCENTRATIONS
(Results are Presented in Micrograms Per Cubic Meter (ug/m^3)

Monitor Identification: / **Location Description:**	**002** **NWL**	**003** **LYM**	**004** **H78**	**005** **OP3**	**006** **BCC**	**007** **64Y**	**001**[1] **64YC**	**008** **32S**
Mean Concentration[2]	0.0062	0.0013	0.0007	<0.0005	<0.0005	0.0011	0.0011	0.0050[3]
Mean Spring[2]	0.0097	0.0016	0.0008	0.0006	<0.0005	0.0012	0.0009	(-)
Mean Summer[2,4]	0.0117	0.0029	0.0011	0.0010	<0.0005	0.0022	0.0020	(-)
Mean Fall[2]	0.0028	0.0006	<0.0005	<0.0005	<0.0005	0.0006	0.0007	(-)
Mean Winter[2]	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	(-)
Max. 24 Hour Concentration	0.030	0.0059	0.0035	0.0019	0.0015	0.0037	0.0041	0.0071
Date of Occurrence	06/15/92	08/02/92	06/05/92	07/19/92	08/14/92	07/21/92	08/02/92	08/02/92
Min. 24 Hour Concentration[5]	ND[6]	ND	ND	ND	ND	ND	ND	0.0035
Date of Occurrence	(-)[7]	(-)	(-)	(-)	(-)	(-)	(-)	07/09/92
Total # of Valid Samples	30	30	30	31	31	29	29	6
% Below the Detection Limit	26.7	46.7	76.7	74.2	83.9	37.9	37.9	0

Notes:

1. Co-located with Monitor 007.
2. Averages are calculated using one-half the detection limit for non-detect events.
3. Based on six sampling events between June 15, 1992 and August 14, 1992.
4. Observations from summer 1991 and 1992 were combined to produce summer averages.
5. Sampling Stations 001 through 007 had several observations of non-detect.
6. ND - Below the detection limit of 0.0005 ug/m^3.
7. (-) - Indicates that a non-detect was recorded on several occasions.

Reference:

Information was reproduced from Zorex, November 1992 - Table 2. The Newell Street Site is represented by the "NWL" location description.

TABLE 7-1

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

PHYSICAL AND CHEMICAL PROPERTIES OF SELECT CONSTITUENTS

Constituent	Water Solubility* (mg/L)	LOG Kow	Vapor Pressure* (mm Hg)	Henry's Law Constant* (atm-m^3/mole)
VOLATILE ORGANIC COMPOUNDS				
Ketones				
Acetone	Miscible	-0.24	231	3.67E-5
Aromatics				
Benzene	1791	2.13	95.2	5.42E-3
Toluene	534.8	2.73	28.4	5.94E-3
Xylene (1,2-)	175	3.12	6.6	5.19E-3
Xylene (1,3-)	146	3.20	8.3	7.19E-3
Xylene (1,4-)	156	3.15	8.7	7.60E-3
Halogenated Compounds				
Chlorobenzene	471.7	2.84	11.9	3.45E-3
Chloroform	7,220	1.97	246	4.35E-3
Methylene chloride	13,000	1.25	434.9	2.68E-3
Trichloroethene	1,100	2.42	69	1.03E-2
1,2-Dichloroethene (cis-)	3,500	1.86	215	3.37E-3
1,2-Dichloroethene (trans-)	6,260	2.09	336	6.72E-3
Vinyl Chloride	2,763	1.38	2,660	1.07E-2
SEMIVOLATILE ORGANIC COMPOUNDS				
Phenols				
Phenol	87,000	1.46	0.524	3.97E-7
Pentachlorpphenol	14(20°C)	5.12	1.1E-4	2.44E-8
Amines				
Aniline	3.64E+4	0.90	0.489	0.136
2-Nitroaniline	1,260	1.85	2.0E-4	2.0E-8
Dimethylphenylethylamine	Not Available	Not Available	Not Available	Not Available
Polychlorinated Benzenes				
1,3-Dichlorobenzene	111 (20°C)	3.60	2.3	1.8E-3
1,4-Dichlorobenzene	87	3.52	1.76	1.5E-3

(See Notes on Page 3)

TABLE 7-1
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

PHYSICAL AND CHEMICAL PROPERTIES OF SELECT CONSTITUENTS

Constituent	Water Solubility* (mg/L)	LOG Kow	Vapor Pressure* (mm Hg)	Henry's Law Constant* (atm-m^3/mole)
SEMIVOLATILE ORGANIC COMPOUNDS (cont'd)				
1,2,3-Trichlorobenzene	16.6	4.05	0.2	1.25E-3
1,2,4-Trichlorobenzene	48.8 (20°C)	4.02	0.29	1.42E-3
1,2,3,5-Tetrachlorobenzene	3.5	4.92	0.07	5.68E-3
1,2,4,5-Tetrachlorobenzene	0.6	4.82	5.4E-3	2.58E-3
PAHs				
Acenaphthene	3.88	3.92	0.004-0.03	1.55E-4
Acenaphthylene	3.93	3.94	9.0E-4	1.13E-5
Anthracene	0.03-0.075	4.45	2.67E-6	6.5E-5
Benzo(a)anthracene	0.009	5.66	3.08E-8	9.75E-7
Benzo(b)fluoranthene	0.0015	6.12	5.0E-7	1.11E-4
Benzo(k)fluoranthene	0.0008	6.12	9.6E-10	4.0E-7
Benzo(g,h,i)perylene	0.00026	7.23	1.33E-8 (20°C)	1.44E-7
Benzo(a)pyrene	0.001-0.004	5.97	5.5E-9	1.82E-6
Dibenz(a,h)anthracene	2.5E-6	6.50	1.0E-10	1.15E-4
Chrysene	0.002	5.66	3.08E-8	9.46E-5
Dibenzofuran	4.8	4.12	2.6E-3	1.20E-4
Fluoranthene	0.26	4.95	1.0E-8	1.26E-8
Fluorene	1.98	4.18	7.0E-4	8.39E-5
Indeno(1,2,3-c,d)pyrene	0.000022	6.58	1.0E-10	1.6E-6
1-Methylnaphthalene	29	3.87	0.07	2.6E-4
2-Methylnaphthalene	25	3.86	0.05	3.74E-4
Naphthalene	31.7	3.30	0.082	4.24E-4
Phenanthrene	1.00	4.46	2.0E-4	3.95E-5
Pyrene	0.129-0.165	4.88	2.5E-6	1.1E-5
Phthalate Esters				
Bis(2-ethylhexyl)phthalate	0.3	5.11	6.45E-6	1.1E-5

(See Notes on Page 3)

TABLE 7-1
(Continued)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT
AND CURRENT ASSESSMENT SUMMARY FOR USEPA AREA 5B

PHYSICAL AND CHEMICAL PROPERTIES OF SELECT CONSTITUENTS

Constituent	Water Solubility* (mg/L)	LOG Kow	Vapor Pressure* (mm Hg)	Henry's Law Constant* (atm-m^3/mole)
SEMIVOLATILE ORGANIC COMPOUNDS (cont'd)				
PCBs				
Aroclor 1254**	0.012	6.5	7.71E-5	2.0E-3
Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans**				
TCDDs	1.0E-6 to 1.0E-4	5.4 to 8.5	1.0E-10 to 1.0E-7	Not Available
PeCDDs	1.0E-4	6.6 to 10.0	1.0E-10 to 1.0E-9	Not Available
HpCDDs	1.0E-6 to 1.0E-4	8.0 to 12.0	1.0E-12 to 1.0E-9	Not Available
OCDD	1.0E-8 to 1.0E-4	8.3 to 12.7	1.0E-13 to 1.0E-7	Not Available
TCDFs	1.0E-4 to 1.0E-3	5.82 to 7.7	1.0E-8 to 1.0E-6	Not Available
PeCDFs	1.0E-4	6.92 to 7.8	1.0E-9 to 1.0E-7	Not Available
HxCDFs	1.0E-6	7.7	1.0E-10 to 1.0E-8	Not Available
HxCDDs	1.0E-6 to 1.0E-5	7.8 to 10.9	1.0E-11 to 1.0E-8	Not Available
HpCDFs	1.0E-6 to 1.0E-5	7.9 to 8.1	1.0E-11 to 1.0E-8	Not Available
OCDF	1.0E-8 to 1.0E-6	6.9 to 14.0	1.0E-12 to 1.0E-9	Not Available
Pesticides				
Sulfotepp	30	Not Available	1.7E-4 (20°C)	2.4E-6 (20°C)
Aldrin	0.02 (20°C)	6.5	3.75E-5 (20°C)	4.96E-4 (20°C)

