7. Deposited Sediment Sampling

7.1 General

The objectives of the deposited sediment sampling program are to identify and evaluate the potential presence of PCBs in the materials that have been deposited on top of the armor stone since completion of the Upper ½-Mile sediment remediation and restoration activities.

7.2 Monitoring Program

The Work Plan requires the performance of three rounds of sampling of the materials on top of the cap in the Upper ½-Mile Reach at 5-year intervals, beginning 5 years after completion of construction of the sediment removal/replacement activities. The sampling conducted in 2007 was the first such sampling event, and involved the collection of sediment grab samples at locations specified in the Work Plan. Additional sampling of the deposited sediments on the cap will be conducted in 2012 and 2017, as discussed in Section 8.6 of this report.

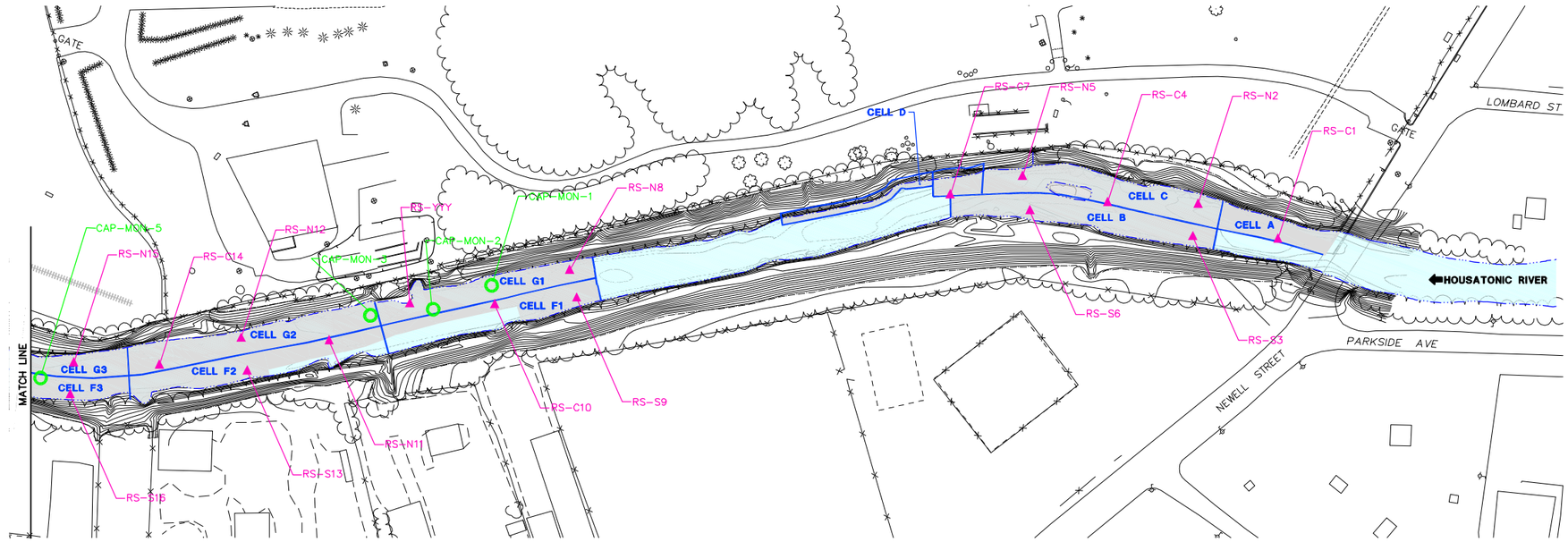
7.3 2007 Monitoring Activities

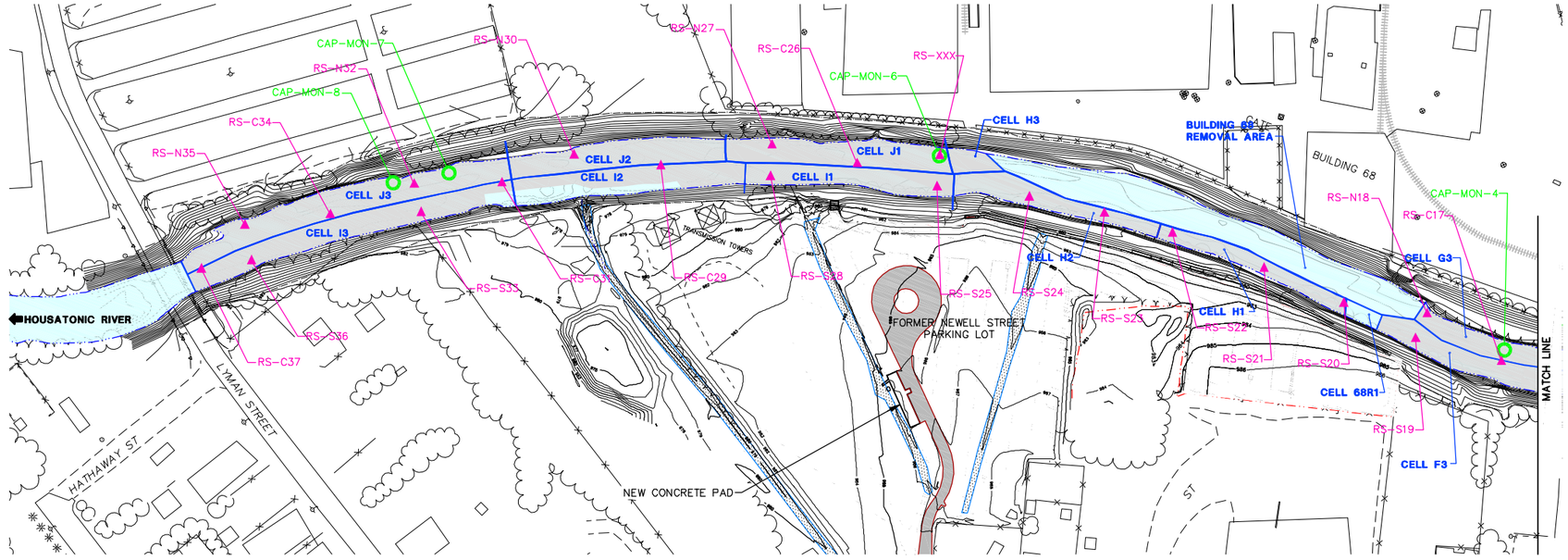
Sediment samples were collected from the Upper ½-Mile Reach on May 24 and 25, 2007. In total, GE collected 39 samples (plus two duplicates) of the surface sediments (top 6 inches or less) and 12 samples (plus one duplicate) of subsurface sediments (deeper than 6 inches), for a total of 51 sediment samples (plus three duplicates). Approximate locations where these sediment samples were collected are shown on Figure 6-1. All samples were analyzed for PCB and TOC by NEA and portions of 23 of these samples were also submitted to Geotechnics, Inc. in Pittsburgh, Pennsylvania, for grain size analysis. At the time of sample processing, Weston Solutions, Inc., on EPA's behalf, collected 12 split samples (plus one duplicate) for analysis.

