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# MCP INTERIM PHASE II REPORT AND CURRENT ASSESSMENT SUMMARY FOR EAST STREET AREA 2/USEPA AREA 4

VOLUME I OF **XII**

General Electric Company

Pittsfield, Massachusetts

August 1994

BLASLAND, BOUCK & LEE, INC.

*ENGINEERS & SCIENTISTS*

# MCP INTERIM PHASE II REPORT AND CURRENT ASSESSMENT SUMMARY FOR EAST STREET AREA 2/USEPA AREA 4

VOLUME I OF XII

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

AUGUST 1994

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# 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 East Street Area 2 Site (ID No. 1-0146), 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 July 1990. Second, this report constitutes a Current Assessment Summary (CAS) report for the area designated as USEPA Area 4, 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 and the USEPA have also executed a Memorandum of Understanding (MOU) that provides for coordination between them in reviewing GE's submittals related to the Consent Order and Permit. Pursuant to the MOU, this document has been prepared to facilitate a coordinated joint agency review.

A previous version of this report was submitted to the MDEP and USEPA on June 30, 1992. However, at that time, 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. This document is being reissued to incorporate new information that has become available since June 30, 1992.

As indicated above, this report is not only an MCP Interim Phase II Report, but also a Current Assessment Summary. Two other documents, one which constitutes an MCP Supplemental Phase II Scope of Work (SOW) and a RCRA Facility Investigation (RFI) Proposal for this site, and a second document, which constitutes a Preliminary Health and Environmental Assessment (HEA) Proposal for this site, are being submitted concurrently with this document.

## 1.2 Backaround Information

The East Street Area 2 Site is co-extensive with USEPA Area 4. It has been designated as a "disposal site" by the MDEP under the MCP and is considered to be in Phase II of the MCP process. It covers the entire western portion of the GE facility and is comprised of property owned by GE. However, it also includes railroad tracks and a public street that traverse the property. Figure l-l shows the general location of the East Street Area 2/USEPA Area 4 Site, and Figure 1-2 shows a more detailed site plan associated with the site.

The western portion of the GE facility in Pittsfield has been utilized by all three of the manufacturing divisions at the GE facility (Transformer, Ordnance, and Plastics). GE has been the owner/operator of most of this property since 1903, when it purchased the bulk of this property from the Stanley Electric Company, the property owner from 1890 to 1903. In addition, the Berkshire Gas Company (Berkshire Gas) and its predecessors had operations and facilities at a portion of the site from 1902 to 1973. Berkshire Gas has been designated by the MDEP as a potentially responsible party (PRP) at the site (MDEP, March 29, 1990). GE acquired the remaining portion of the site (a small strip of land along Newell Street) from the Beioit Corporation in 1968.

Over the years, GE has used this portion of its facility in various manufacturing operations, primarily the manufacture of electrical transformers and associated components. In addition, Berkshire Gas used a portion of the site for coal gasification activities. As a result of these operations. various oils, some containing polychlorinated biphenyls (PCBs), and other materials were inadvertently released to the environment. In addition, the site contains several other features of interest. These include: a former oxbow of the Housatonic River; former coal gasification facilities of the Berkshire Gas Company; and a scrap yard area. These features are discussed below, following a discussion of the subsurface oil at this site. A listing of the numerous studies that have been carried out at this site since 1980 is presented in Table 1-1.

### 1.2.1 Subsurface Oil

Although subsurface oil has been identified north of East Street, the majority of the oil plume currently exists south of East Street, extending toward the Housatonic River which borders the southern portion of the site. The occurrence of oil in this area has been extensively studied over the past decade.

Since the early 1960s, GE has implemented various programs to investigate and address environmental concerns at the East Street Area 2/USEPA Area 4 Site, including programs to locate and remove potentially leaking tanks and pipes and to collect oil already present in the ground. These programs focused initially on two sources: potential leaks in the oil storage/distribution system, and oils conveyed in the storm sewer system. In addition, oil collection systems were installed in the area south of East Street to remove oils from the subsurface oil plume in that area.