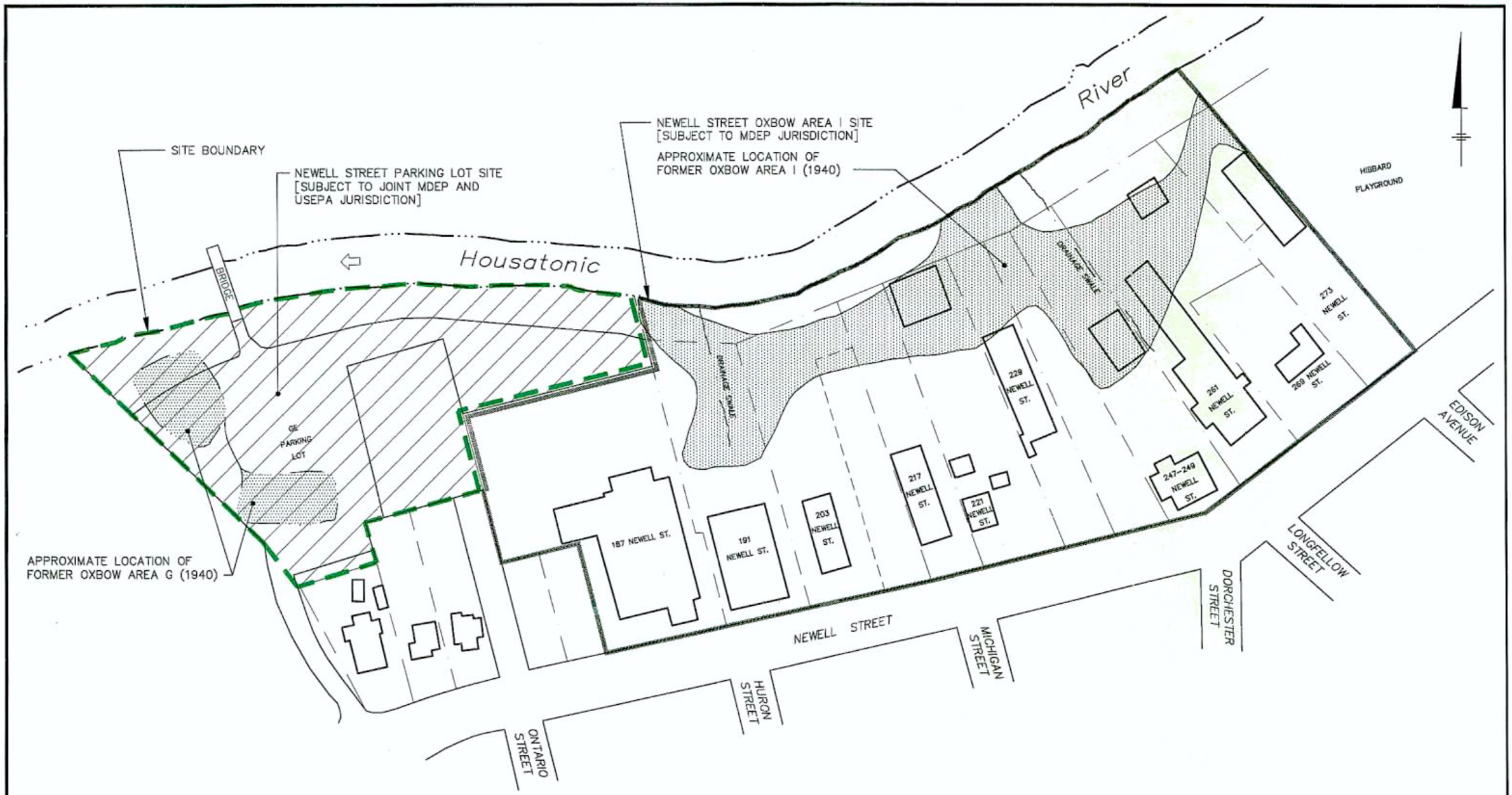
Notes:

1. Summary includes organic compounds detected in soils or groundwater above the quantitation limit.
2. * = At 25°C unless noted otherwise.
3. ** = This constituent is actually a mixture (or group) of chemical compounds. Each chemical compound has its own physical and chemical properties. The values presented here for this constituent are representative values for this mixture (or group) of compounds.
4. TCDDs = Tetrachlorodibenzo-p-dioxins
5. PeCDDs = Pentachlorodibenzo-p-dioxins
6. HxCDDs = Hexachlorodibenzo-p-dioxins.
7. HpCDDs = Heptachlorodibenzo-p-dioxins
8. OCDD = Octachlorodibenzo-p-dioxin
9. TCDFs = Tetrachlorodibenzofurans.
10. PeCDFs = Pentachlorodibenzofurans.
11. HxCDFs = Hexachlorodibenzofurans.
12. HpCDFs = Heptachlorodibenzofurans
13. OCDF = Octachlorodibenzofuran

References:

(Howard, 1989; 1990; 1991; 1993; CHEMFATE, 1989; Hansch and Leo, 1985; Hartley and Kidd, 1987; Verschueren, 1983; Mackay et.al. 1992; USEPA April 1986, June 1986).

Figures



NOTE:

1. SITE INFORMATION IS APPROXIMATE. ALL SITE FEATURES ARE NOT SHOWN.

120' 0 120'

APPROXIMATE SCALE

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

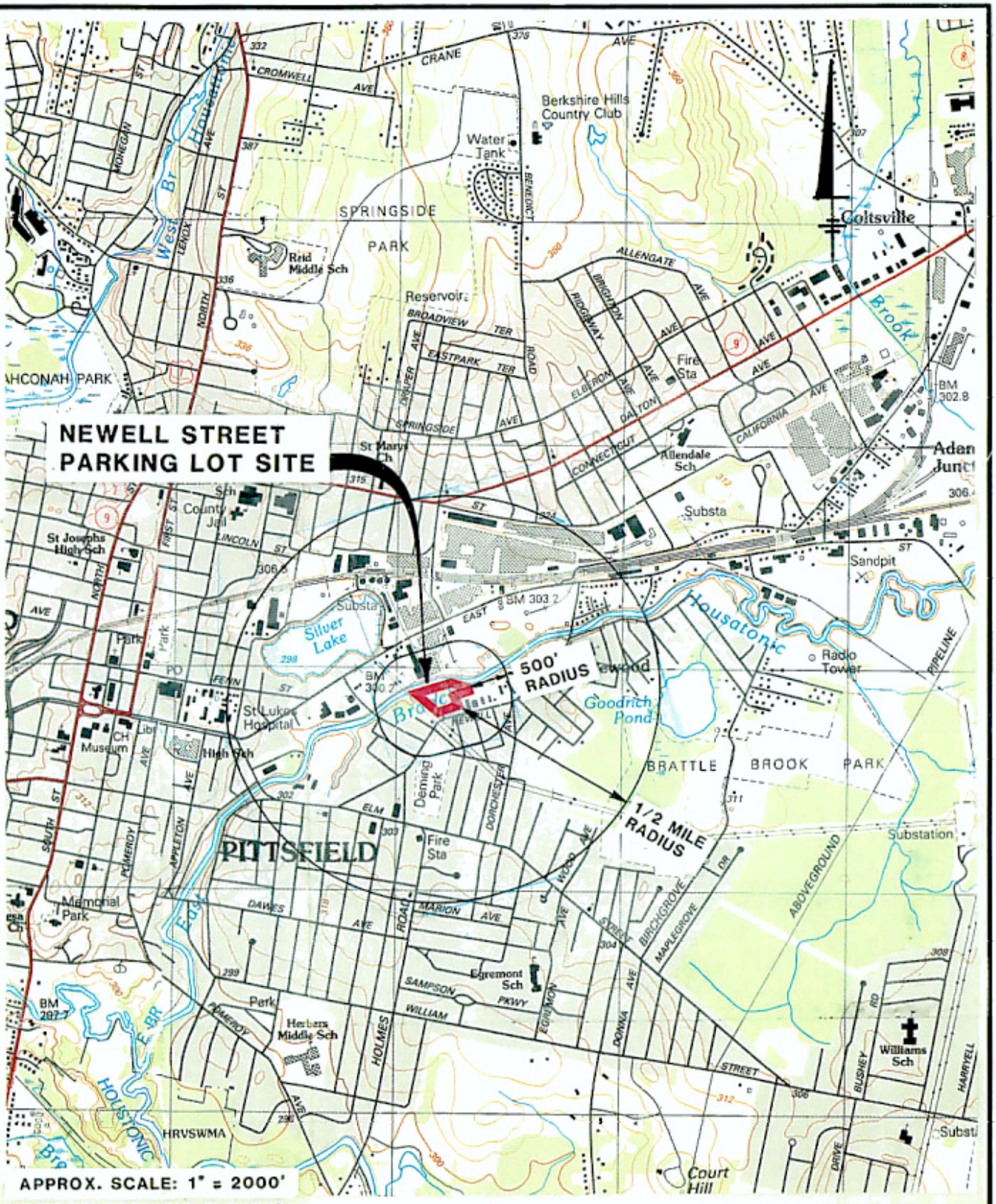
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
MCP INTERIM PHASE II REPORT FOR NEWELL STREET
PARKING LOT/CAS FOR USEPA AREA 5B

DELINEATION OF STUDY AREAS

FIGURE **1-1**

2/94 SA-JLG AK
10196031R/10196G26.DWG

FIGURE 1-2



REFERENCE: PITTSFIELD EAST QUAD.