Sediment sampling locations available on following page

Location-specific sediment probing thickness, maximum recovery lengths and grain size analytical data are summarized in Table 7-1. Field observations at the time of sample collection noted a petroleum odor at five locations; four of these locations were located at the upstream end of the Upper ½-Mile and the fifth (RS-C17) was located at the approximate mid-point of the Upper ½-Mile (see Table 7-1 and Figure 6-1).

Analytical results for PCBs and TOC in the sediment samples collected by GE are presented in Table 7-2. Of the 51 sediment samples (after averaging the duplicate results), 45 samples (88%) showed PCB concentrations less than 1.0 mg/kg, 44 (86%) less than 0.5 mg/kg, and 12 (24%) less than 0.1 mg/kg. Three samples had no detectable PCB





LEGEND:

- APPROXIMATE WATER LINE
- BUILDING
- CHAIN LINK FENCE
- TREE/SHRUB
- 2007 DEPOSITED SEDIMENT SAMPLING LOCATION
- 2007 ISOLATION LAYER SAMPLE COLLECTION LOCATION
- REMOVAL CELL BOUNDARY
- REMOVAL AREAS INCLUDED IN THE 1/2-MILE REACH REMOVAL ACTION

NOTES:

1. ALL LOCATIONS AND SURFACE FEATURES ARE APPROXIMATE.

0 80' 160'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
UPPER 1/2-MILE REACH OF THE HOUSATONIC RIVER

2007 SEDIMENT AND ISOLATION LAYER SAMPLING LOCATIONS

ARCADIS

FIGURE
1

SYR-85-NES JHR BGP
LAYER: ON=*; OFF=*REF*
G:\CAD\GE-CAD\N-ACT\B0020197\0000\00026\20197101.DWG SAVED:1/30/2008 2:39 PM LAYOUT:1 PAGESETUP:---- PENTABLE:PLTFULL.CTB PRINTED:1/30/2008 2:41 PM BY:BDECLERCQ
PROJECTNAME:----
XREFS:
20197X01
20197X02
20197X08
IMAGES:

ARCADIS
Infrastructure, environment, facilities

Imagine the result

General Electric Company
Pittsfield, Massachusetts

2007 Annual Monitoring Report

Upper ½-Mile Reach of the Housatonic River

January 2008