Starting in 1964, a new above-ground tank farm (Building 29 Area) was installed approximately 1,300 feet west of Building 12F (Figure l-2). As part of this program, existing pipelines were removed and reinstalled above

the ground surface or in subgrade conduits to facilitate visual inspection. In addition, process piping and holding tank use was evaluated and, where practical, rerouted. At the same time, potentially leaking pipes between tanks were replaced. The purpose of this work was to remove all known potentially leaking tanks and pipes from service.

During more recent years, GE has carried out numerous investigations and remedial measures at the East Street Area 2/USEPA Area 4 Site to address the oil plume on the water table and, in particular, to control and remove the oil portion of the plume as it migrates toward, and before it reaches, the Housatonic River. (A listing of studies and reports on these activities is included in Table 1-1 .) The remedial measures implemented by GE include a source management and cleanup program, the installation and operation of several oil collection and recovery systems in the area, and the installation of a subgrade slurry cutoff wall at the site to prevent or reduce the migration of the free-floating oil plume on the groundwater toward the Housatonic River (see Figure l-2).

There are four active oil collection and recovery systems within the East Street Area 2/USEPA Area 4 Site. These oil recovery systems generally consist of recovery wells and/or subgrade caissons, where water and oils are collected from the subsurface groundwater table. The wells/caissons allow the oils to separate from the groundwater, and the oils are then removed by an engineered pumping system positioned on top of the water table within each system. The removed oils are subsequently collected and incinerated at GE's Toxic Substance Control Act-regulated (TSCA-regulated) Thermal Oxidizer located in the south central portion of East Street Area 2. To date, more than 450,000 gallons of oil have been removed from the subsurface of the site.

Before October 1991, the recovered groundwater entered a retention structure to allow any remaining floating oils to separate. The separated water was then discharged to a pond known as the groundwater recharge pond (see Figure I-2). According to the terms of the July 1990 Consent Order, GE submitted a Short-Term Measure (STM) plan for ceasing discharge of untreated, separated water from its oil recovery systems into the groundwater recharge pond in August 1990. That plan proposed the construction and operation of a groundwater treatment facility to remove PCBs, other organic constituents, and metals from the recovered groundwater prior to discharge. This treatment plant (named 64-G) was constructed during the summer of 1991 and became operational in October 1991. The majority of treated water from the treatment plant is discharged to the Housatonic River through a National Pollution Discharge Elimination System - permitted (NPDES-permitted) outfall. A small portion of the treated water, however, is still discharged to the groundwater recharge pond to maintain a groundwater mound in this area. The groundwater mound assists in restricting migration of the oil plume toward the river. A more detailed discussion of on-going and proposed oil recovery and Short-Term/Interim Measure activities is provided in Sections 4.2.4 and 4.2.5., respectively.

Site investigations have also identified the occurrence of small intermittent oil seeps along the banks of the Housatonic River at the East Street Area 2/USEPA Area 4 Site. Following identification of these occasional oil seeps, GE installed a temporary containment system, consisting of floating oil-absorbent booms, to collect the small amount of oil seeping into the river and prevent it from flowing downstream.

In addition, in 1989 and 1990, GE conducted a study to identify the source of the intermittent seepage and to evaluate potential prevention or

control methods. This "River Bank Study" investigated the source of the oil seeps through the installation of a series of borings and piezometers. Details regarding this investigation, as well as the associated results, are presented in a report entitled "Area 2 River Bank Investigation" (GE, August 1990a) and are summarized in Section 4.2.1 of this report.

In general, as a result of this investigation, GE provided a proposal as part of the MCP process to the MDEP in August 1990 for the implementation of an STM for the oil seep in the riverbank area of the East Street Area 2/USEPA Area 4 Site (GE, August 1990b). (A copy of that report was also provided to the USEPA.)

