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Kassandra Kimmey, Environmental Analyst
Vermont Department of Environmental Conservation
Waste Management and Prevention Division | Sites Management Section
Davis 1, 1 National Life Drive | Montpelier, VT 05620-3704
Kassandra.Kimmey@vermont.gov

SUBJECT: Workplan and Cost Estimate for Indoor Air Sampling for the Presence of Polychlorinated Biphenyls (PCBs) at the Green Mountain Union High School (aka Green Mountain UHS #35), 716 VT-103, Chester, VT (VTDEC #20225171)

Dear Kassie:

The Vermont Department of Environmental Conservation (VTDEC) Sites Management Section (SMS) has requested the completion of indoor air sampling for the presence of polychlorinated biphenyls (PCBs) at the Green Mountain Union High School, located at 716 VT-103 in Chester, Vermont. The following Indoor Air Sampling Plan has been drafted in accordance with project-specific technical guidance provided by the VTDEC. It contains a summary of pre-sampling building inventory data; rationales for room/area group assignments and sample location selection; descriptions of proposed field activities, sampling and analytical methods; and a site map(s) with proposed sampling locations. A cost estimate and proposed schedule for proposed sampling activities are also provided.

Site Information

TABLE. SITE INFORMATION

Name	Relationship	Contact
Todd Parah	Director of Operations, Green Mountain UHS #35	(802) 373-9524 Todd.Parah@trsu.org
Lauren Fierman	Superintendent, Two Rivers Supervisory Union	(802) 875-3365 lauren.fierman@trsu.org

General Site Description

The Green Mountain Union High School (site) is located on the west side of VT Route 103, south of the intersection with Treatment Plant Road, and north of the intersection with Remington Road,

in the Town of Chester, Vermont (Figure 1). The GPS coordinates of the School Building are 43.253654°N, -72.580677°W. The site is identified in the Vermont Center for Geographic Information database as parcel 144-045-10730. The site is presently occupied by the Green Mountain Union High School, a grade 7 through Grade 12 public school superintended by the Two Rivers Supervisory Union (TRSU).

Satellite imagery and a 2022 School Facility Inventory Report made available by the Vermont Agency of Education (AOE) indicate that the 184.2-acre site contains a single three-story building with an approximate total area of 126,000 square feet. The Vermont Agency of Natural Resources (ANR) Natural Resource Atlas indicates that the site building is supplied by the municipal water system. The school building is heated primarily with fuel oil.

TABLE: BUILDING DETAILS

Building	Size (gross sf)	Stories	Year Built	Last Renovated
Main Building	126,000	3	1970	2016

The site is surrounded by a mix of residential and commercial properties and undeveloped land. There are several private wells in the area. Adjacent properties include commercial properties to the east and south, residential and undeveloped land to the west, and residential and commercial properties as well as undeveloped land to the north.

Property History

A review of Vermont state records revealed no history of PCB, petroleum or hazardous material contamination at the site or any adjacent property. There was one historical site of petroleum/hazardous material contamination of soil and/or groundwater identified within a 0.5-mile radius of the site in the VTDEC Hazardous Sites database. Conditions at that site were evaluated and determined not to pose a material threat to the subject site. PCBs were not identified as a contaminant of concern at any nearby site.

Conceptual Site Model

The 2022 School Facilities Inventory Report available from the Vermont AOE indicates that the building at the site was constructed prior to 1979 and may contain PCB-containing building materials and products. The number, type and extent of potential PCB-containing materials, equipment and secondary sources at the site—and the impact of such potential sources on indoor air quality— remain unknown at this time.

Site Background

HEA/JTC arrived at the subject site on January 30, 2023 to complete a survey of potential PCB-containing building materials and products in the Main Building, which was constructed prior to 1980. HEA/JTC personnel were accompanied by Todd Parah, the Director of Operations at Green Mountain Union High School.

The example Pre-Sampling Building Inventory provided by the SMS was used to help identify potential PCB-containing materials and products and organize survey data with respect to material type, description, color and location; building, floor and room number (or other location ID); approximate quantity; photo documentation; and other criteria.

Building Inventory

The findings of the building inventory, organized by room/area and material type are presented in Tables 1 and 2. No obvious indoor sources of PCBs (e.g., PCB-containing electrical transformers, capacitors or magnetic fluorescent light ballasts) were identified and flagged for removal prior to indoor air sampling for the presence of PCBs. Two or more of every distinct type of fluorescent lighting fixture encountered in each building were spot-checked to identify whether the ballasts contained PCBs; all fixtures were found to contain electronic ballasts.

