O'Reilly, Talbot & Okun
ENGINEERING ASSOCIATES

August 15, 2023
J5174-04-06

Worcester Public Schools
20 Irving Street
Worcester, MA 01609

Attn.: Ms. Kristen Tran,
Environmental Health & Safety Coordinator

RE: PCB BMP Quarterly Status Report, 2022-2023 School Year
Fourth Quarter, June 2023
Doherty High School

Dear Kristen,

In accordance with the Worcester Public School's (WPS) authorization, O'Reilly Talbot & Okun Associates, Inc. (OTO) is pleased to present this quarterly status report of the Best Management Practices (BMPs) implemented at the Doherty High School (Doherty). This status report represents the fourth quarter of the 2022-2023 school year. The objective of the BMP program is to reduce potential exposure to polychlorinated biphenyls (PCBs).

Certain materials used in the construction and renovation of buildings between 1950 and 1980 may contain PCBs. Doherty High School was constructed during this period. The U.S. Environmental Protection Agency (USEPA) has recommended that a BMP program be implemented in schools and other buildings either constructed or renovated during this period.

WPS and its staff are responsible for implementing the BMPs at Doherty High School. OTO personnel are responsible for conducting quarterly independent evaluations to provide WPS management with an assessment of the effectiveness of the BMPs implementation.

Best Management Practices (BMPs)

In its July 28, 2015 guidance for school administrators and other building owners and managers titled "Practical Actions for Reducing Exposure to PCBs in Schools and Other Buildings" the USEPA described potentially useful BMPs, including:

1. Ensuring that ventilation systems are operating properly and are regularly inspected and maintained according to system manufacturer instructions and guidelines or ANSI/ASHRAE/ACCA Standard 180-2012—Standard Practice for Inspection and Maintenance of Commercial Building HVAC

Systems. If system cleaning is needed, follow ANSI/ACCA Standard 6–Restoring the Cleanliness of HVAC Systems (2007);

2. Cleaning inside schools and other buildings frequently to reduce dust and residue;
3. Using a wet or damp cloth or mop to clean surfaces;
4. Using vacuum cleaners with high efficiency particulate air (HEPA) filters;
5. Not sweeping with dry brooms or using dry cloth wipes for dusting;
6. Washing hands with soap and water, particularly before eating; and
7. Washing children's toys.

We understand that WPS has modeled its BMP program for Doherty High School on EPA's guidelines. OTO's assessment of BMP effectiveness focuses on items 1 through 5 on this list. Regarding item 6, all school lavatories are equipped with soap and water, and it is the responsibility of students and staff to maintain personal cleanliness. Item 7 on the list is not relevant to high school environments.

Assessment of BMPs at Doherty High School

We conducted the fourth quarter, 2022-2023 school year BMP assessment at Doherty on June 27, 2023, accompanied by representatives from the District and School environmental and facilities department. To the best of our knowledge, the Heating, Ventilation, and Air-Conditioning (HVAC) system was operating properly at the time of the BMP assessment.

Because window and door caulking in the school may contain PCBs, WPS has previously applied a layer of non-PCB caulk over the previously existing caulking to reduce the potential for exposures. OTO observed twenty-three (23) classrooms or other representative spaces in the school selected at random during the assessment. Our observations focused on the presence of dust on windows, windowsills, and window frames as well as the univent systems that provide heating and ventilation to the classrooms.

The school spaces we observed included:

- Cafeteria,
- Gymnasium hallway,
- Library / Media Center, and
- Other Selected classrooms or learning areas

Our general observations are summarized on Table 1 (attached). The univents were generally free of significant dust and visible oil leakage. During the assessment a majority of rooms/areas observed were rated as "Very Good" (minimal dust or debris). Some areas

rated as “Little” or “Moderate” amounts of dust accumulation. During the fourth quarter observation, no rooms were observed with missing or deteriorating caulk. Spaces with moderate dust accumulation were identified at the time to District and School facilities representatives and are documented in the attached Table.