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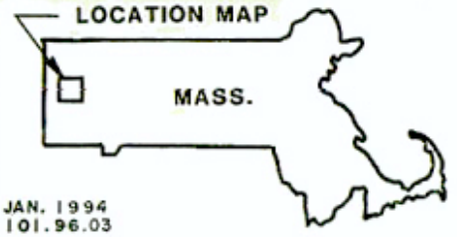
LOCATION MAP



MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT / CAS FOR USEPA AREA 5B

LOCATION PLAN

JAN. 1994
101.96.03

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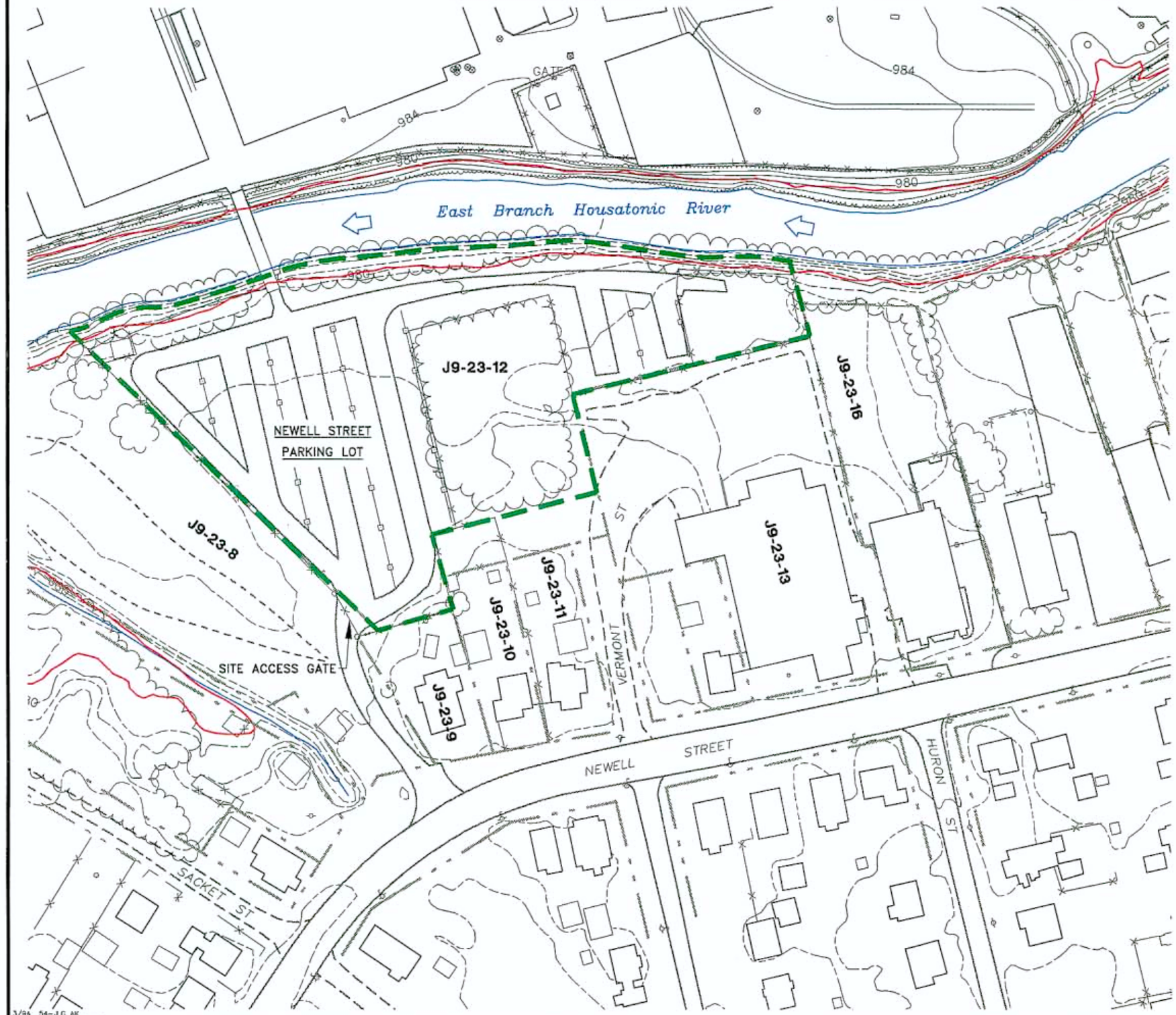


LEGEND

- I9-8-2 — TAX ASSESSOR'S PARCEL IDENTIFICATION NUMBER
- APPROX. SITE BOUNDARY
- APPROX. PARCEL BOUNDARY
- LIMIT OF APPROX. 10-YEAR FLOODPLAIN
- EDGE OF WATER
- PAVED ROADWAY
- UNPAVED ROADWAY
- LIGHT POLE (NON UTILITY)
- MANHOLE
- 970 — INDEX ELEVATION CONTOUR
- INTERMEDIATE ELEVATION CONTOUR
- VEGETATION
- FENCE LINE

0 100' 200'

SCALE: 1" = 100'

GENERAL NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. THE LIMIT OF FLOODPLAIN REPRESENTS THE APPROXIMATE 10-YEAR FLOODPLAIN. DELINEATION OF 10-YEAR FLOODPLAIN IS BASED ON HEC-2 HYDRAULIC MODELING PERFORMED BY BLASLAND & BOUCK ENGINEERS, P.C. (1991) AND AVAILABLE TOPOGRAPHIC MAPPING.
3. TAX ASSESSOR'S PARCEL IDENTIFICATION NUMBERS AND BOUNDARY INFORMATION OBTAINED FROM CITY OF PITTSFIELD'S TAX ASSESSORS' OFFICE AND IS CURRENT THROUGH DECEMBER 31, 1991.

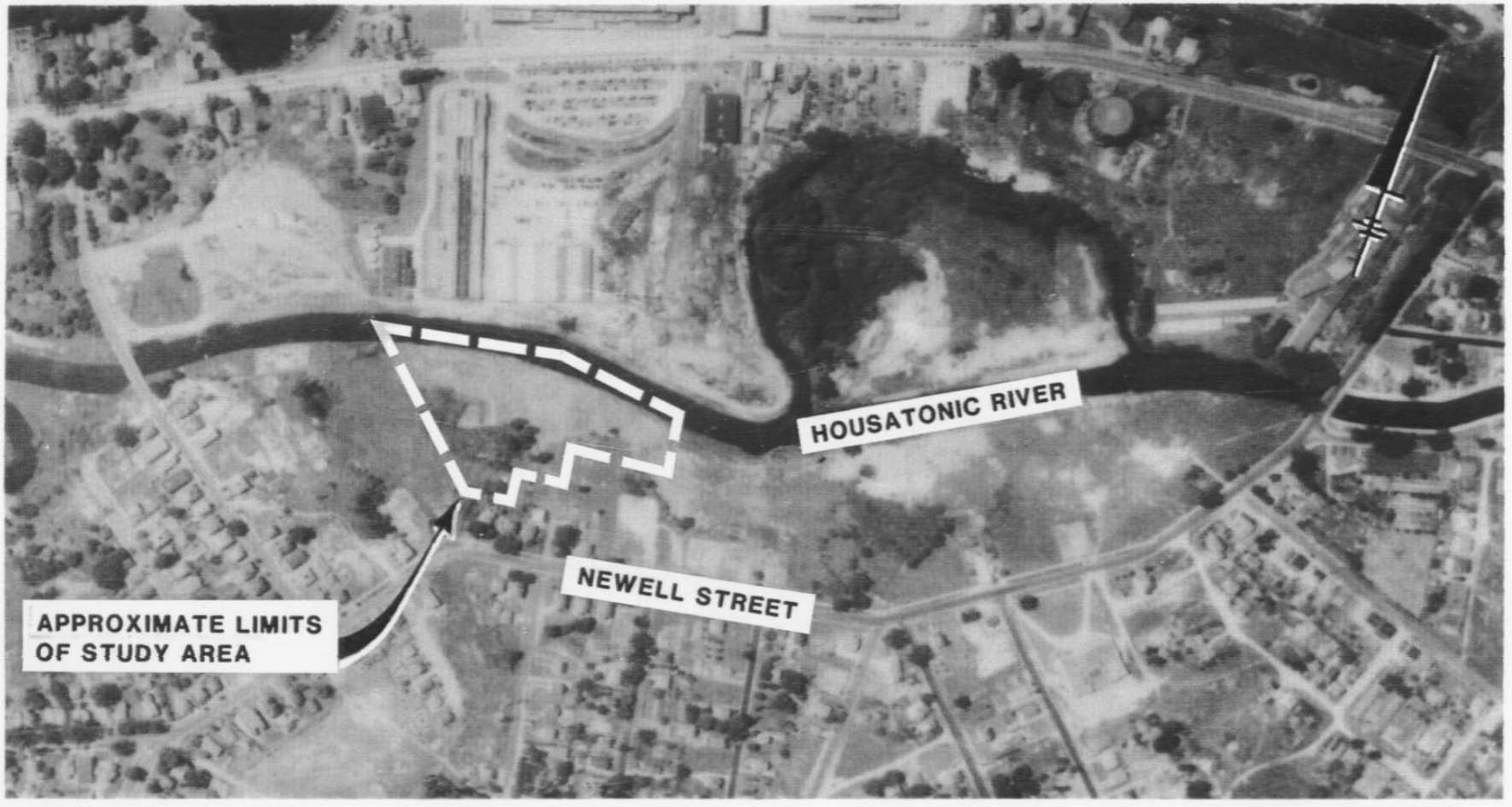
BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT/CAS FOR USEPA AREA 5B