A total of 61 types of potential PCB-containing building materials were identified in a total of 127 rooms/areas. These included suspended ceiling tile (113 rooms/areas), cove base and associated mastic (105 rooms/areas), rubber or felt window seals/gaskets (65 rooms/areas), around-frame window caulking (62 rooms/areas), vinyl floor tile and associated mastic (61 rooms/areas), fibrous/cementitious roof deck material (57 rooms/areas), pre-1980 univent/room units (54 rooms/areas), doorframe caulking (47 rooms/areas), inset window caulking (45 rooms/areas), ceramic tile and associated mastic/grouts (34 rooms/areas), countertop adhesive (31 rooms/areas), 9x9 asbestos-containing material (ACM) floor tile and associated mastic (24 rooms/areas), carpet and associated mastic (23 rooms/areas), plumbing fixture caulking (22 rooms/areas), electrical panels/circuit/switch boxes (20 rooms/areas), sink undercoating (17 rooms/areas), concrete patching (16 rooms/areas), wall tile and associated adhesive/grout (11 rooms/areas), suspect paint (9 rooms/areas), electrical transformers (9 rooms/areas), duct/pipe/vent caulking (9 rooms/areas), inset door window caulking (9 rooms/areas), room/area-specific air handlers (8 rooms/areas), resilient sheet flooring (8 rooms/areas), expansion joint caulking (8 rooms/areas), sealed or painted concrete (6 rooms/areas), floor caulking (5 rooms/areas), air circulators/fans (4 rooms/areas), flush-mounted ceiling tile (3 rooms/areas), adhesive-mounted board (3 rooms/areas), stage lighting (2 rooms/areas), projector screen

material (2 rooms/areas), foam rubber mats (2 rooms/areas), adhesive (2 rooms/areas), ceiling/foundation wall caulking (1 room/area), workshop equipment (1 room/area), wood paneling glue/adhesive (1 room/area), water heater(s) (1 room/area), stage curtain (1 room/area), spray foam (1 room/area), a space heater (1 room/area), room divider(s) (1 room/area), refrigerator/freezer units (1 room/area), linoleum and associated mastic (1 room/area), lab supplies (1 room/area), lab equipment (1 room/area), a kitchen exhaust hood (1 room/area), furnace (1 room/area), foam rolls (1 room/area), foam pads (1 room/area), finished wood flooring (1 room/area), elevator hydraulics (1 room/area), elevator hydraulic tank and controls (1 room/area), elevator electronics (1 room/area), elevator/hydraulic lift (1 room/area), electronic (wired) PA unit (1 room/area), air handling units (1 room/area), air filtration units (1 room/area), and an air compressor (1 room/area).

Proposed Indoor Air Sampling Plan by Area

A total of 127 rooms/areas were assigned to a total of 16 groups on the basis of location, construction dates, and the similar potential PCB-containing materials identified in the rooms/areas. The assigned group numbers are indicated in the following table. A total of 45 proposed sampling locations are indicated with orange highlighting. Sampling locations are also indicated in Figure 2.

TABLE: ROOM IDs, GROUPS & PROPOSED SAMPLING LOCATIONS		
Main Building, Floor 1, Mens Bathroom 1	5171-GMS-1-MBR1	01
Main Building, Floor 1, Mens Bathroom 2	5171-GMS-1-MBR2	01
Main Building, Floor 1, Womens Bathroom 1	5171-GMS-1-WBR1	01
Main Building, Floor 1, Womens Bathroom 2	5171-GMS-1-WBR2	01
Main Building, Floor 2, Mens Bathroom 1	5171-GMS-2-MBR1	01
Main Building, Floor 2, Mens Bathroom 2	5171-GMS-2-MBR2	01
Main Building, Floor 2, Womens Bathroom 1	5171-GMS-2-WBR1	01
Main Building, Floor 2, Womens Bathroom 2	5171-GMS-2-WBR2	01
Main Building, Floor 3, Mens Bathroom 1	5171-GMS-3-MBR1	01
Main Building, Floor 3, Mens Bathroom 2	5171-GMS-3-MBR2	01
Main Building, Floor 3, Womens Bathroom 1	5171-GMS-3-WBR1	01
Main Building, Floor 3, Womens Bathroom 2	5171-GMS-3-WBR2	01
Main Building, Floor 2, Boys Locker Room	5171-GMS-2-BLR	02
Main Building, Floor 2, Coach's Locker Room	5171-GMS-2-CLR	02
Main Building, Floor 2, Girls Locker Room	5171-GMS-2-GLR	02
Main Building, Floor 1, East Hall	5171-GMS-1-EHAL	03
Main Building, Floor 1, Entryway 1	5171-GMS-1-ENT1	03
Main Building, Floor 1, Entryway 2	5171-GMS-1-ENT2	03

