

concentrations that either: (a) do not exceed the Method 1 soil standards specified in the Massachusetts Contingency Plan (MCP) (or MCP Method 2 standards, if developed);⁴ or (b) are shown through an area-specific risk evaluation to have cumulative risk levels that do not exceed (after rounding) an excess lifetime cancer risk of 1×10^{-5} and a non-cancer Hazard Index of 1.

3.2 Sediment

As set forth in the SOW and modified in subsequent discussions with EPA, the Performance Standards for Silver Lake sediment remediation are briefly summarized below:

- GE is required to remove a maximum of 400 in-situ cy of sediments from an area in the general vicinity of former Outfall 01A, replace the removed sediments, and restore and vegetate that portion of the affected area that is not underwater in coordination with the installation of the sediment cap.
- GE is also required to install a cap over the lake bottom to achieve the design standards set forth in Attachment K to the SOW, including an isolation layer consisting of silty sand with: (a) a presumptive thickness of 10 inches in near-shore areas, where a geotextile will be placed over the sediments and armor stone will be placed on top of the isolation layer, and 14 inches in the remaining areas (which will not have a geotextile or armor stone);⁵ (b) a TOC content of 0.5%; and (c) concentrations of PCBs at non-detectable levels and other constituents at background levels.
- The capping system must include an overlaying armor layer of stone incorporated along the shoreline as necessary to prevent potential erosion of the isolation layer due to wind-induced wave action.
- GE must construct a shallow-water shelf along the shorelines of the lake to provide an improved habitat for aquatic species. This shallow-water shelf is to include the armoring layer of stone to be placed around the shoreline as part of the capping system. In addition, GE is required to place a three-inch layer of gravel and sand over the armoring stone to facilitate fish usage on the shelf.

⁴ As noted in Section 4.2, a separate special procedure was agreed upon for the evaluation of sulfide.

⁵ The SOW specified presumptive isolation layer thicknesses of 10 inches with geotextile and 12 inches without geotextile. Pursuant to EPA's letter dated August 17, 2004 conditionally approving GE's *Pre-Design Investigation Report for Silver Lake Sediments* (Sediments PDI Report) (BBL, 2004), these thicknesses were increased by 2 inches to 12 and 14 inches, respectively. Subsequently, EPA and GE agreed that the thickness of the isolation layer in near-shore areas where an armor stone layer would be placed over the isolation layer will be 10 inches with use of a geotextile, as specified in EPA's May 31, 2011 conditional approval letter for the September 2010 Revised Final Work Plan,

6.6.2.1 Sediment Removal Near Former Outfall 01A, as Required by SOW

6.6.2.1.1 Sediment Data

Sediment sampling for PCBs has been performed on several occasions in Silver Lake, resulting in the collection of more than 200 samples. Sediment sampling efforts in 1992 identified a location with relatively higher PCB levels in surface sediments (top foot) in the general vicinity of then-existing Outfall 01A (designated Outfall SL-OF-15 on Figure 1-20) in the northeast corner of Silver Lake. Performance standards detailed in the SOW require delineation and removal of a maximum of 400 in-situ cy of Silver Lake sediment from this area to address the presence of elevated PCBs.

Sediment sampling was performed in 2003 to better define the vertical and horizontal extent of PCBs in this area, in order to assist in determining the limits of sediment removal. A summary of the sediment PCB data collected in the northeast corner of the lake is presented on Figure 6-2. As detailed in the Revised Sediments Conceptual Work Plan, and consistent with the preliminary removal area discussed in the SOW (i.e., in the vicinity of then-existing Outfall 01A and sample location NO2(92)), a removal area has been defined to a depth of 3 feet which would result in the removal of 400 cy of sediment.