SITE PLAN

FIGURE **2-1**

3/94 54-JLG AK
1019603R/10196G40.DWG



APPROX. SCALE: 1" - 400'

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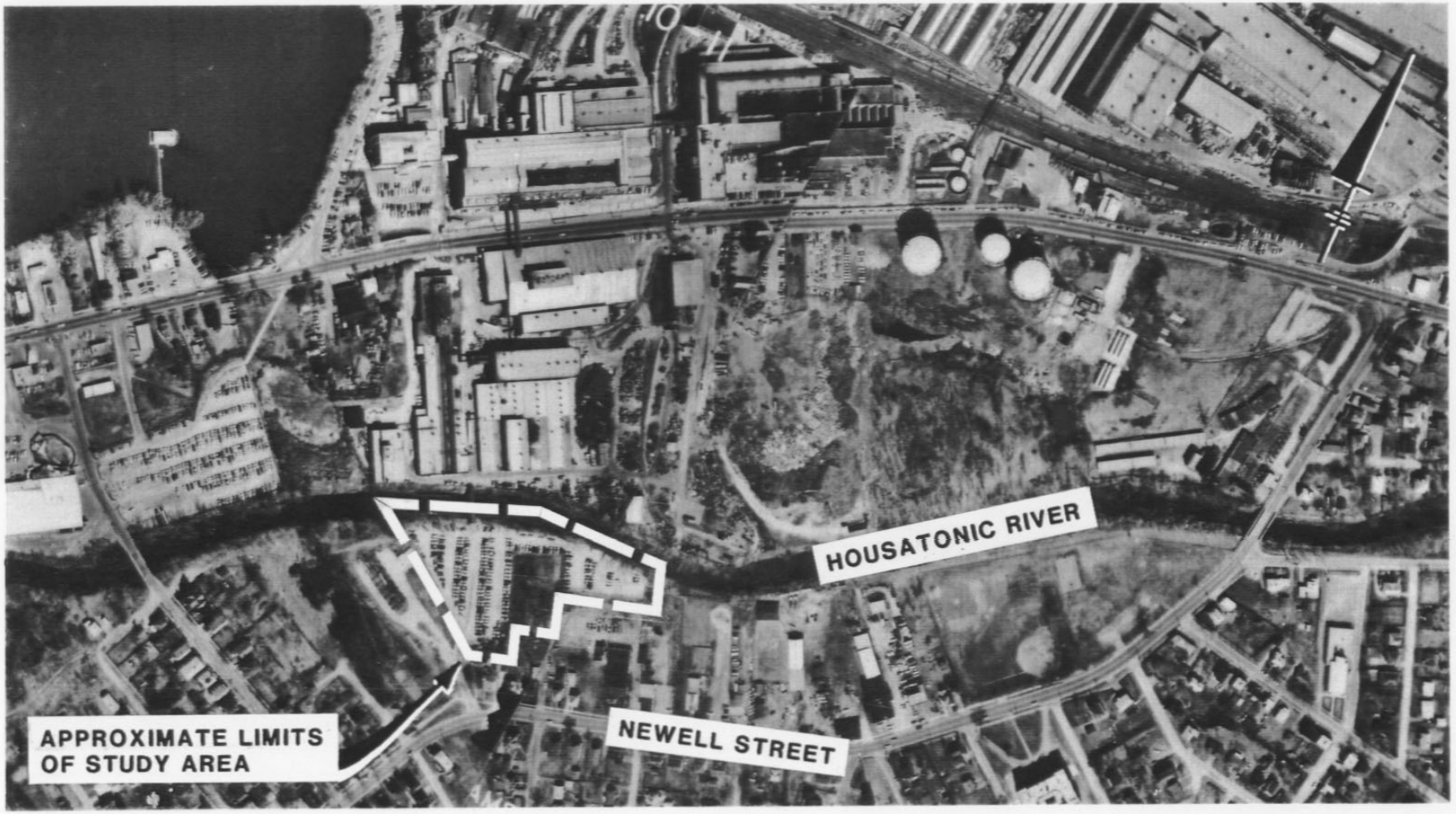
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET
PARKING LOT/CAS FOR USEPA AREA 5B

HISTORICAL AERIAL PHOTOGRAPH - 1942

FIGURE **2-2**

FEB. 1994
101.96.03



APPROX. SCALE: 1" - 400'

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MCP INTERIM PHASE II REPORT FOR NEWELL STREET
PARKING LOT / CAS FOR USEPA AREA 5B

HISTORICAL AERIAL PHOTOGRAPH - 1969

FIGURE **2-3**

FEB. 1994
101.96.03

APPROX. SCALE: 1" - 400'

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MCP INTERIM PHASE II REPORT FOR NEWELL STREET
PARKING LOT/CAS FOR USEPA AREA 5B

HISTORICAL
AERIAL PHOTOGRAPH - 1990

FIGURE
2-4

FEB. 1994
101.96.03

LEGEND

- TREES
- BARE SOIL
- PAVED
- GRASS
- —x—x—x— FENCING
- APPROXIMATE SITE BOUNDARY

NOTES:

1. SITE INFORMATION IS APPROXIMATE. ALL SITE FEATURES ARE NOT SHOWN.

120' 0 120'
APPROXIMATE SCALE

LAYER FRZ: HAT-*, OFF: REF
3/94 54-JLG YCC
1019503R/1019SG47.DWG

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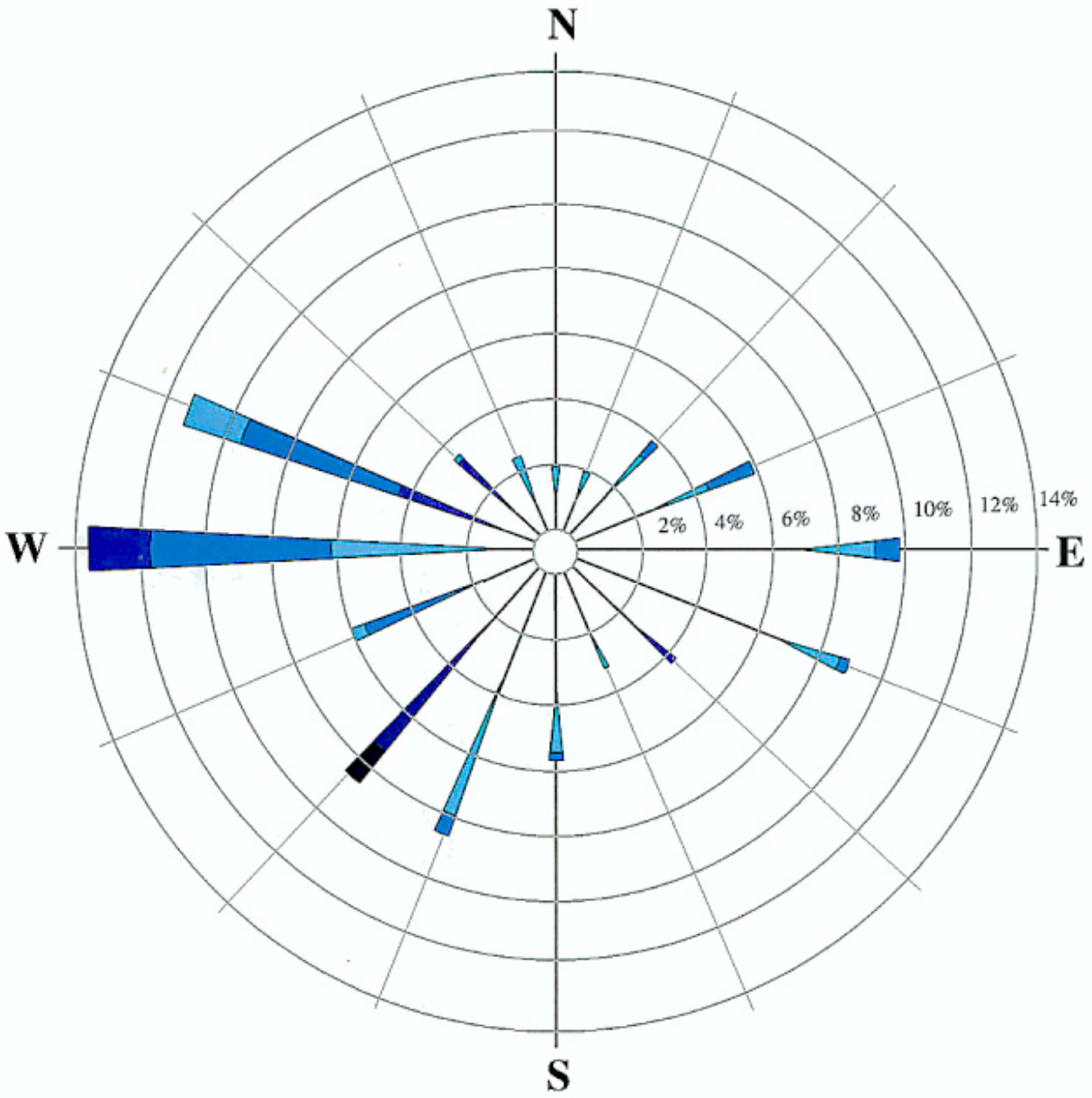
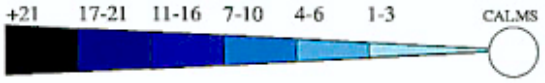
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT/CAS FOR USEPA AREA 5B