Main Building, Floor 1, Main Hallway	5171-GMS-1-MHAL	03
Main Building, Floor 2, East Hall	5171-GMS-2-EHAL	03
Main Building, Floor 2, Gallery Hall	5171-GMS-2-GHAL	03
Main Building, Floor 2, Mezzanine	5171-GMS-2-MEZ1	03
Main Building, Floor 2, Main Hall	5171-GMS-2-MHAL	03
Main Building, Floor 2, North Hall	5171-GMS-2-NHAL	03
Main Building, Floor 3, Main Hallway	5171-GMS-3-MHAL	03
Main Building, Floor 1, Elevator Room	5171-GMS-1-ELV	04
Main Building, Floor 1, Gym Hall	5171-GMS-1-GHALL	04
Main Building, Floor 1, Maintenance 1	5171-GMS-1-MAT1	04
Main Building, Floor 1, Boiler Room	5171-GMS-1-BOIL	05
Main Building, Floor 1, Electrical 1	5171-GMS-1-ELC1	05
Main Building, Floor 1, Electrical 2	5171-GMS-1-ELC2	05
Main Building, Floor 1, Electrical 3	5171-GMS-1-ELC3	05
Main Building, Floor 2, Electrical 1	5171-GMS-2-ELC1	05
Main Building, Floor 2, Electrical Room 2	5171-GMS-2-ELC2	05
Main Building, Floor 2, Electrical 3	5171-GMS-2-ELC3	05
Main Building, Floor 3, Electrical 1	5171-GMS-3-ELC1	05
Main Building, Floor 3, Electrical 2	5171-GMS-3-ELC2	05
Main Building, Floor 1, Custodial 1	5171-GMS-1-CUS1	06
Main Building, Floor 1, Custodial 2	5171-GMS-1-CUS2	06
Main Building, Floor 2, Custodial 1	5171-GMS-2-CUS1	06
Main Building, Floor 2, Custodial 2	5171-GMS-2-CUS2	06
Main Building, Floor 2, Custodial 3	5171-GMS-2-CUS3	06
Main Building, Floor 3, Custodial 1	5171-GMS-3-CUS1	06
Main Building, Floor 3, Custodial 2	5171-GMS-3-CUS2	06
Main Building, Floor 1, Stairway 1	5171-GMS-1-STW1	07
Main Building, Floor 1, Stairwell 2	5171-GMS-1-SW2	07
Main Building, Floor 1, Stairwell 3	5171-GMS-1-SW3	07
Main Building, Floor 2, Stairway 1	5171-GMS-2-SW1	07
Main Building, Floor 2, Stairway 2	5171-GMS-2-SW2	07
Main Building, Floor 3, Stairway 1	5171-GMS-3-SW1	07
Main Building, Floor 3, Stairwell 2	5171-GMS-3-SW2	07
Main Building, Floor 3, Stairwell 3	5171-GMS-3-SW3	07
Main Building, Floor 3, Stairwell 4	5171-GMS-3-SW4	07
Main Building, Floor 1, Gym	5171-GMS-1-GYM	08
Main Building, Floor 2, Weight Room	5171-GMS-2-WR	08
Main Building, Floor 1, Storage 1	5171-GMS-1-STO1	09
Main Building, Floor 1, Storage 2	5171-GMS-1-STO2	09
Main Building, Floor 2, Gym Storage	5171-GMS-2-GSTOR1	09
Main Building, Floor 2, Storage 3	5171-GMS-2-STO3	09
Main Building, Floor 2, Storage 4	5171-GMS-2-STO4	09

Main Building, Floor 2, Storage 1	5171-GMS-2-STOR1	09
Main Building, Floor 2, Storage 2	5171-GMS-2-STOR2	09
Main Building, Floor 3, Storage 1	5171-GMS-3-STO1	09
Main Building, Floor 2, Auditorium	5171-GMS-2-AUD	10
Main Building, Floor 2, Stage	5171-GMS-2-STG	10
Main Building, Floor 1, Kitchen	5171-GMS-1-KIT	11
Main Building, Floor 1, Kitchen Loading Area	5171-GMS-1-KLA	11
Main Building, Floor 1, Kitchen Storage Area	5171-GMS-1-KSA	11
Main Building, Floor 1, Cafeteria	5171-GMS-1-CAF	12
Main Building, Floor 1, Room 100	5171-GMS-1-100	13
Main Building, Floor 1, Room 102	5171-GMS-1-102	13
Main Building, Floor 1, Room 104	5171-GMS-1-104	13
Main Building, Floor 1, Room 106	5171-GMS-1-106	13
Main Building, Floor 1, Room 108	5171-GMS-1-108	13
Main Building, Floor 1, Room 101	5171-GMS-1-101	14
Main Building, Floor 1, Room 103	5171-GMS-1-103	14
Main Building, Floor 1, Room 105	5171-GMS-1-105	14
Main Building, Floor 1, Room 107	5171-GMS-1-107	14
Main Building, Floor 1, Room 109	5171-GMS-1-109	14
Main Building, Floor 2, Room 200	5171-GMS-2-200	15
Main Building, Floor 2, Room 201	5171-GMS-2-201	15
Main Building, Floor 2, Room 202	5171-GMS-2-202	15
Main Building, Floor 2, Room 203	5171-GMS-2-203	15
Main Building, Floor 2, Room 204	5171-GMS-2-204	15
Main Building, Floor 2, Room 205	5171-GMS-2-205	15
Main Building, Floor 2, Room 206	5171-GMS-2-206	15
Main Building, Floor 2, Room 207	5171-GMS-2-207	15
Main Building, Floor 2, Room 208	5171-GMS-2-208	15
Main Building, Floor 2, Room 209	5171-GMS-2-209	15
Main Building, Floor 2, Room 210	5171-GMS-2-210	15
Main Building, Floor 2, Room 211	5171-GMS-2-211	15
Main Building, Floor 2, Room 212	5171-GMS-2-212	15
Main Building, Floor 2, Room 213	5171-GMS-2-213	15
Main Building, Floor 2, Band Room	5171-GMS-2-BND	15
Main Building, Floor 2, Conference Room 1	5171-GMS-2-CON1	15
Main Building, Floor 2, Guidance Room	5171-GMS-2-GDE	15
Main Building, Floor 2, Main Office	5171-GMS-2-MO	15
Main Building, Floor 2, Nurse 1	5171-GMS-2-NURSE1	15
Main Building, Floor 2, Office 1	5171-GMS-2-OFF1	15
Main Building, Floor 2, Office 2	5171-GMS-2-OFF2	15
Main Building, Floor 2, Office 3	5171-GMS-2-OFF3	15
Main Building, Floor 2, Office 4	5171-GMS-2-OFF4	15