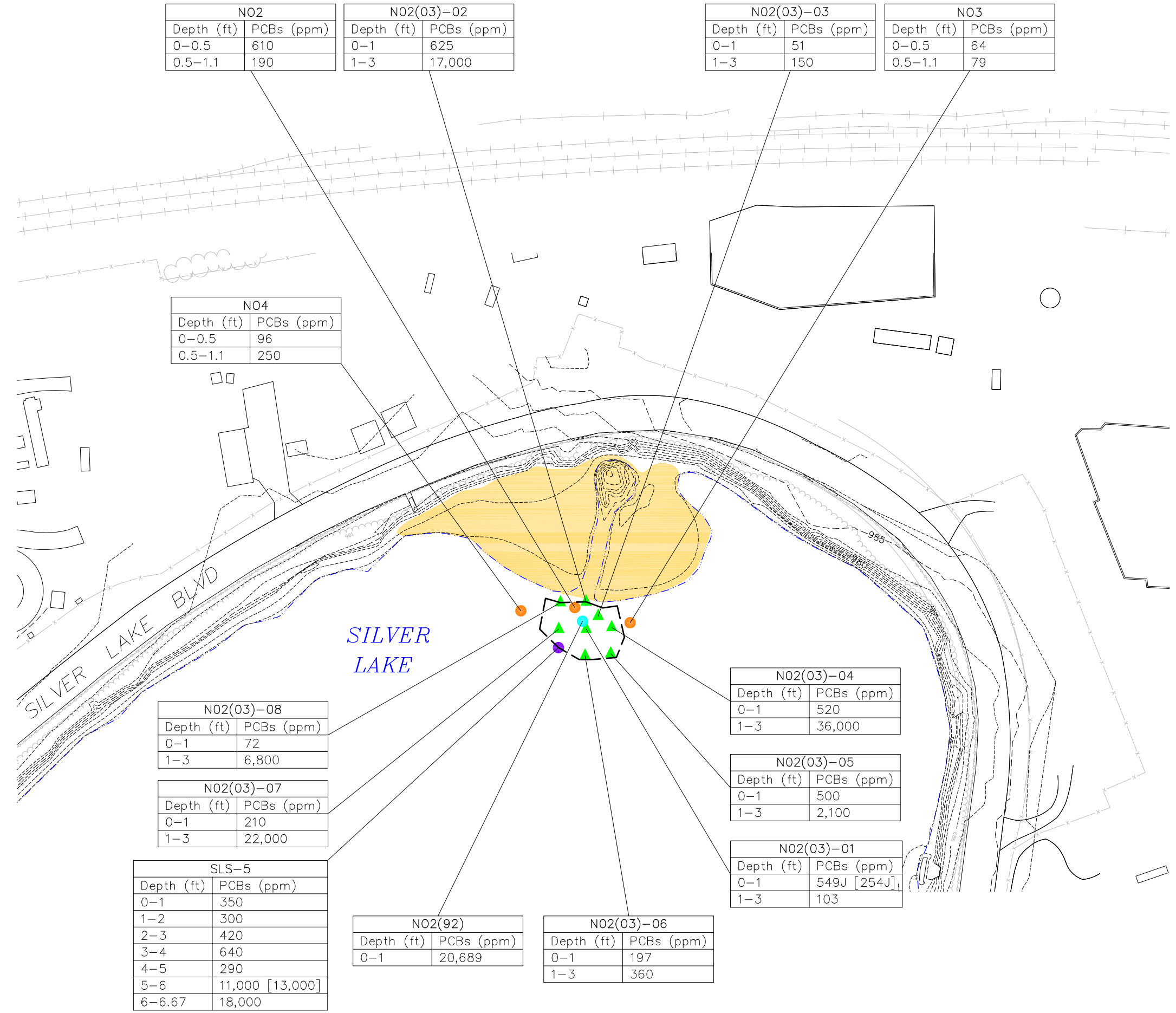
6.6.2.1.2 Methods for Sediment Removal

The sediment removal approach will involve mechanical removal “in the wet” using conventional equipment (e.g., long-reach excavator with an environmental bucket). The performance of this removal will be either from a barge or from a temporary access road and staging area constructed within the shrub-scrub island area. In consultation with the selected Remediation Contractor, available removal equipment and environmental controls will be evaluated in consideration of minimizing potential resuspension and/or transport, and therefore the actual removal methods will be determined in conjunction with the selected Remediation Contractor.