VEGETATIVE COVER PLAN FIGURE **2-5**



WIND SPEED (KNOTS)



NOTES:

1. INFORMATION WAS COLLECTED BY ZOREX ENVIRONMENTAL ENGINEERS, INC., DURING JANUARY 1 THROUGH DECEMBER 31, 1992 FROM A METEOROLOGICAL STATION LOCATED IN EAST STREET AREA 2/USEPA AREA 4.
2. FREQUENCIES INDICATE DIRECTION FROM WHICH THE WIND IS BLOWING.
3. CALM WINDS 2.94%.

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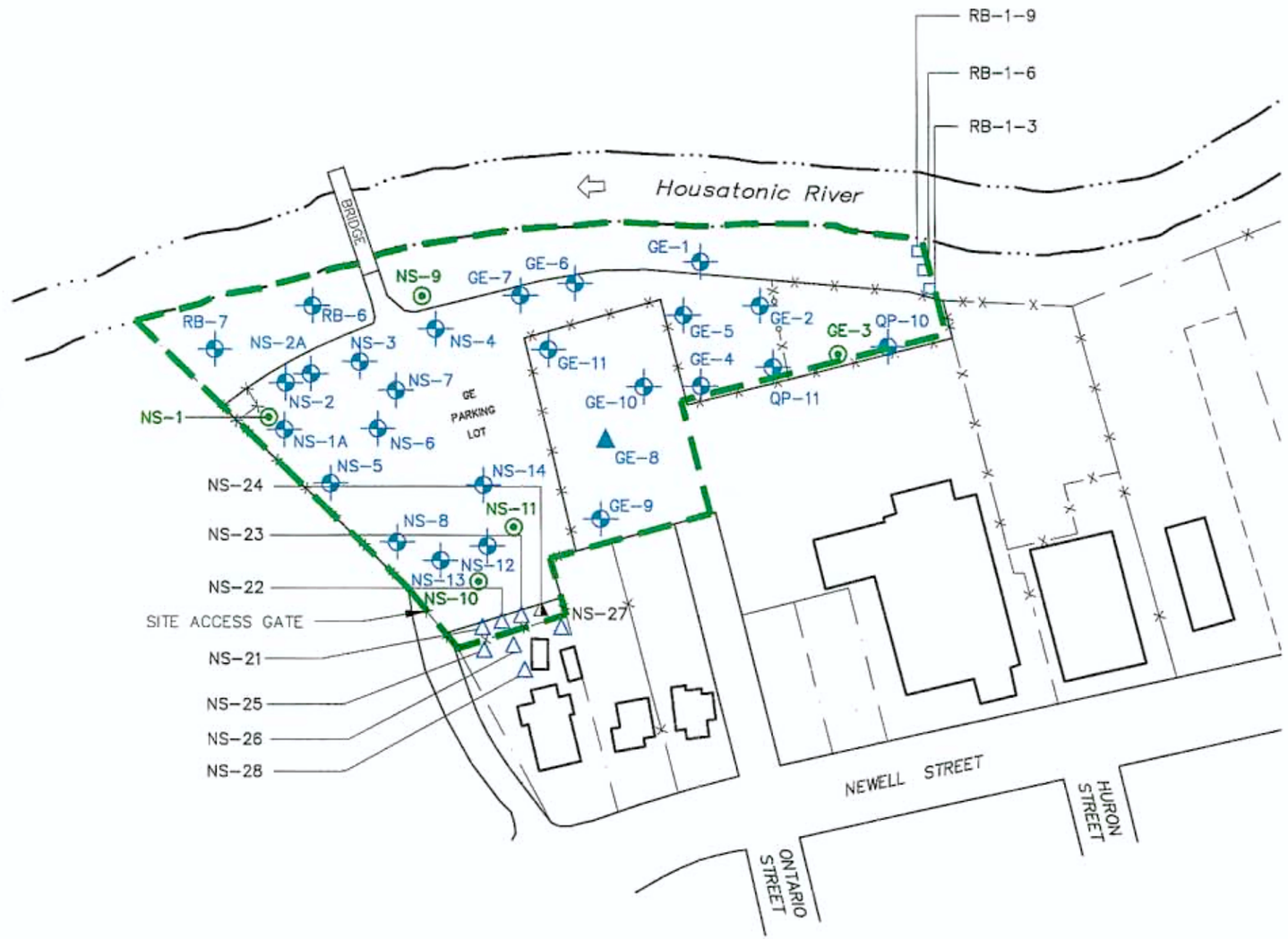
1992 WIND ROSE

FIGURE 2-6

01/94 54-PMC
2011401R/20114G02.CDR



LEGEND

- NS-21 — SURFACE SOIL PCB SAMPLE
- NS-24 — SURFACE SOIL APPENDIX IX SAMPLE
- GE-8 — SURFACE SOIL APPENDIX IX METALS SAMPLE
- RB-1-9 — RIVERBANK PCB SAMPLE
- GE-3 — MONITORING WELL
- NS-5 — SOIL BORING LOCATION
- —X—X—X— FENCING
- SITE BOUNDARY

NOTES:

1. SITE INFORMATION IS APPROXIMATE. ALL SITE FEATURES ARE NOT SHOWN.
2. ALL SOIL BORING, MONITORING WELL AND SAMPLE LOCATIONS ARE APPROXIMATE.

120' 0 120'
APPROXIMATE SCALE

LAYER FRZ: SP-PROP, OFF: REF
3/94 54-JLG YCC
1019603R/10196G34.DWG

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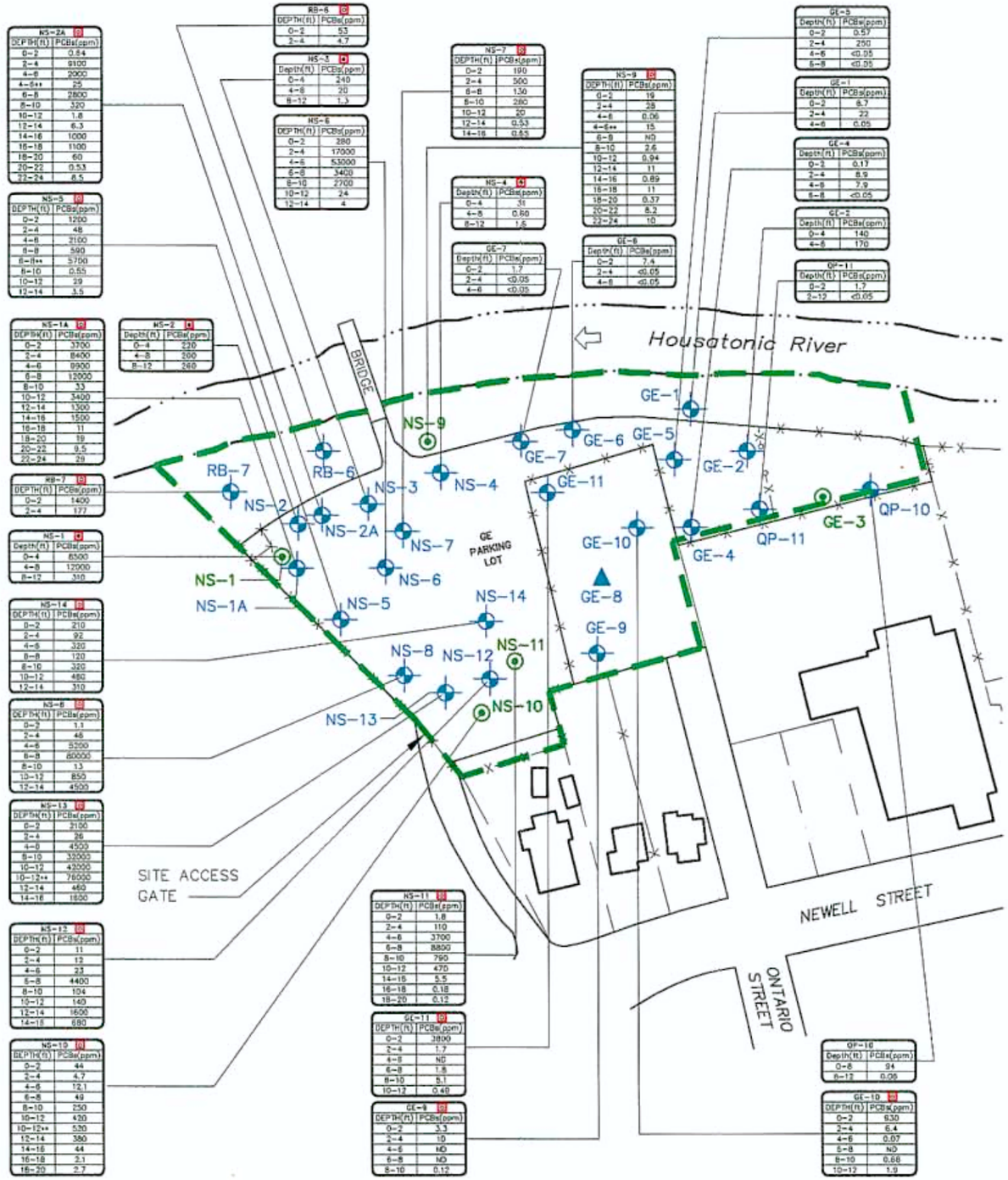
SUMMARY OF FIELD INVESTIGATIONS