Main Building, Floor 2, Staff Room 1	5171-GMS-2-STF1	15
Main Building, Floor 3, Room 300	5171-GMS-3-300	16
Main Building, Floor 3, Room 301	5171-GMS-3-301	16
Main Building, Floor 3, Room 302	5171-GMS-3-302	16
Main Building, Floor 3, Room 303	5171-GMS-3-303	16
Main Building, Floor 3, Room 304	5171-GMS-3-304	16
Main Building, Floor 3, Room 305	5171-GMS-3-305	16
Main Building, Floor 3, Room 306	5171-GMS-3-306	16
Main Building, Floor 3, Room 307	5171-GMS-3-307	16
Main Building, Floor 3, Room 308	5171-GMS-3-308	16
Main Building, Floor 3, Room 309	5171-GMS-3-309	16
Main Building, Floor 3, Room 310	5171-GMS-3-310	16
Main Building, Floor 3, Room 311	5171-GMS-3-311	16
Main Building, Floor 3, Room 312	5171-GMS-3-312	16
Main Building, Floor 3, Room 313	5171-GMS-3-313	16
Main Building, Floor 3, Room 314	5171-GMS-3-314	16
Main Building, Floor 3, Room 315	5171-GMS-3-315	16
Main Building, Floor 3, Room 316	5171-GMS-3-316	16
Main Building, Floor 3, Library	5171-GMS-3-LIB	16
Main Building, Floor 3, Office 1	5171-GMS-3-OFF1	16
Main Building, Floor 3, Office 2	5171-GMS-3-OFF2	16
Main Building, Floor 3, Server Room	5171-GMS-3-SERV	16
Main Building, Floor 3, Staff Room 1	5171-GMS-3-STF1	16
Main Building, Floor 3, Staff Room 2	5171-GMS-3-STF2	16
Main Building, Floor 3, Tech Lab	5171-GMS-3-TECH	16

Grouping and Sampling Plan

The cafeteria (5171-GMS-1-CAF) was determined to have a significantly distinct building inventory and was assigned its own group number (Group 12); as the only room/area in its group, it has been designated as a proposed sampling location. For groups comprising multiple rooms/areas, a minimum of 30% of spaces in each group were selected for sampling. The rationale for sample location selection for each group is as follows:

Group 01: The 12 spaces in this group consist of all bathrooms in the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials include suspended ceiling tile (12 rooms/areas), ceramic tile and associated mastic/grouts (12 rooms/areas), cove base (7 rooms/areas), fibrous/cementitious roof deck material (4 rooms/areas), resilient sheet flooring (4 rooms/areas), plumbing fixture caulking (4 rooms/areas), doorframe caulking (4 rooms/areas), wall tile and associated adhesive/grout (3 rooms/areas), vinyl floor tile and associated mastic (2 rooms/areas), concrete

patching (2 rooms/areas), and an air circulator/fan (1 rooms/areas). The Group 01 sampling locations (5171-GMS-1-WBR2, 5171-GMS-2-MBR1, 5171-GMS-2-MBR2, 5171-GMS-3-WBR2) were selected as being representative of the group, widely distributed spatially, and containing the largest numbers and volumes of materials relative to other Group 01 rooms/areas.