The August 1990 STM proposal led to the implementation of a passive oil recovery program involving wells and piezometers near the riverbank in this area. The proposal also led to the performance of a specific study involving evaluation of the existing systems, various pumping tests, and use of a groundwater flow model to assess additional active recovery measures. The results of this specific study, together with a proposal for additional measures, were submitted to the MDEP on April 30, 1992 in a document entitled "Pumping Test Analyses and Evaluation of Recovery Measures' (Golder, April 1992). (A copy was again provided to the USEPA.) GE's proposal for additional measures called for a phased approach involving the installation of a new active oil recovery well and pumping equipment adjacent to the most active riverbank seep zone; operation of this new pumping well for a six-month period: and at the end of this period, an assessment of the effectiveness of these systems and, if appropriate, the need for additional active recovery wells.

GE implemented these activities and certain modifications with MDEP approval and provided a system evaluation to the MDEP on June 10, 1993 in a report entitled "Evaluation of River Bank Recovery Measures: RW-1 (X)

System, East Street Area 2" (Golder. June 1993). A copy was also sent to the USEPA.

Further information related to the control of intermittent oil seepage into the Housatonic River is provided in Section 4.2.5.

### 1.2.2 Former Oxbow

At one time, an oxbow of the Housatonic River was present within the East Street Area 2/USEPA Area 4 Site (see Figure l-2). (This former oxbow is referred to by GE as Oxbow Area H for purposes of its investigation of a number of former oxbow areas in this stretch of the river.) Due to a rechannelization project reportedly performed by the Army Corps of Engineers in the late 1930s or early 1940s, this oxbow was cut off from the flow of the Housatonic River. The oxbow was subsequently filled with materials from GE, Berkshire Gas, and possibly others. The only remaining indication of the former oxbow is the groundwater recharge pond (see Figure 1-2). Presently, the former oxbow channel appears to be influencing the direction and flow of the oil plume. as discussed in Section 4.2.3. This may be attributed to the variance of the physical properties of the fill deposits which are more permeable than native deposits in the vicinity.

### 1.2.3 Former Coal Gasification Facilities

A portion of the East Street Area 2/USEPA Area 4 Site, not purchased by GE in 1903, was owned by another company and used for the operation of a coal gasification plant. Specifically, the Pittsfield Coal Gas Company operated a gas manufacturing and gas storage plant at the site from 1902 until the advent of natural gas to the New England area in 1953. The plant generated coal tars, oil tars, and liquors as well as drip oils and sludges that were either sold or, if a market was not available, reused in the gas process. In addition to the production of gas and associated products, residual byproducts, such as iron oxide chips, heavy sludges, and

cinders, were generated, and have been found in the former oxbow during subsequent investigative activities. The location of the former coal gasification facilities is shown in Figure 1-3.

With the introduction of natural gas supplies to the New England area, the Pittsfield Coal Gas Company reorganized, changing its name to the Berkshire Gas Company in 1954. During the next several years, construction and renovations were carried out to convert the facility from a coal gas manufacturing facility to a natural gas distribution facility. During that period, large portions of the coal gas equipment and structures, such as oil gas purifiers and retorts, were retired and disassembled.

In 1973, Berkshire Gas sold this property to GE. In preparation for the sale, the Berkshire Gas property and equipment on both the north and south sides of East Street were decommissioned. The decommissioning process involved a number of phases instituted by Berkshire Gas, which reportedly included the hauling of waste sludges and tars off-site, deposition of materials in the former oxbow, and in-place abandonment of waste tars, liquors, oils, sludges, and related equipment. These activities were completed prior to the 1973 sale, and GE has since retained ownership of the property on both sides of East Street.

In a letter dated March 29, 1990, the MDEP issued a Notice of Responsibility to the Berkshire Gas Company under the MCP regarding the Berkshire Gas Company's former operations at the East Street Area 2/USEPA Area 4 Site.