FIGURE **4-1**



NS-2A	
DEPTH(ft)	PCBs(ppm)
0-2	0.84
2-4	9100
4-6	2000
4-6**	22
6-8	2800
8-10	320
10-12	1.8
12-14	6.3
14-16	1000
16-18	1100
18-20	60
20-22	0.53
22-24	8.5

RB-6	
DEPTH(ft)	PCBs(ppm)
0-2	53
2-4	4.7

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

NS-6	
DEPTH(ft)	PCBs(ppm)
0-2	280
2-4	17000
4-6	53000
6-8	3400
8-10	2700
10-12	24
12-14	4

NS-7	
DEPTH(ft)	PCBs(ppm)
0-2	190
2-4	560
6-8	130
8-10	280
10-12	20
12-14	0.53
14-16	0.65

NS-9	
DEPTH(ft)	PCBs(ppm)
0-2	19
2-4	28
4-6	0.06
4-6**	15
6-8	ND
8-10	2.6
10-12	0.94
12-14	11
14-16	0.89
16-18	11
18-20	0.37
20-22	8.2
22-24	10

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

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

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

GE-2	
Depth(ft)	PCBs(ppm)
0-4	140
4-6	170

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

NS-5	
DEPTH(ft)	PCBs(ppm)
0-2	1200
2-4	48
4-6	2100
6-8	590
6-8**	3700
8-10	0.65
10-12	29
12-14	3.5

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

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

GE-6	
Depth(ft)	PCBs(ppm)
0-2	2.4
2-4	<0.05
4-6	<0.05

NS-1A	
DEPTH(ft)	PCBs(ppm)
0-2	3700
2-4	8400
4-6	9900
6-8	12000
8-10	33
10-12	3400
12-14	1300
14-16	1500
16-18	11
18-20	19
20-22	9.5
22-24	29

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

RB-7	
DEPTH(ft)	PCBs(ppm)
0-2	1400
2-4	177

NS-1	
Depth(ft)	PCBs(ppm)
2-4	6500
4-8	12000
8-12	310

NS-14	
DEPTH(ft)	PCBs(ppm)
0-2	210
2-4	92
4-6	320
6-8	120
8-10	320
10-12	480
12-14	310

NS-8	
DEPTH(ft)	PCBs(ppm)
0-2	1.1
2-4	46
4-6	5200
6-8	60000
8-10	13
10-12	850
12-14	4500

NS-13	
DEPTH(ft)	PCBs(ppm)
0-2	2100
2-4	26
4-6	4500
6-10	32000
10-12	42000
10-12**	78000
12-14	460
14-16	1600

NS-12	
DEPTH(ft)	PCBs(ppm)
0-2	11
2-4	12
4-6	23
6-8	4400
8-10	104
10-12	140
12-14	1600
14-16	680

NS-10	
DEPTH(ft)	PCBs(ppm)
0-2	44
2-4	4.7
4-6	12.1
6-8	49
8-10	250
10-12	420
10-12**	530
12-14	380
14-16	44
16-18	2.1
18-20	2.7

NS-11	
DEPTH(ft)	PCBs(ppm)
0-2	1.8
2-4	110
4-6	3700
6-8	8800
8-10	790
10-12	470
14-15	5.5
16-18	0.18
18-20	0.12

GE-11	
DEPTH(ft)	PCBs(ppm)
0-2	2800
2-4	1.7
4-8	ND
6-8	1.8
8-10	5.1
10-12	0.40

GE-8	
DEPTH(ft)	PCBs(ppm)
0-2	3.3
2-4	10
4-6	ND
6-8	ND
8-10	0.12

GP-10	
Depth(ft)	PCBs(ppm)
0-8	94
8-12	0.05

GE-10	
DEPTH(ft)	PCBs(ppm)
0-2	630
2-4	6.4
4-6	0.07
6-8	ND
8-10	0.68
10-12	1.9

LEGEND

- THESE BORINGS WERE ALSO ANALYZED FOR VOC's & BASE/NEUTRAL ORGANICS
- THESE BORINGS WERE ALSO ANALYZED FOR APPENDIX IX CONSTITUENTS
- GE-3 — MONITORING WELL LOCATION
- NS-5 — SOIL BORING LOCATION
- —X—X—X— FENCING
- SITE BOUNDARY

NOTES:

1. SITE INFORMATION IS APPROXIMATE. ALL SITE FEATURES ARE NOT SHOWN.
2. ALL SOIL BORING AND MONITORING WELL LOCATIONS ARE APPROXIMATE.

120' 0 120'

APPROXIMATE SCALE

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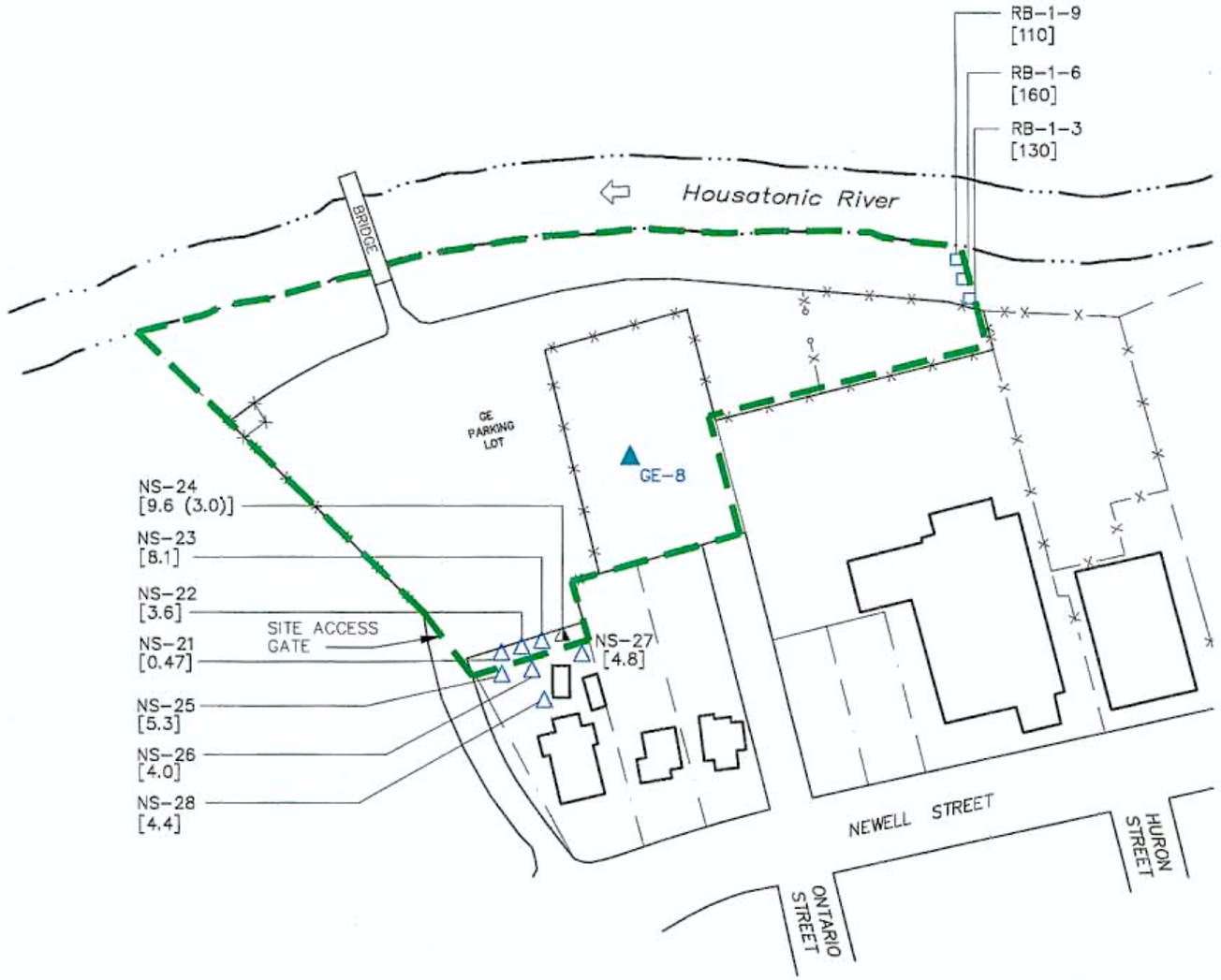
SUBSURFACE SOIL SAMPLING LOCATIONS AND PCB DATA — FIGURE **4-2**