Based on our discussions and observations, it is our conclusion that the implementation of the BMPs at Doherty is generally effective. We recommend that if areas are observed with deteriorating caulk an application of non-PCB caulk sealant should be applied. Areas noted to have moderate dust accumulation should be cleaned in accordance with “Practical Actions for Reducing Exposure to PCBs in Schools and Other Buildings” guidance.

WPS authorized OTO to conduct annual indoor air monitoring for PCBs at Doherty High School. The full air testing reports are provided separately from the BMP reports. Air monitoring results have been below USEPA guidelines for PCB concentrations in school air for each of the sampling rounds completed to date.

Other USEPA Recommendations for Suspected PCBs in Schools

Although not technically BMPs, USEPA made three other recommendations in its July 28, 2015 guidance for PCBs in schools:

- Remove all PCB containing fluorescent light ballasts (FLBs);
- Give consideration to encapsulating suspected PCB containing materials (such as caulk) to further reduce the potential for PCB exposure; and
- Removing suspect PCB containing building materials during planned renovations and repairs.

WPS removed all suspect PCB containing FLBs in 2012. There are no suspected PCB FLBs remaining in the Worcester school system.

In 2012 WPS encapsulated the suspect PCB containing caulk around the windows and doors at Doherty with an additional layer of non-PCB caulk. Exterior suspect caulking was likewise covered with new caulk to a height of eight feet above grade. WPS subsequently over-caulked the remainder of the building’s exterior door, window, and expansion joints in September and October 2018. This over-caulking is repaired as needed to maintain its condition.

Finally, WPS has applied to the State sponsored school building financing program for help with the replacement of the Doherty High School building. WPS is anticipating the new Doherty High School building will open in 2024. After the opening of the new school, the suspect PCB containing materials in the former Doherty High building will be removed and disposed of in accordance with applicable regulatory requirements.

Conclusions and Recommendations

In conclusion, it is our opinion that the BMPs are being implemented in an effective manner at Doherty High School. Based on our observations, there were no areas where caulk is deteriorating or missing that a fresh caulk seal is required. We recommend that the next quarterly (first quarter of the 2023-2024 school year) on-site visit be conducted in September of 2023.

Should you have questions or require additional information, please contact the undersigned.

Sincerely,
O'Reilly, Talbot & Okun Associates, Inc.

Jonathan Hermanson, CHMM
Project Manager

Robert Kirchherr, CSP
Principal

Attachments Table 1 – Summary of Observations for Doherty High School

cc Mr. Richard Ikonen,
Facilities Director

Table 1 - Summary of BMP Observations
Doherty Memorial High School
299 Highland Street
Worcester, MA 01602
June 27, 2023

Room	Condition of Caulk	Condition of Univents	Dust Accumulation	Comments
Cafeteria	VG	VG	M	---
214	VG	VG	L	---
211	VG	VG	VG	---
210	VG	VG	VG	---
212	VG	VG	VG	---
Transition Hallway B	VG	VG	M	--
330	VG	VG	VG	--
334	VG	VG	L	---
336	VG	VG	VG	--
326	VG	VG	VG	---
316	VG	VG	VG	--
308	VG	VG	VG	--
310	VG	VG	VG	---
Gym Hallway	VG	VG	M	---
406	VG	VG	VG	---
407	VG	VG	VG	---
411	VG	VG	VG	
414	VG	VG	VG	---
424	VG	VG	VG	---
421	VG	VG	VG	---
Library / Media Center	VG	VG	VG	--
202	VG	VG	L	Wood blocking far left window, bottom pane
Transition Hallway A	VG	VG	M	---

CATEGORIZATION
Very good = VG: disturbance or dust or debris minimal
Little = L: enough dust to leave a residue on a gloved finger or little disturbance
Moderate = M: visible accumulations of dust or moderate disturbance
Significant = S: thick layer of dust or significant distrubance