KE

GE Energy

Dawn M Varacchi-Ives
EHS Program Leader
Transactions/Remediation

621 Main Street
Fitchburg MA 01420

T 978.353-3738
F 978.353-3740
dawn.varacchi@ge.com

14 October 2010

Kathleen Emery
Environmental Engineer
NYSDEC
270 Michigan Avenue
Buffalo, New York 14203

Re: **Two Mile Creek – 2010 Bank Soil Sampling Report**

Dear Ms. Emery:

Enclosed please find a copy of the 2010 Bank Soil Sampling Report for Two Mile Creek, written by AECOM. This report documents the results of the bank sampling conducted in 2010 to further define the degree and extent of results obtained during the 2009 sampling round. Based on the results of the 2010 sampling, the PCB detections in soils along the west bank at transect T3 appear to be limited in extent, immediately surrounding the locations of the 2009 sampling.

GE proposed to address the bank samples impacted with PCBs above 1 mg/kg via soil removal. Pending approval from NYSDEC and permission from the Town of Tonawanda to conduct limited work near the creek, bank soils at T3 will be excavated to a depth of approximately 18 inches. The excavation will extend from the water level of the creek to location G, and from approximately half-way between E and E-L1 to half-way between E and E-R1. GE will collect confirmation samples from the four "corners" of the excavation and one from the center bottom of the excavation to confirm remaining soils contain less than 1 mg/kg PCBs. Soils will be properly disposed off-site. The soils will be replaced using clean fill.

Thank you for your assistance with this project. I look forward to receiving NYSDEC's approval for this work, which will conclude the Two Mile Creek investigation and remediation. Please feel free to contact me at 781.710-4608 if you have additional questions.

Sincerely,

Dawn M Varacchi-Ives
EHS Program Leader – Transactions/Remediation

encl.

AECOM

5015 Campuswood Drive, Suite 104
East Syracuse, NY 13057
Tel: 315-432-0506
Fax: 315-437-0509

Technical Memorandum

September 30, 2010

TO: Ms. Kathleen H. Emery, P.E

FROM: Kendrick Jaglal, P.E.

CC: Dawn M. Varacchi-Ives

SUBJECT: Two Mile Creek – Tonawanda, New York
2010 Bank Soil Sampling Report

1.1 Overview

General Electric (GE) operates a Parts and Repair Service Center in the Town of Tonawanda, Erie County, New York. A Corrective Action Program has been ongoing at the Center in accordance with a May 1996 Hazardous Waste Management Permit. As part of the Corrective Action Program, the New York State Department of Environmental Conservation (NYSDEC) had required that soil and sediment sampling be performed in a portion of the Creek. After sediment samples were collected to the satisfaction of the NYSDEC in 2008, bank soil sampling was performed in the spring of 2009. A follow-up round of bank soil sampling was performed in one area during May 2010. This document presents the results of the 2010 bank soil sampling along the targeted portion of Two Mile Creek.

1.2 Site Description

The GE Tonawanda Parts and Repair Service Center is located at 175 Milens Road in Tonawanda, New York. On-site storm sewers drain into the municipal storm sewer system together with flows from other locations and commercial properties in the area. The area is heavily industrialized in an urban setting and the municipal storm sewer system in this vicinity discharges to Two Mile Creek. The Creek is a combination of underground and open channel that flows in a northerly direction. The primary portion of the Creek that was initially targeted for sampling, lies between Oriskany Drive and Route 290 and is approximately 1000 feet in length. It runs through the Sheridan Park golf course and receives stormwater from both surface runoff and point discharges. The creek width in this section ranges from 6 to 15 feet and bank height on both banks ranges from 3 to 15 feet. Water depths ranging from 10 to 34 inches and sediment depths ranging from 0.5 to 2.5 feet have been measured.

1.3 Previous Bank Soil Sampling Activities

Bank soil sampling was performed along the Creek on April 9 and 10, 2009 in general accordance with an approved May 2007 Work Plan, with some modifications that were discussed and agreed to

by GE and NYSDEC. Soil samples were collected from both banks at a total of five (5) transects along Two Mile Creek (Figure 1), between Route 290 and just upstream of the Oriskany Drive storm sewer outfall. At each bank, soil samples were collected at the ordinary high water mark, either half-way or three feet up the bank (depending upon the height of the bank) and three feet past the ordinary high water mark. For the two locations closest to the water, samples from the 0- to 3-inch and 6- to 12-inch intervals at each location were submitted for analysis. For the location furthest from the water, only the 0- to 3-inch interval was analyzed.