Group 02: The three (3) spaces in this group consist of the girls' locker room, boys' locker room, and coach's locker room located in the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 02 spaces include ceramic tile and associated mastic/grout (3 rooms), wall tile and associated adhesive/grout (3 rooms), suspended ceiling tile (3 rooms), fibrous/cementitious roof deck material (3 rooms), doorframe caulking (3 rooms), sealed or painted concrete (2 rooms), room/area-specific air handlers (2 rooms), concrete patching (2 rooms), plumbing fixture caulking (1 room), suspect paint (1 room), cove base and associated mastic (1 room), and an electrical panel/circuit/switch box (1 room). The Group 02 sampling location (5171-GMS-2-GLR) was selected for number and volume of materials relative to the other Group 02 rooms.

Group 03: The 10 spaces in this group consist of hallways and entryways located throughout the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 03 spaces include suspended ceiling tile (10 areas), rubber or felt window seals/gaskets (8 areas), vinyl floor tile and associated mastic (8 areas), cove base and associated mastic (8 areas), around-frame window caulking (7 areas), doorframe caulking (7 areas), inset window caulking (6 areas), ceramic tile and associated mastic/grout (5 areas), inset door window caulking (4 areas), pre-1980 univent/room units (2 areas), concrete patching (2 areas), 9x9 ACM floor tile and associated mastic (2 areas), fibrous/cementitious roof deck material (1 area), electrical panels/circuit/switch boxes (1 area), carpet and associated mastic (1 area), and a space heater (1 area). The Group 03 sampling locations (5171-GMS-1-EHAL, 5171-GMS-1-ENT1, 5171-GMS-2-NHAL) were selected as being representative of the group, widely distributed spatially, and containing the largest numbers of materials relative to other Group 03 areas.

Group 04: The three (3) spaces in this group consist of a maintenance room, the gym hall, and the elevator room located in the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. These rooms/areas were grouped together as they all contain elevator equipment (e.g., elevator electronics, hydraulics, lifts). Potential PCB-containing materials identified in Group 04 spaces include suspended ceiling tile (3

rooms/areas), cove base and associated mastic (2 rooms/areas), vinyl floor tile and associated mastic (1 room/area), plumbing fixture caulking (1 room/area), foam rolls (1 room/area), doorframe caulking (1 room/area), concrete patching (1 room/area), 9x9 ACM floor tile and associated mastic (1 room/area), elevator hydraulics (1 room/area), elevator hydraulic tank and controls (1 room/area), elevator electronics (1 room/area), an elevator / hydraulic lift (1 room/area), and electrical panels/circuit/switch boxes (1 room/area). Two of the three Group 04 rooms/areas were selected for sampling (5171-GMS-1-ELV, 5171-GMS-1-GHALL) due to the presence of oil-filled equipment and presumed pre-1980 elevator components in Group 04 rooms/areas.

Group 05: The nine (9) spaces in this group consist of the boiler room located on the first floor and electrical rooms located throughout the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 05 spaces include electrical panels/circuit/switch boxes (9 rooms), suspended ceiling tile (8 rooms), dry-type electrical transformers (8 rooms), cove base and associated mastic (6 rooms), concrete patching (6 rooms), fibrous/cementitious roof deck material (3 rooms), duct/pipe/vent caulking (3 rooms), water heaters (1 room), expansion joint caulking (1 room), ceramic tile and associated mastic/grout (1 room), a furnace (1 room), and an air compressor (1 room). The Group 05 sampling locations (5171-GMS-1-BOIL, 5171-GMS-1-ELC2, 5171-GMS-3-ELC1) were selected as being representative of the group, widely distributed spatially, and containing the largest numbers of materials relative to other Group 05 rooms/areas.

Group 06: The seven (7) spaces in this group consist of the custodial rooms located throughout the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 06 spaces include suspended ceiling tile (7 rooms), cove base and associated mastic (6 rooms), plumbing fixture caulking (5 rooms), fibrous/cementitious roof deck material (2 rooms), suspect paint (1 room), doorframe caulking (1 room), and concrete patching (1 room). The Group 06 sampling locations (5171-GMS-2-CUS2, 5171-GMS-3- CUS2) were selected as being representative of the group, widely distributed spatially, and containing the largest numbers of materials relative to other Group 06 rooms.

Group 07: The nine (9) spaces in this group consist of the stairways/stairwells located in the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 07 spaces include around-frame window caulking (8 areas), cove base and associated mastic (8

areas), suspect paint (7 areas), rubber or felt window seals/gaskets (6 areas), roof deck super-ceiling material (6 areas), vinyl floor tile and associated mastic (5 areas), inset door window caulking (4 areas), floor caulking (3 areas), doorframe caulking (3 areas), suspended ceiling tile (2 areas), concrete patching (2 areas), inset window caulking (1 area), sealed or painted concrete (1 area), and 9x9 ACM floor tile and associated mastic (1 area). The Group 07 sampling locations (5171-GMS-2-SW2, 5171-GMS-3- SW2, 5171-GMS-3- SW3) were selected as being representative of the group, widely distributed spatially, and containing the largest numbers of materials relative to other Group 07 areas.

