UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
2890 WOODBRIDGE AVENUE
EDISON, NEW JERSEY 08837-3679

JAN 20 2012

CERTIFIED MAIL – RETURN RECEIPT REQUESTED
Article Number: 7011 0470 0002 3731 8640

Mr. Vinicius Castagnola, Vice President
Environmental and Regulatory Compliance
New York City School Construction Authority
30-30 Thompson Avenue
Long Island City, New York 11101

Re: Approval of Long Term Monitoring Work Plan

Dear Mr. Castagnola:

This is in response to your electronic correspondence of January 19, 2012, transmitting the January 19, 2012 Long Term Monitoring Work Plan for the polychlorinated biphenyl (PCB) patch and repair, encapsulation, and PCB caulk removal remedies performed at the New York City Pilot Schools. The United States Environmental Protection Agency has reviewed your January 19, 2012 submission and hereby approves the Long Term Monitoring Work Plan.

Should you have any questions concerning this matter, please contact Mr. James Haklar of my staff at (732) 906-6817 or at haklar.james@epa.gov.

Sincerely yours,

John Gorman, Chief
Pesticides and Toxic Substances Branch

Pilot Study Remedial Investigation: Long Term Monitoring of Patch & Repair, Encapsulation and PCB Caulk Removal Remedies at P.S. 178X, P.S. 309K and P.S. 199M

As per the Pilot Study Remedial Investigation Work Plan (RI Plan) dated July 9, 2010, the City is responsible for implementing a long-term monitoring of patch and repair, encapsulation, and PCB Caulk removal remedies through annual bulk and/or wipe samples for a period of five years. In 2010, PCB Caulk remedial activities were undertaken in three of the five pilot schools. Following is a listing of the schools, the specific remedial activities, the materials abated, and the location within each building where activities were undertaken in 2010:

Table 1. List of Locations and Remedial Alternatives Implemented in 2010

School ID	Remedial Action	Homogenous Material	Floor	Locations
P.S. 178X	Patch and repair of PCB Caulk	Window frame caulk – brown	1	139, 182
			2	223, 239, 258
			3	304, 322A, 337A, 357
		Window sill caulk - brown	1	182
		Display case glaze - gray	1	Hallway 103 (Southwest) lobby
		Display case caulk – yellow	1	Hallway 103 (Southwest) lobby
P.S. 309K	Encapsulation of PCB Caulk	Door frame caulk – gray	1	Cafeteria, Gymnasium, West corridor
			1 – 3	North stairwell
		Door frame caulk – red/brown	1 - 3	North stairwell
		Door frame caulk – beige	1 - 3	North stairwell
		Column/Wall seam caulk	1	Cafeteria
		Heat vent caulk	1	Gymnasium
		Display case caulk	1	West corridor
P.S. 199M	Removal and replacement of PCB Caulk	Sink caulk - white	1	116
			2	202
			3	308, 316, 318, 320, 328
		Door frame caulk - gray	1	Cafeteria
			2	Gymnasium
			3	North corridor
			1-3	Main Entrance stairwell
		Metal wall panel caulk – gray	3	North corridor
		Metal panel caulk (above fire extinguishers) - gray	1	Cafeteria
			3	North corridor
		Door window glaze - beige	1	Cafeteria
			3	North corridor
		Transom window glaze - gray	1	118
		Fire stop/penetration caulk - red	2	Gymnasium

In the RI Plan, the following long-term sampling strategies were proposed:

Patch and Repair – one (1) bulk caulk sample from each area of homogeneous PCB Caulk identified during the pre-remedial bulk caulk sampling

Encapsulation – one (1) wipe sample of each paint/sealant from each encapsulated area of homogeneous PCB Caulk identified during the pre-remedial bulk caulk sampling and one (1) bulk sample of each area of homogeneous PCB Caulk identified during the pre-remedial bulk caulk sampling. The City does not believe that, for the bulk samples, the encapsulant can be effectively separated from the underlying caulk to a degree that any subsequent analysis of the encapsulant would provide any meaningful data. For the foregoing reason, we request approval to modify the RI Plan so that only wipe samples shall be collected as part of the long-term sampling strategy for any caulk which has been encapsulated.

Remove PCB Caulk – one (1) bulk sample from each area of replacement caulk from each abated homogeneous PCB Caulk identified during the pre-remedial bulk caulk sampling.

PROPOSED SAMPLING LOCATIONS AND MATERIALS

Sampling for each previously remediated homogenous PCB caulk will be performed on a location-by-location basis. Following is a listing of the specific materials and locations that will be sampled during the first round of long-term monitoring in 2012. All of the areas where bulk or wipe samples will be collected have already undergone air sampling.

P.S. 178X

One (1) composite bulk sample of replacement caulk shall be collected from each homogenous material in each of the locations listed in Table 1.

P.S. 199M

One (1) composite bulk sample of replacement caulk shall be collected from each homogenous material in each of the locations listed in Table 1.

P.S. 309K

One (1) wipe sample shall be collected from the surface of encapsulated caulk from each homogenous material in each of the locations listed in Table 1, with the exception of the column/wall seam caulk in the cafeteria. That particular material was repaired and re-encapsulated during the summer of 2011 due to severe cracking in the original encapsulant. For this reason, that material will not be sampled during this round of testing, but will be included in future sampling events.

BULK SAMPLING PROCEDURES

The following procedures will be used to collect bulk caulk samples. Representative samples shall be collected and analyzed as follows:

A. Caulk samples will be collected by physically removing sections of caulk using stainless steel scalpels and tweezers (or other clean implements, as needed). Sampling equipment shall either be

dedicated for each homogenous sample or shall be thoroughly cleaned with hexane or other suitable solvent between samples.

B. Samples will be collected from the approximate middle of the new replacement caulk section, at least one inch (1") from where the new caulk joins with the original caulk.

C. Three (3) sub-samples (each approximately 10 grams in weight) of each homogeneous material will be collected to form a composite sample. Each sub-sample shall be placed in a separate, pre-cleaned glass jar having a Teflon-lined cap to submit to the laboratory.

D. The laboratory shall be directed to create one (1) composite sample of each homogeneous material from equal mass portions (+ 5%) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the following Aroclors: Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

WIPE SAMPLING PROCEDURES

The following procedures will be used to collect wipe samples from encapsulated caulk surfaces. Representative samples shall be collected and analyzed as follows:

A. Wipe sampling will be performed in accordance with 40 CFR 761.3, 761.123 and 761.30.

B. Sampling Methodolgy

1. PCB-free gauze wipes will be wetted with hexane to collect surface wipe samples.

2. Wipe sampling will be performed using a 10 cm by 10 cm template consistent with American Society for Testing and Materials *Standard Practice for Field Collection of Organic Compounds from Surfaces Using Wipe Sampling*.

3. Each wipe sample will be collected from a 100-cm^2 area. Samples shall be collected only from the encapsulated caulk material using customized sampling templates to mask non-encapsulated surfaces. In cases where the surface *a*rea available for wipe sampling is less than 100 cm^2, the actual area wiped will be recorded.

4. Transfer of PCBs from the encapsulated caulk surface will occur through physical wiping of the defined surface area while applying moderate pressure.

5. Wipes will be handled using appropriate chemical resistant gloves followed by storage in a clean glass jar having a Teflon-lined cap.

6. Analysis of the samples shall be via EPA Method 8082 and report the following Aroclors: Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.