The bank soil samples were analyzed for PCBs and TOC and the results were reported to NYSDEC in a Technical Memorandum from K. Jaglal to K. Emery, dated April 2, 2010. The analytical results reported relatively low concentrations of PCBs in the samples as Aroclors 1254 and 1260. All reported total PCB concentrations were below 1.0 milligram per kilogram (mg/kg) except for the samples from the western bank at Transect T3. At these locations, the concentrations of total PCBs ranged from 2.2 to 6.3 mg/kg. Based upon a review of the results for the west bank of transect T3, additional sampling and analysis was planned for that area.

1.4 Additional Bank Soil Sampling (2010)

The objective of the 2010 bank soil sampling program was to delineate the area with total PCB concentrations greater than 1.0 mg/kg along the west bank of transect T3. To achieve this objective, deeper samples at the 12- to 24-inch and 24- to 36-inch intervals were collected at the previously sampled locations D and E (shown in yellow on Figure 2). Deeper samples at the 6- to 12-inch, 12- to 24-inch and 24- to 36-inch intervals were collected at the previously sampled location F. Also, three new step-out locations were also sampled (E-L1 and E-R1 located 5 feet to the left and right of previously sampled location E, and G located 3 feet above previously sampled location F). In addition, three other step-out locations were also sampled (E-L2 and E-R2 located 10 feet to the left and right of previously sampled location E, and H located 6 feet above previously sampled location F). Samples were collected at each of these step-out locations from the 0- to 3-, 6- to 12-, 12- to 24- and 24- to 36-inch intervals.

The samples were divided into two batches to facilitate immediate analysis of the first batch and subsequent analysis of the second depending on the results from the first batch. Samples from the three outermost locations (E-L2, E-R2 and H) and those from the 24- to 36-inch interval at the other six locations were held for potential future analysis. The remaining samples were analyzed for PCBs and TOC by Test America (Amherst, New York) using United States Environmental Protection Agency (U.S. EPA) Method SW 846-8082 (U.S. EPA, 1996) and the Lloyd Kahn (1988) Method, respectively. The held samples were only to be analyzed if an adjacent sample from the initial round of analysis had PCBs above 1 mg/kg. Following review of the analytical results for the first batch, it was unnecessary to analyze the second batch.

1.5 Analytical Results and Data Evaluation

The PCB and TOC results for the samples taken from the western bank at transect T3 are presented in the attached Table 1. The analytical results for the 2010 samples reported relatively low concentrations of PCBs in the samples as Aroclor 1254. All reported 2010 PCB Aroclor concentrations were below 1.0 mg/kg. At these locations, the 2010 concentrations of total PCBs ranged from not detected to 0.190 mg/kg and TOC from 0.6% to 6.1%. Therefore, based on a

review of both the 2009 and 200 data, total PCB concentrations exceeding 1 mg/kg are present at locations D, E and F up to depths of 12, 12 and 3 inches, respectively. These samples are within an area of approximately 10 feet by 10 feet bounded by the adjacent samples (E-L1, E-R1 and G) that all had less than 1 mg/kg total PCBs. Locations E-L1 and E-R1 are 5 feet to the left and right of Location E, respectively. Sample G is 3 feet above location G which is approximately 10 feet to the edge of water. The affected soil depth is 3 inches (0.25 foot) at the upper portion of bank and 12 inches (1 foot) toward the creek.

1.6 References

URS Corporation. (2003). "Two Mile Creek Limited Sediment Sampling Report." Clifton Park, New York.

Kahn, Lloyd. (1988). "Determination of Total Organic Carbon in Sediment (Lloyd Kahn Method)." United States Environmental Protection Agency (U.S. EPA), Region II, Edison New Jersey.

U.S. EPA. (1996). Office of Solid Waste and Emergency Response. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." SW-846 3rd ed. Washington, D.C.

TABLE 1
TWO MILE CREEK (Tonawanda, NY)
Recent Bank Soil PCB Concentrations

TRANSECT	DATE	LOCATION	INTERVAL (inches)	AROCLOR 1254 (mg/kg)	AROCLOR 1260 (mg/kg)	TOTAL PCBs (mg/kg)	TOC, %	SOLIDS, %
T3 West	May 2010	G	0 - 3	0.039	U	0.039	4.3	79
			6 - 12	U	U	U	3.3	81
			12 - 24	0.058	U	0.058	2.3	83
		F	6 - 12	0.008	U	0.008	3.6	80
			12 - 24	0.083	U	0.083	1.5	80
		E-L1	0 - 3	0.190	U	0.190	5.1	76
			6 - 12	0.110	U	0.110	3.1	80
			12 - 24	0.054	U	0.054	2.0	78
		E	12 -24	0.012	U	0.012	3.0	80
		E-R1	0 - 3	0.170	U	0.170	6.1	71
			6 - 12	0.033	U	0.033	3.4	79
			12 - 24	U	U	U	0.9	84
			12 - 24 DUP	0.008	U	0.008	1.0	83
		D	12 - 24	U	U	U	0.6	82
	April 2009	D	0 - 3	2.900	0.520	3.420	1.1	80
			6 - 12	* 1.800	* 0.400	* 2.200	1.7	69
		E	0 - 3	1.700	0.540	2.240	2.0	71
			6 - 12	5.200	1.100	6.300	3.5	69
		F	0 - 3	2.500	0.640	3.140	1.5	68

NOTES:

U	Compound was not detected.
PCB	Polychlorinated biphenyls
TOC	Total organic carbon
mg/kg	Milligram per kilogram
DUP	Duplicate sample
*	Average result for duplicate samples
%	Percent
	Indicates samples with Total PCB concentrations exceeding 1 mg/kg.