Group 08: The two (2) spaces in this group consist of the gym and the mezzanine-level weight room (overlooking the gym) located in the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 08 spaces include room/area-specific air handlers (2 rooms/areas), foam rubber mats (2 rooms/areas), suspended ceiling tile (1 room/area), fibrous/cementitious roof deck material (1 room/area), roof deck material (1 room/area), finished wood flooring (1 room/area), doorframe caulking (1 room/area), carpet and associated mastic (1 room/area), cove base and associated mastic (1 room/area), and 9x9 ACM floor tile and associated mastic (1 room/area). The Group 08 sampling location (5171-GMS-2-GYM) was selected as containing the largest number and volume of materials relative to the other Group 08 room/area.

Group 09: The eight (8) spaces in this group consist of storage rooms/areas located in the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 09 spaces include suspended ceiling tile (8 rooms/areas), cove base and associated mastic (6 rooms/areas), roof deck super-ceiling material (4 rooms/areas), duct/pipe/vent caulking (3 rooms/areas), doorframe caulking (3 rooms/areas), 9x9 ACM floor tile and associated mastic (3 rooms/areas), carpet and associated mastic (2 rooms/areas), rubber or felt window seal/gasket (2 rooms/areas), wall tile and associated adhesive/grout (2 rooms/areas), vinyl floor tile and associated mastic (2 rooms/areas), pre-1980 univent/room unit (2 rooms/areas), room/area-specific air handlers (2 rooms/areas), electrical panels/circuit/switch boxes (2 rooms/areas), ceramic tile and associated mastic/grout (2 rooms/areas), wood paneling glue/adhesive (1 room/area), around-frame window caulking (1 room/area), spray foam (1 room/area), sink undercoating (1 room/area), sealed or painted concrete (1 room/area), resilient sheet flooring (1 room/area), plumbing fixture caulking (1 room/area), expansion joint caulking (1 room/area), an electrical transformer (1 room/area), and countertop adhesive (1 room/area). The Group 09 sampling locations (5171-GMS-1-STO2, 5171-GMS-2-STO4, 5171-GMS-2-STOR2) were

selected for spatial distribution and as containing the largest numbers and volumes of materials relative to other Group 09 rooms/area.

Group 10: The two (2) spaces in this group consist of the auditorium and stage located in the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 10 spaces include pre-1980 univent/room units (2 rooms/areas), stage lighting (2 rooms/areas), roof deck super-ceiling material (2 rooms/areas), doorframe caulking (2 rooms/areas), suspended ceiling tile (1 room/area), stage curtain (1 room/area), electrical panels/circuit/switch boxes (1 room/area), cove base and associated mastic (1 room/area), carpet and associated mastic (1 room/area), adhesive-mounted board (1 room/area), and air handling units (1 room/area). The Group 10 sampling location (5171-GMS-2-AUD) was selected for number and volume of materials relative to the other Group 10 room/area.

Group 11: The three (3) spaces in this group consist of the kitchen, kitchen storage area, and kitchen loading area located in the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 11 spaces include suspended ceiling tile (3 rooms/areas), pre-1980 univent/room units (1 room/area), sealed or painted concrete (1 room/area), refrigerator/freezer units (1 room/area), a kitchen exhaust hood (1 room/area), an electronic (wired) PA unit (1 room/area), electrical panels/circuit/switch boxes (1 room/area), cove base and associated mastic (1 room/area), ceramic tile and associated mastic/grout (1 room/area), and 9x9 ACM floor tile and associated mastic (1 room/area). The Group 11 sampling location (5171-GMS-1-KIT) was selected for number and volume of materials relative to other Group 11 rooms/areas.

Group 12: Cafeteria. This is a single-room/area group consisting of the cafeteria (5171-GMS-1-CAF) located in the main building. Potential PCB-containing materials identified in 5171-GMS-1-CAF include inset window caulking, around-frame window caulking, room/area specific air handlers, foam pads, cove base and associated mastic, and 9x9 ACM floor tile and associated mastic. Room 5171-GMS-1-CAF has a unique building material inventory; it was designated as its own group and proposed sampling site for this reason.