### 1.2.4 Scrap Yard

The southwest section of the GE facility contains a scrap yard (see Figure 1-2), which has been used since 1937 as a scrap metal crushing, sorting, and storage area. This area is also referred to as the Materials

Reclamation Center. The scrap yard, currently covered by asphalt and concrete, encompasses an area of approximately two acres.

### 1.2.5 MCP Phase II Scope of Work

Pursuant to the Consent Order executed by GE and the MDEP effective July 2, 1990, GE was required to undertake a Phase II Comprehensive Site Assessment of the site under the MCP, and to prepare and submit a report thereon. In accordance with the MCP and the 1990 Consent Order, GE prepared a SOW for the Phase II Comprehensive Site Assessment of the site. That SOW, which incorporated MDEP comments on a prior draft, was submitted to the MDEP in August 1990, accompanied by a Supplemental Data Summary, which presented the results of investigations conducted prior to that date. The revised SOW was approved by the MDEP (subject to certain conditions) in a letter dated November 7, 1990.

The principal objectives of the Phase II Comprehensive Site Assessment for the site were to: 1) identify the presence of PCBs and other contaminants in soils and fill materials; 2) determine the extent to which groundwater quality has been impacted by site activities; 3) characterize three potential source areas that had not been investigated in detail previously (namely, the former Housatonic River oxbow, the Scrap Yard Area, and the former Berkshire Gas facility locations and fill areas); and 4) determine the extent and impacts (if any) of site contaminants on human health and the environment.

The field investigations called for in the MCP Phase II SOW for the site began in November 1990. This report summarizes the scope and findings of the MCP Phase II investigations of this area to date.

### 1.2.6 RCRA-Regulated Units

There are two active RCRA-regulated units located within the East Street Area 2/USEPA Area 4 Site used in the treatment, storage, or disposal

(TSD) of hazardous constituents. These units are the groundwater recharge pond and the Thermal Oxidizer, both of which are currently regulated under USEPA's RCRA program for TSD facilities. (The Thermal Oxidizer is also regulated under the TSCA.) These units are described in this section.

The groundwater recharge pond is located in the south-central section of the site, north of the Housatonic River (Figure 1-2). The pond occupies an area approximately 100 feet long and 70 feet wide in a former oxbow section of the Housatonic River and is lined with gravel banks. Based on historical photographs, the unit reportedly did not appear as a pond until approximately 1969.

Prior to October 1991, the groundwater recharge pond was used to receive all the recovered, separated groundwater that was collected from the oil recovery systems in East Street Area 2. This continued influx of groundwater into the recharge pond was useful in creating a groundwater mound in this area, which assisted in restricting migration of the oil plume toward the river. Since the 64-G Groundwater Treatment Facility became operational in October 1991, a relatively small portion of the groundwater that is collected from the oil recovery systems and treated in that Treatment Facility is discharged to the groundwater recharge pond, This is done, as necessary, to maintain the water elevation in the pond and the associated groundwater mounding. (The remainder of the treated water is discharged to the river via a NPDES-permitted outfall.)

The Thermal Oxidizer Facility is located in the south-central portion of the Site, south of East Street, just east of the western limb of the former oxbow (see Figure 1-2). The commercially-operated Thermal Oxidizer facility includes all of the structures, equipment, storage tanks, and process equipment necessary to destroy liquids containing PCBs. Shipments of

liquid PCB wastes are delivered to the facility and transferred to one of several storage tanks within an associated storage tank facility.

Depending on the characteristics of the liquids in the storage tanks, the liquids are blended by GE to achieve a desired PCB and chlorine content. Three storage tanks within the storage tank facility are designated as the PCB mix tanks, or the PCB "burn" tanks. The PCB liquids within these tanks are ultimately transferred via pipeline to the Thermal Oxidizer for incineration.

Liquid PCB waste oil is injected into the Thermal Oxidizer through a series of atomizing nozzles. The nozzles discharge the atomized waste into a high temperature oxidizing region where the waste is combusted and a gaseous product is produced. The Thermal Oxidizer provides a minimum of two seconds of residence time for the destruction of PCBs.