Samples were collected in April 2009 and May 2010.
The detection limit was reported when PCBs were detected but were not quantifiable.

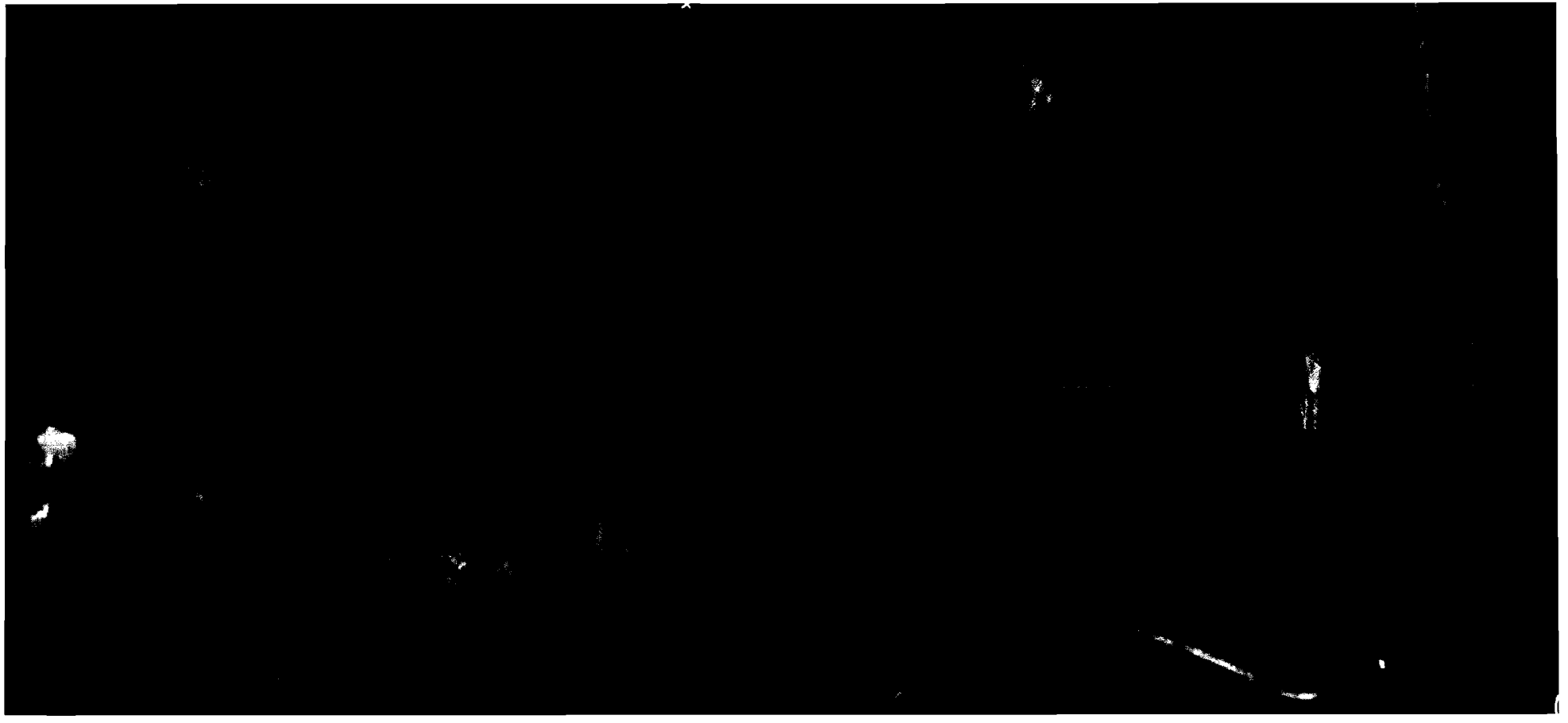

FIGURE 1
Two Mile Creek, Tonawanda, NY
Bank Soil Sampling Transects

Aerial photograph taken from www.bing.com/maps

○ Sampled in 2009

● Sampled in 2010

● Sampled in 2010 but not analyzed

Figure 2. Two Mile Creek - Tonawanda, New York. Soil Sampling Locations.