Group 13: The five (5) spaces in this group consist of partially subterranean classrooms located on the first floor of the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Group 13 rooms are distinct as they have no exterior windows. Potential PCB-containing materials identified in Group 13 spaces include

suspended ceiling tile (4 rooms), cove base and associated mastic (4 rooms), inset window caulking (3 rooms), vinyl floor tile and associated mastic (3 rooms), pre-1980 univent/room units (3 rooms), doorframe caulking (3 rooms), countertop adhesive (3 rooms), sink undercoating (2 rooms), electrical panels/circuit/switch boxes (2 rooms), workshop equipment (1 room), rubber or felt window seals/gaskets (1 room), room/area-specific air handler(s) (1 room), flush-mounted ceiling tile (1 room), duct/pipe/vent caulking (1 room), ceiling/foundation wall caulking (1 room), air filtration units (1 room), adhesive-mounted board (1 room), adhesive (1 room), and 9x9 ACM floor tile and associated mastic (1 room). The Group 13 sampling locations (5171-GMS-1-102, 5171-GMS-1-108) were selected for numbers and volumes of materials relative to other Group 13 rooms.

Group 14: The five (5) spaces in this group consist of classrooms located on the first floor of the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 14 spaces include Rubber or felt window seal/gasket (5 rooms/areas), around-frame window caulking (5 rooms/areas), pre-1980 univent/room units (5 rooms/areas), suspended ceiling tile (5 rooms/areas), cove base and associated mastic (5 rooms/areas), countertop adhesive (5 rooms/areas), vinyl floor tile and associated mastic (4 rooms/areas), sink undercoating (4 rooms/areas), doorframe caulking (3 rooms/areas), 9x9 ACM floor tile and associated mastic (3 rooms/areas), inset window caulking (2 rooms/areas), carpet and associated mastic (2 rooms/areas), wall tile and associated adhesive/grout (1 rooms/areas), sealed or painted concrete (1 rooms/areas), plumbing fixture caulking (1 rooms/areas), linoleum and associated mastic (1 rooms/areas), electrical panels/circuit/switch boxes (1 rooms/areas), ceramic tile and associated mastic/grout (1 room/area), and air circulators/fans (1 rooms/areas). The Group 14 sampling locations (5171-GMS-1-103, 5171-GMS-1-109) were selected for numbers and volumes of materials relative to other Group 14 rooms.

Group 15: The 24 spaces in this group consist of classrooms, offices, the nurse's room, guidance room, band room, conference room 1, and staff room 1 located on the second floor of the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 15 spaces include suspended ceiling tile (24 rooms), cove base and associated mastic (24 rooms), rubber or felt window seals/gaskets (22 rooms), pre-1980 univent/room units (19 rooms), around-frame window caulking (18 rooms), vinyl floor tile and associated mastic (17 rooms), inset window caulking (10 rooms), doorframe caulking (9 rooms), countertop adhesive (9 rooms), carpet and associated mastic (9 rooms), 9x9 ACM floor tile and associated mastic (9 rooms), ceramic tile

and associated mastic/grout (6 rooms), fibrous/cementitious roof deck material (5 rooms), plumbing fixture caulking (4 rooms), resilient sheet flooring (3 rooms), wall tile and associated adhesive/grout (2 rooms), floor caulking (2 rooms), expansion joint caulking (2 rooms), duct/pipe/vent caulking (2 rooms), air circulators/fans (2 rooms), sink undercoating (1 room), projector screen material (1 room), lab supplies (1 room), lab equipment (1 room), electrical panels/circuit/switch boxes (1 room), and adhesive-mounted board (1 room). The Group 15 sampling locations (5171-GMS-2-202, 5171-GMS-2-205, 5171-GMS-2-207, 5171-GMS-2-208, 5171-GMS-2-212, 5171-GMS-2-GDE, 5171-GMS-2-NURSE1, 5171-GMS-2-OFF3) were selected as being representative of the group, widely distributed spatially, and containing the largest numbers of materials relative to other Group 15 areas.

Group 16: The 24 spaces in this group consist of classrooms, offices, staff rooms, a server room, tech lab, and library located on the third floor of the main building. They contain similar potential PCB-containing building materials and electrical/heating/cooling equipment. Potential PCB-containing materials identified in Group 16 spaces include fibrous/cementitious roof deck material (24 rooms/areas), cove base and associated mastic (23 rooms/areas), around-frame window caulking (22 rooms/areas), suspended ceiling tile (22 rooms/areas), rubber or felt window seals/gaskets (21 rooms/areas), pre-1980 univent/room units (20 rooms/areas), vinyl floor tile and associated mastic (19 rooms/areas), inset window caulking (18 rooms/areas), countertop adhesive (13 rooms/areas), sink undercoating (9 rooms/areas), doorframe caulking (7 rooms/areas), carpet and associated mastic (7 rooms/areas), plumbing fixture caulking (5 rooms/areas), expansion joint caulking (4 rooms/areas), flush-mounted ceiling tile (2 rooms/areas), room divider(s) (1 rooms/areas), projector screen material (1 rooms/areas), inset door window caulking (1 room/area), adhesive (1 room/area), and 9x9 ACM floor tile and associated mastic (1 room/area). The Group 16 sampling locations (5171-GMS-3-301, 5171-GMS-3-307, 5171-GMS-3-309, 5171-GMS-3-313, 5171-GMS-3-315, 5171-GMS-3-LIB, 5171-GMS-3-OFF1, 5171-GMS-3-OFF2) were selected as being representative of the group, widely distributed spatially, and containing the largest numbers and volumes of materials relative to other Group 16 areas.