LAYERS FRZ: SP-PROP, RB-SYM, PCB-SF-SYM, SURF-SYM, MTL-SF-SYM, OFF: REF
3/94 54-JLG YCC
1019603R/10196036.DWG



LEGEND

- GE-8 — SURFACE SOIL APPENDIX IX METALS SAMPLE
- NS-21 — SURFACE SOIL PCB SAMPLE
- NS-24 — SURFACE SOIL APPENDIX IX SAMPLE
- RB-1-9 — RIVERBANK PCB SAMPLE
- [12.6] — TOTAL PCB CONCENTRATION PARTS PER MILLION DRY WEIGHT (PPM). DUPLICATE RESULTS SHOWN IN PARENTHESES
- —X—X—X— FENCING
- SITE BOUNDARY

NOTES:

1. SITE INFORMATION IS APPROXIMATE. ALL SITE FEATURES ARE NOT SHOWN.
2. ALL SAMPLE LOCATIONS ARE APPROXIMATE.

120' 0 120'
APPROXIMATE SCALE

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ENGINEERS & SCIENTISTS

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PITTSFIELD, MASSACHUSETTS
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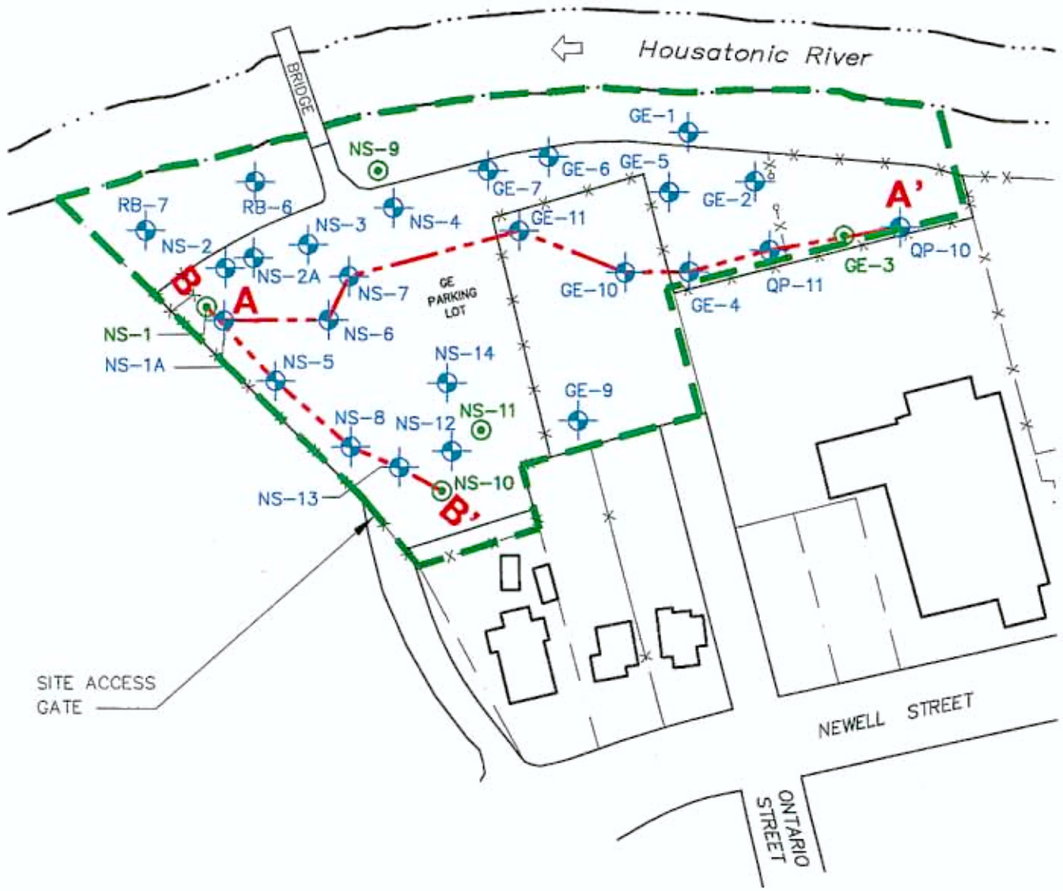
SURFICIAL SOIL SAMPLING LOCATIONS AND PCB DATA FIGURE **4-3**

LAYERS FRZ: SP-PROP, MWSB-SYM, MW-SYM, MW1-SYM, OFF: REF
3/94 94-JLG YDC
1019603R/10196042.DWG



LEGEND

- GE-3 — MONITORING WELL LOCATION
- NS-5 — SOIL BORING LOCATION
- —X—X—X— FENCING
- A'—A GEOLOGIC CROSS-SECTION LOCATION
- SITE BOUNDARY

NOTES:

1. SITE INFORMATION IS APPROXIMATE. ALL SITE FEATURES ARE NOT SHOWN.
2. ALL SOIL BORING AND MONITORING WELL LOCATIONS ARE APPROXIMATE.