Prior to initiating removal activities, a silt curtain will be installed around the sediment removal area to minimize sediment transport, as discussed in Section 6.2.5.3 and illustrated in the Technical Drawings package included in Appendix D. In addition, sorbent booms and/or oil-containment booms will be placed inside the silt curtain, and sorbent pads will be available on-site for controlling sheens, if any, observed during removal activities. As noted in Section 6.2.5.3, details and specifications for these environmental controls will be developed in coordination with the Remediation Contractor and will be included in the forthcoming SIP for EPA review and approval.

It is expected that the environmental bucket will be held for a brief time over the contained excavation area to allow for the drainage of free liquids; however, if sheens are observed, such deliberate draining will be avoided and the time necessary to move the sediments

CITY: SYRACUSE DIV: GROUP: ENV: CAD: DR: K. SARTORI: G. STOWELL: L. FORAKER: LD: DMW: PIC: P. KEANEY: PM: T. CRIDGE: TM: L. PUTNAM: LYN: ON: "OFF-REF"
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N02	
Depth (ft)	PCBs (ppm)
0-0.5	610
0.5-1.1	190

N02(03)-02	
Depth (ft)	PCBs (ppm)
0-1	625
1-3	17,000

N02(03)-03	
Depth (ft)	PCBs (ppm)
0-1	51
1-3	150

N03	
Depth (ft)	PCBs (ppm)
0-0.5	64
0.5-1.1	79

N04	
Depth (ft)	PCBs (ppm)
0-0.5	96
0.5-1.1	250

N02(03)-08	
Depth (ft)	PCBs (ppm)
0-1	72
1-3	6,800

N02(03)-07	
Depth (ft)	PCBs (ppm)
0-1	210
1-3	22,000

SLS-5	
Depth (ft)	PCBs (ppm)
0-1	350
1-2	300
2-3	420
3-4	640
4-5	290
5-6	11,000 [13,000]
6-6.67	18,000

N02(92)	
Depth (ft)	PCBs (ppm)
0-1	20,689

N02(03)-06	
Depth (ft)	PCBs (ppm)
0-1	197
1-3	360

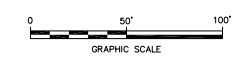
N02(03)-04	
Depth (ft)	PCBs (ppm)
0-1	520
1-3	36,000

N02(03)-05	
Depth (ft)	PCBs (ppm)
0-1	500
1-3	2,100

N02(03)-01	
Depth (ft)	PCBs (ppm)
0-1	549J [254J]
1-3	103

- LEGEND:**
- STEWART LABORATORIES SAMPLING LOCATION (1982)
 - MISCELLANEOUS GRAB SAMPLING LOCATION (1992)
 - MCP/RFI SEDIMENT SAMPLING LOCATION (1995)
 - ▲ PRE-DESIGN SEDIMENT SAMPLING LOCATION (2003)
 - EDGE OF WATER
 - PAVED ROADWAY
 - RAILROAD
 - VEGETATION
 - FENCELINE
 - GUARDRAIL
 - APPROXIMATE SEDIMENT REMOVAL AREA
 - APPROXIMATE AREA OF SHRUB-SHRUB ISLAND

- NOTES:**
1. BASE MAP INFORMATION ADJACENT TO SILVER LAKE BASED ON SURVEYS PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS IN 2006 AND 2008, AND OTHER BASE MAP INFORMATION PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
 2. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
 3. ALL SEDIMENT DATA ARE PRESENTED IN DRY WEIGHT - PARTS PER MILLION (ppm). DUPLICATE RESULTS ARE SHOWN IN BRACKETS.
 4. J - ANALYTE WAS POSITIVELY IDENTIFIED BUT THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION.



GENERAL ELECTRIC COMPANY
 PITTSFIELD, MASSACHUSETTS
REVISED FINAL RD/RA WORK PLAN
SILVER LAKE AREA

SELECT SEDIMENT SAMPLING
LOCATIONS, APPROXIMATE AREA OF
SCRUB-SHRUB ISLAND, AND
APPROXIMATE REMOVAL AREA

ARCADIS

FIGURE
6-2



General Electric Company

**Revised Final Removal
Design/Removal Action Work Plan for
Silver Lake Area**

Revised August 2011