Sampling Methodology

Upon approval of this work plan and cost estimate, HEA will schedule indoor air sampling at the subject site for April 10-12, 2023. Sampling will take place over two consecutive 24-hour periods. On April 10, 2023, per EPA Method TO-10A, calibrated low-flow air pumps will be placed in all proposed sampling locations located on the first and third floors of Green Mountain Union High School (28 of 45 total proposed sampling locations) to collect 24-hour indoor air samples at a flow rate of 4-5L/minute through polyurethane foam cassettes (Figures 2A and 2C). Polyethylene tubing will be positioned with stands to collect samples at a height of approximately 36-48 inches above the floor. HEA will return to the site on April 11, 2023 to complete the first round of samples and initiate sampling, as described above, for the remaining 17 proposed sampling locations (i.e., second floor sampling locations; Figure 2B). HEA will return to the site on April 12, 2023 to complete sampling. For QA/QC purposes, three duplicate indoor air samples will be collected in sampling locations 5171-GMS-1-108, 5171-GMS-2-NURSE1 and 5171-GMS-3-LIB and an ambient air sample will be collected as indicated in Figure 2A. Two duplicate samples (5171-GMS-1-108 and 5171-GMS-2-NURSE1) will be collected during the first round of sampling on April 10-11, 2023; the third duplicate sample (5171-GMS-3-LIB) and the ambient air sample will be collected during the second round of sampling on April 11-12, 2023. As sampling will be scheduled to take place while the school is out of session for spring vacation, special arrangements will be made with school personnel to ensure that HVAC systems operate during the sampling periods as they would during a normal school day.

Samples, including three duplicate samples, one ambient air sample, and one field blank, will be logged onto a chain-of-custody form and delivered by courier to Pace Labs in East Longmeadow, Massachusetts where they will be analyzed for individual PCB Aroclors using EPA method 8082. Sample analytical results will be reported as total Aroclors, with laboratory reporting limits of 10 ng/m^3 or below. The laboratory will review the raw data (for example, chromatogram) and report any peaks that cannot be identified as an Aroclor (UIP) but fall within the retention time windows for a potential PCB congener.

Site Characterization Objectives and Strategy

The objectives of the proposed indoor air sampling plan are to:

1. Determine if PCB Aroclors are present in indoor air in 45 sampling locations at the subject site; and
2. Complete a Consultant Sample Input File in CSV format; and
3. Complete an Indoor Air Sampling Report in accordance with the I-Rule, including base map with sampling locations and a tabular summary of analytical results with relevant details about sampling locations and conditions.

A strategy for accomplishing these objectives is outlined below:

Task 1: Indoor Air Sampling

Pending approval of this work plan/cost estimate by the SMS, HEA/JTC will travel to the site to conduct indoor air sampling in 45 locations as described above. Two duplicate indoor air samples, one ambient air sample, and one field blank will also be collected/analyzed via EPA Method 8082.

Task 2: Deliverables— Indoor Air Sampling Report and Consultant Sample Input File

HEA/JTC will complete an Indoor Air Sampling Report in accordance with the I-Rule. The report will include a base map with sampling locations and a tabular summary of analytical results with relevant details about sampling locations and conditions. For each sample/location, information provided in the Consultant Data Input File submitted with the final report will include sampling date; unique room ID; main sample ID; unique sample ID; unique lab sample name; SMS site number; school name, address, town, latitude and longitude; point of contact name and email; building/wing name; room number/type; floor; group; occupancy type; youngest grade of occupants; matrix; sampling method; starting indoor and outdoor temperature, relative humidity, wind speed, barometric pressure; ending indoor and outdoor temperature, relative humidity, wind speed, barometric pressure; HVAC system type; air exchange information; heating system type; time heating system is on during sampling; whether and how long room is occupied during sampling; maximum time room is occupied (hours per week); and whether potential PCB-containing materials are present.

* * *

If you have any questions regarding the planned field procedures, analytical methods, and reporting presented in this workplan, please contact us at (802) 672-6112 or craig@harperenv.com.

Sincerely,
Harper Environmental Associates

Craig Sterritt
Director, Environmental Services

Attachments:

	Table 1:	Building Inventory by Room/Area
	Table 2:	Building Inventory by Material
	Figure 1:	Site Vicinity Map
	Figures 2A-2C:	Site Plans with Proposed Sampling Locations
	Appendix:	Cost Estimate
		Pre-Sampling Building Inventory (Separate XLS File)
		Consultant Sample Input File (Separate CSV File)