120' 0 120'
APPROXIMATE SCALE

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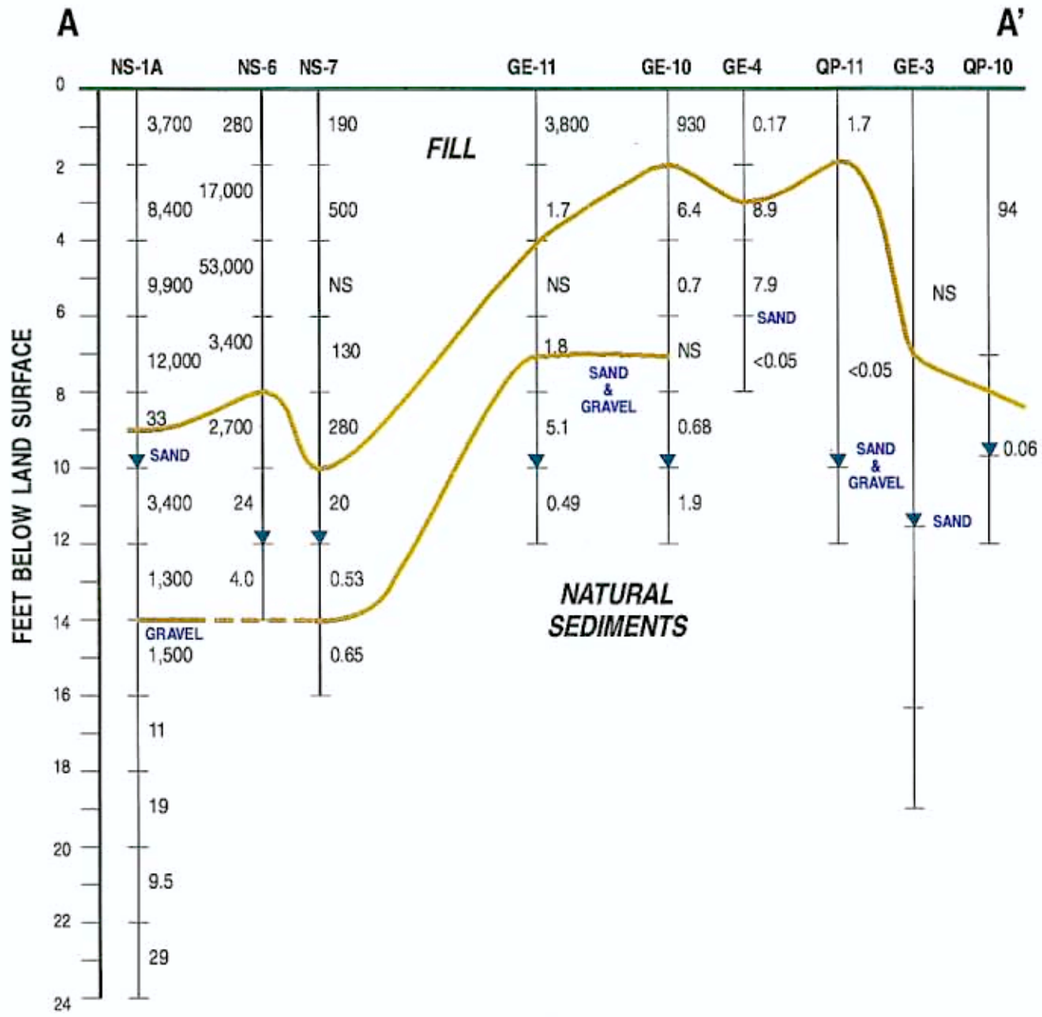
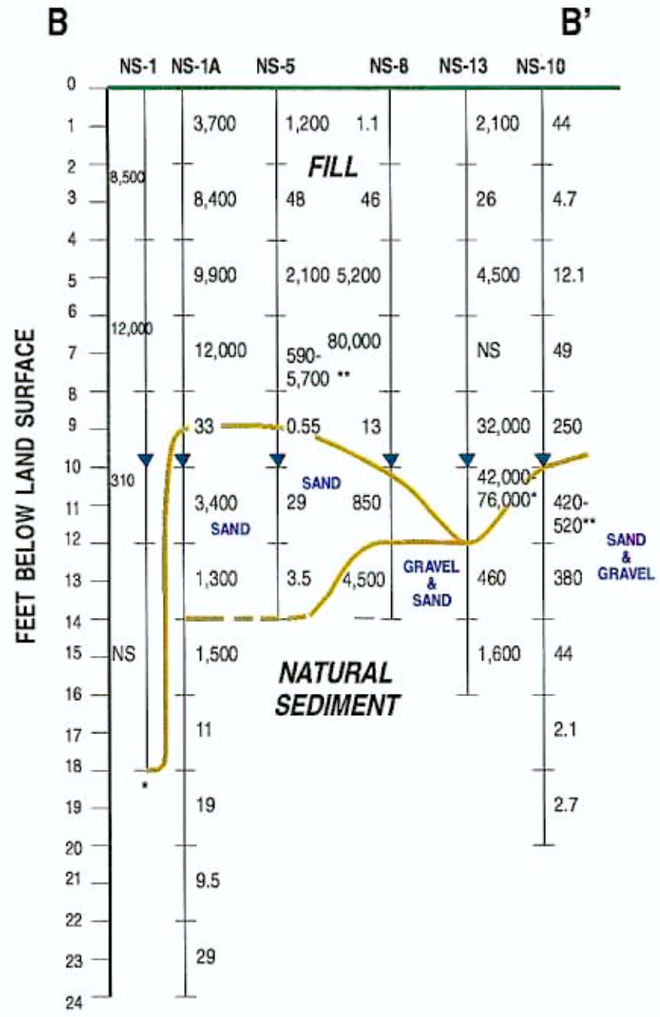
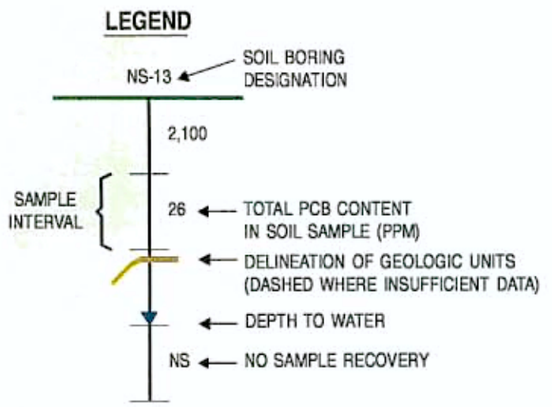
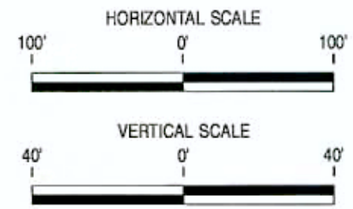
GEOLOGIC CROSS-SECTION LOCATIONS | FIGURE **4-4**

LAYERS FRZ: SP-PROP, RB-SYM, PCB-SF-SYM, SURF-SYM, MTL-SF-SYM, OFF: REF
3/94 54-JLC YCC
1019603R/10196045.DWG









* BOTTOM OF FILL NOT REACHED
** DUPLICATE SAMPLES

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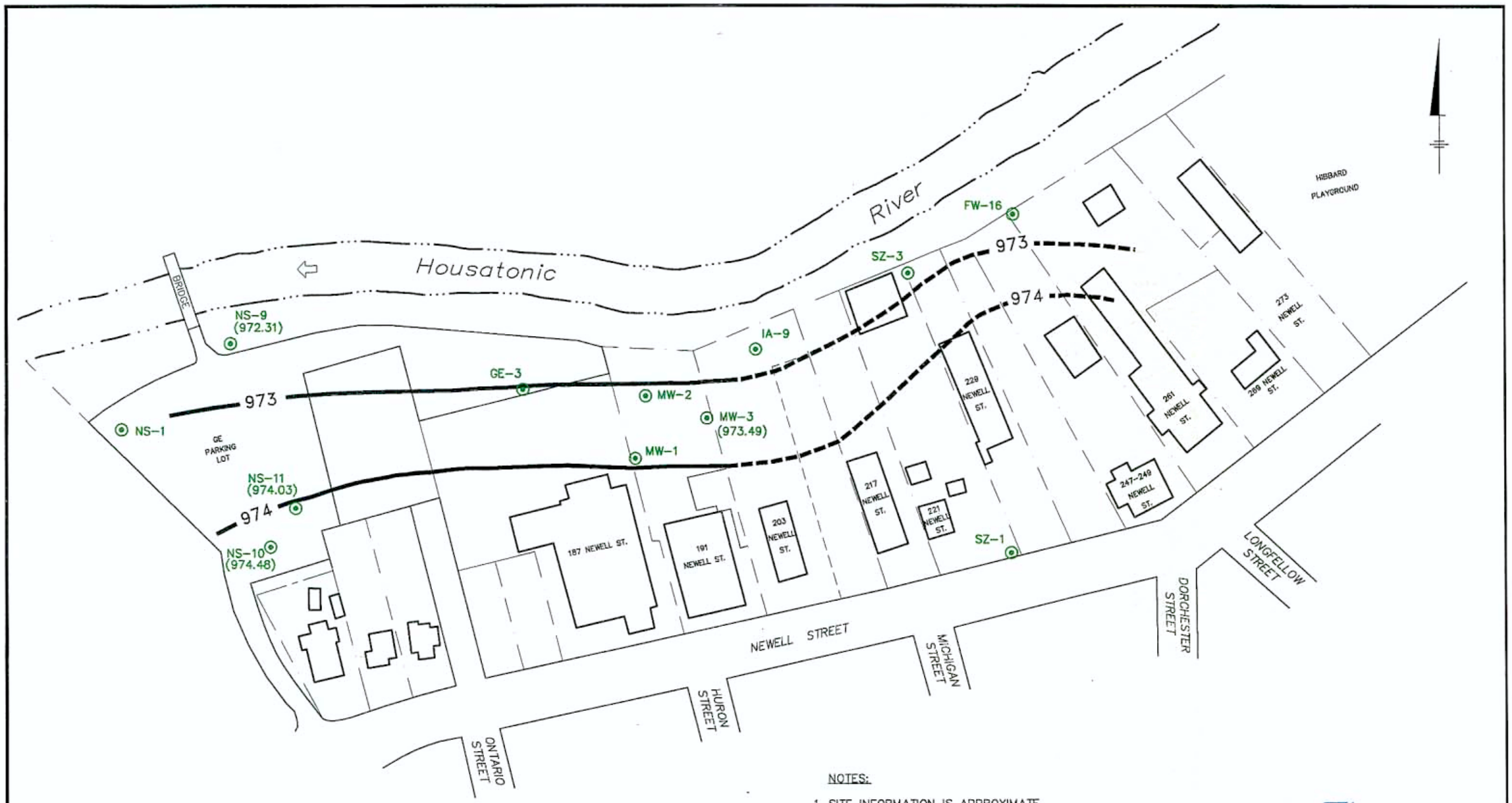
GEOLOGIC CROSS-SECTIONS NEWELL STREET PARKING LOT SITE

FIGURE **4-5**

02/93 D54-DJH
1019603R/10196N01.CDR



LEGEND

NS-1	MONITORING WELL LOCATION
(973.49)	GROUNDWATER ELEVATION
—973—	GROUNDWATER CONTOUR
- - - - -	INFERRED GROUNDWATER CONTOUR

NOTES:

1. SITE INFORMATION IS APPROXIMATE. ALL SITE FEATURES ARE NOT SHOWN.
2. ALL MONITORING WELL LOCATIONS ARE APPROXIMATE.
3. CONTOUR LINES DEVELOPED BY GERAGHTY AND MILLER, INC.

120' 0 120'
APPROXIMATE SCALE

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
MCP INTERIM PHASE II REPORT FOR NEWELL STREET PARKING LOT/CAS FOR USEPA AREA 5B

GROUNDWATER CONTOUR MAP DECEMBER 19, 1991

FIGURE **4-6**

3/94 54-JLG YCC
1019S03R/1019SG31.DWG