Combustion gases exit the Thermal Oxidizer and enter the downcomer section of the quench pot. In the downcomer, the gases are cooled by water which is sprayed across the gas stream. In addition to cooling the gas, the water spray also removes hydrochloric acid (HCI), which is present in the gas stream as a result of combustion of chlorinated compounds. As the water droplets containing HCI fall into the quench pot. the HCI is neutralized by a sodium hydroxide solution that enters the system at the quench pot.

The combustion gases leave the quench pot and are directed into a packed bed scrubber. The gas stream is drawn through 12 feet of packing material which is wetted from above with an alkaline water mixture. The remaining HCI in the gas stream is removed in the scrubber. The gas stream then passes through an induced draft fan and exits through the exhaust stack.

### 1.2.7 Background Information on Remainder of Site

A number of USEPA-designated SWMUs are present in the remainder of the East Street Area 2/USEPA Area 4 Site and generally consist of underground storage tanks, oil/water separators, and several miscellaneous areas. Further details regarding these SWMUs are included in Section 3.

To the immediate west of a portion of East Street Area 2/USEPA Area 4 is Silver Lake. NPDES-permitted discharges from the GE facility, as well as stormwater runoff from the City of Pittsfield storm sewer system, are routed to the lake, which in turn discharges to the Housatonic River. Silver Lake is subject to investigation as part of the Housatonic River site, and separate reports entitled "MCP Interim Phase II Report/Current Assessment Summary for Housatonic River" (Blasland & Bouck, December 1991) and "Addendum to MCP interim Phase II Report/Current Assessment Summary for Housatonic River" (Blasland & Bouck, August 1992) provide details associated with the lake.

## 1.3 Format of Document

This document is divided into several sections. These sections include a detailed description of site location and history, a summary of previous investigations conducted at the site, the results of the MCP Phase II investigations to date, and characterization of the presence of PCBs and other hazardous constituents associated with the site.

Specifically, this Section 1 presents pertinent background information. Section 2 describes the physical and environmental setting of the site. It includes site maps and photographs, and discusses topography, surface drainage, vegetation. surface water and flooding potential, wetlands and critical wildlife habitats, geology and groundwater/hydrogeology, land use, climatology/ meteorology, and utilities.

Section 3 provides an identification and characterization of potential sources of contamination at the site. This includes a description of various SWMUs, as identified in the Permit.

Section 4 presents and discusses the hydrogeologic investigations performed prior to and as part of the recent MCP activities, and provides an overall hydrogeologic characterization of the site. Sections 5 through 8 discuss the results of other field investigations associated with the site, both prior to and as part of the MCP activities. In particular, these sections present and discuss data associated with the surface water and sediments of the Housatonic River adjacent to the site, as well as surficial soils, miscellaneous soils investigations, and air monitoring at the site.

Section 9 presents fate and transport characteristics associated with hazardous constituents detected at the site. Section 10 discusses potential migration pathways based on the information contained in the previous sections, while Section 11 identifies remaining data needs. Finally, Section 12 presents conclusions and future activities.

implemented by GE in an effort to accelerate the rate of oil recovery in this area.

- The main oil plume is in contact with groundwater throughout a majority of the gas plant area and a portion of the former oxbow. The concentrations and types of constituents detected in the two oil samples obtained from oil recovery caissons 64V and 64S as part of MCP activities varied. The oil in caisson 64V had higher concentrations of VOC and PAH compounds than did oil sampled from caisson 64S. Oil in caisson 64S had higher concentrations of PCBs.

12.1.2 Former Oxbow and Gas Plant Area

- Various constituents were detected in the soil/fill in the former oxbow and gas plant area.
  - Total concentrations of VOCs in soil/fill in this area were generally quite low, with the exception of a fill/tar sample from boring X-19, which was advanced in the location of the former tar separator. Where detected, VOCs were composed primarily of BTEX and chlorobenzene.
  - SVOCs were detected in soil/fill at higher concentrations than VOCs, particularly in the area of the former gas plant and those portions of the former oxbow in the vicinity of the former gas plant. The majority of SVOCs detected were PAHs, although others were detected less frequently and at lower concentrations.
  - PCBs were detected in soil/fill generally at relatively low concentrations. PCB concentrations typically decreased with depth and were generally not found in native deposits. Most borings with high PCB levels were located in the western limb of the former oxbow.

- Inorganics, primarily metals, were also detected at some locations in the soil/fill, although, as discussed below, they do not appear to be migrating significantly to groundwater.

- Despite the presence of these constituents in the soil/fill, certain site-specific factors in this area would be expected to limit the potential for such constituents to migrate to groundwater. The water table was not observed at a majority of the boring locations north of the former oxbow, and the water table in the western limb of the oxbow was predominantly below the depth of the fill. The potential for constituents in the fill material to dissolve into and migrate with groundwater is reduced when groundwater is not in contact with the fill material. However, the water table in the eastern limb of the former oxbow was at or above the depth of fill. The elevations of groundwater in the eastern oxbow limb may be influenced by the recharge pond, which produces a localized groundwater mound. Some of the oxbow and gas plant area is covered with pavement or vegetation, which can reduce the degree of infiltration and therefore the dissolution and leaching of some constituents from soil/fill to groundwater.

- With the exception of three wells (64, ES2-6, and 54), concentrations of VOCs and SVOCs in groundwater were relatively low. Well 64 showed anomalously high concentrations of VOCs. Wells ES2-6 and 54 showed relatively high concentrations of BTEX, with well ES2-6 exhibiting relatively high levels of PAHs as well. These localized anomalies will be investigated further as discussed in Section 11.

- No PCBs, pesticides, or herbicides were detected in the groundwater in this area.

- Despite the inorganics found in the soil/fill in this area, the number and concentrations of metals detected in groundwater were low.

- The presence of DNAPL was detected at well ES2-6. Analytical results of this DNAPL indicate elevated concentrations of PAHs and no PCBs. Additional activities to determine the potential impact to groundwater associated with this DNAPL are needed as described in Section 11.

12.1.3 Scrap Yard Area

- VOC concentrations detected in soil/fill in the scrap yard area were low, with total VOC concentrations of less than 0.1 ppm detected in 27 of the 29 borings sampled. Where detected, the VOCs were composed primarily of aromatic hydrocarbon and chlorinated hydrocarbon compounds. SVOC concentrations in the soil/fill in this area were generally less than 100 ppm. The SVOCs detected consist principally of PAHs, although other compounds were detected as well. PCBs were detected in scrap yard soil/fill at generally low concentrations. The higher PCB concentrations were found primarily in the eastern and southeastern portion of the scrap yard area adjacent to the former oxbow. PCB concentrations generally decreased with depth and were relatively low in native deposits. A number of inorganics were also detected in the scrap yard soil/fill at variable concentrations, as would be expected in an area where metal was stored and recycled.

- The water table is generally below the bottom of the fill material throughout the majority of the scrap yard area. Because the groundwater is generally below the fill material, the potential for constituents in the fill material to dissolve into and migrate with groundwater is significantly reduced. The majority of the scrap yard

area is also covered with pavement, thus further reducing the potential for vertical migration of constituents during precipitation events.

- Groundwater quality data in the scrap yard area indicate that although the soil and fill material contains both organic and inorganic constituents, the majority of these constituents were not detected in groundwater samples, and those constituents that were detected in groundwater are present at considerably lower concentrations. PCBs were not detected at all in the groundwater in this area.

12.1.4 Remainder of East Street Area 2/USEPA Area 4

- Few organic or inorganic constituents were detected in soils in the remainder of the East Street Area 2/USEPA Area 4 Site.
- Groundwater analysis at nine wells in this area similarly found few constituents above detection limits, thus indicating no significant effect on groundwater in this portion of the facility.

12.1.5 Continuity and Nature of Till

- Subsurface logs from 30 borings throughout the East Street Area 2/USEPA Area 4 Site indicate that glacial till exists below fluvial deposits and fill material at depths ranging from: 0 to 10 feet below ground surface in the area north of the railroad tracks; 17.5 to 38 feet below grade adjacent to East Street; and 36 to 43 feet below grade in the area south of East Street;
- Glacial till is characterized in the 30 subsurface logs as “very dense silt”, “dense sand”, “silt and gravel till”, and “gravel till”, and by a significant increase in bulk density as determined by blow counts (“n" values > 25).
- The minimum till thickness determined from the 30 site-wide boring logs ranged from 1 to 20 feet.

- The till surface elevation map, as interpreted from the boring logs, indicates that the till surface decreases in elevation 80 feet from the northern to southern boundaries of the East Street Area 2/USEPA Area 4 Site (at a gradient of approximately four percent).
- The till surface elevation map suggests the presence of a relatively narrow north-south oriented valley that extends from the railroad tracks to the recharge pond. The feature appears to have down-cut into the till surface and may be the remnant of a Pleistocene glaciofluvial stream channel.
- he presence of glacial till interpreted from the boring logs correlated stratigraphically in the geologic cross-sections, thereby indicating that the till appears to be continuous throughout the East Street Area 2/USEPA Area 4 Site.

12.1.6 Impact on Housatonic River

- The potential effects of groundwater and oil migration from the site on the Housatonic River have been assessed through sampling and Appendix IX+3 analysis of the surface water and sediments of the river upstream, adjacent to, and downstream of this site.
- As shown in Section 5, the water column data from the river indicate that possible releases from the this site in groundwater and/or oil have no significant impact on the surface water quality of the river.
- As shown in Section 5, the sediment data from the river indicate the presence of elevated levels of a few hazardous constituents at certain localized areas, notably the Lyman Street Bridge. These elevated levels may be attributable to prior releases from this site or to other sources. Otherwise, however, apart from PCBs, the sediment data do not indicate any significant overall impact of the site on constituents in the river sediments.

### 12.1.7 Surficial Soils and Air Quality

- As part of MCP Phase II activities, surficial soil was sampled at five locations at this site and analyzed for Appendix IX+3 constituents. The results indicate that a number of constituents, most notably PAHs and PCBs, were found at relatively low concentrations in these soils.
- An air monitoring investigation was performed as part of Phase II activities to determine if PAHs at this site, particularly in the area of the former coal gasification facilities, were susceptible to airborne migration and are contributing to ambient levels of PAHs. This monitoring was conducted in August 1991 under meteorological conditions that would be conducive to finding airborne levels of PAHs. The air samples were analyzed for 17 PAHs (many of which were detected in surficial soils in this area). The results of the monitoring showed that none of these PAHs were found above the detection limit of 0.417 ug/m3.
- Potential airborne migration of PCBs from surficial soils or other sources in the site were assessed through the year-long Facility Air Monitoring Program. This program showed relatively low levels of PCBs in the ambient air at the site, with somewhat higher levels near Silver Lake. It identified Silver Lake as a potential source of airborne PCBs in this area.

## 12.2 Future Activities

Section 11 of this document has identified several data gaps concerning the presence and extent of hazardous materials at the East Street Area 2/USEPA Area 4 Site. The separately bound MCP Supplemental Phase II SOW/RFI Proposal for this site describes the field activities intended to fill those data needs. Following the MDEP's review and approval of this Interim Phase II

Report/CAS and the separately bound MCP Supplemental Phase II SOW/RFI Proposal, the activities described in the latter document will be performed. After the performance of these activities, all data will be completed, presented, and interpreted in a MCP Supplemental Phase II/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. After performance of the risk assessment activities, the MCP Final Phase II Report (including the risk assessment) and the HEA Report will be submitted, together with a Media Protection Standards Proposal for this site.