

June 1, 2020

File No. 5174-01-06

Worcester Public Schools
20 Irving Street
Worcester, MA 01609, MA 02035

Attn.: Mr. James Bedard,
Director of Environmental Management and Capital Projects

RE: May 2020 - PCB BMP Quarterly Status Report
Doherty Memorial High School

Dear Jim,

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 Memorial High School (Doherty). The objective of the BMP program is to reduce potential exposures to polychlorinated biphenyls (PCBs).

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

WPS and its staff are responsible for implementing the BMPs, and OTO conducts quarterly independent evaluations to provide WPS management with an assessment of the effectiveness of their implementation. Please note that the evaluation typically conducted during the first quarter of the calendar year 2020 did not occur due to the Covid-19 Pandemic.

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.

OTO's assessment of BMP effectiveness focuses on items 1 through 5 on this list. For item 6 all school lavatories are equipped with soap and water. Item 7 is not relevant to high school environments.

Assessment of BMPs at Doherty Memorial High School

We conducted the Spring 2020 BMP assessment at Doherty on May 5, 2020 accompanied by representatives from the School facilities department. We reviewed the operation of the HVAC/air handling equipment with school facilities staff. The system underwent a significant overhaul in 2017 and was operating properly at the time of the BMP assessment.

Because window and door caulking may contain PCBs, WPS has previously applied an additional layer of non-PCB caulk over the previously existing caulking to reduce the potential for exposures. OTO observed twenty-seven (27) classrooms or other representative spaces in the school selected at random during the assessment; this is roughly 25% of rooms within the school. Our observations focused on the presence of dust on windows, window sills and window frames as well as the univent systems that provide heating and ventilation to the classrooms. As noted on Table 1, some windowsills were obstructed by book storage, art displays or other materials.

The school spaces we observed included:

- Cafeteria
- Library/Media Center
- Selected classrooms, and
- Hallway areas.

Our general observations are summarized on Table 1 (attached). During the assessment we observed small amounts of missing caulk that we identified at the time to the school facilities representatives. We were told they would be quickly repaired. At the time we also observed areas in two classrooms with moderate dust accumulation on surfaces and caulking materials. We discussed cleaning procedures with facilities personnel emphasizing the importance of consistency with the BMPs. We were assured that the BMP recommendations were routinely followed in the school.

Based on our discussions and observations, it is our conclusion that the implementation of the BMPs at Doherty is effective. The univents were free of significant dust and visible oil leakage. Except as noted above, most rooms exhibited only slight accumulation of dust. The exterior over-caulking was observed to be intact.

Note that WPS has also authorized OTO to conduct annual indoor air monitoring for PCBs at Doherty. The full air testing reports are provided separately from the BMP reports,

although we note that the air monitoring results have been well 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 also encapsulated suspect PCB containing caulk around the windows and doors at Doherty with an additional thick layer of non-PCB caulk. We observed this over-caulking in each room we visited and found that it was intact and in good condition. This over-caulking is repaired as-needed to maintain its condition. Exterior suspect caulking was likewise covered with new caulk to a height of eight feet above grade. Only limited areas of uncoated caulk are present on the exterior, primarily where the metal window units meet the brick facing. We observed this over-caulking at selected points on the building exterior and found that it was intact and in good condition. No significant deterioration of the uncovered caulking at the tops of window units was observed.

Finally, it should be noted that Doherty has been accepted into the state school building financing program. Plans are now moving forward for the replacement of the Doherty High School structure in approximately 5 years. When Doherty is replaced, the suspect PCB containing materials 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 Memorial High School. We recommend that the next quarterly on-site visit be conducted in August 2020, prior to the start of the school year.

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

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


Christine Arruda, CIEC
Project Manager


James D. Okun, LSP
Principal

Attachments

Table 1 – Summary of Observations for Doherty Memorial High School

Table 1 - Summary of BMP Observations
Doherty Memorial High School
299 Highland Street
Worcester, MA 01602
May 5, 2020

Room	Condition of Caulk	Condition of Univents	Dust Accumulation	Comments
106	VG	VG	VG	---
Cafeteria	VG	VG	VG	3rd window from right, bottom pane, bottom seam, 1/2" hole
Stairwell by Cafeteria	VG	VG	VG	---
Windows at west end of 200s hall (by 213)	VG	VG	VG	Right side 200s hall windows, mid bottom seam, 3" tear
214	VG	VG	VG	4th window from left, middle pane, bottom seam, 18" caulk missing
212	VG	VG	VG	---
209	VG	VG	VG	---
205	VG	VG	VG	5th window from left, middle pane, bottom seam, 2" caulk missing
Library/Media center	VG	VG	VG	---
Transition Hall A	VG	VG	VG	---
318	VG	VG	VG	---
324	VG	VG	VG	Last window on right, bottom pane, bottom seam, 18" caulk missing
328	VG	VG	VG	Last window on right, middle pane, left side seam, 18" caulk missing and bottom seam completely missing. 2nd to right window, middle pane, bottom seam, 3" missing caulk
332	VG	VG	VG	---
336	VG	VG	VG	---
400s Hall, end of hall windows (by 425)	VG	VG	VG	Left side, top pane, bottom seam, 12" caulk missing
423	VG	VG	M	5th window, middle pane, bottom seam
419	VG	VG	VG	---
420	VG	VG	VG	---
416	VG	VG	VG	---
411	VG	VG	VG	---
410	VG	VG	VG	Stacks of books in some areas
407	VG	VG	VG	---
406	VG	VG	VG	---
Upper Gym Hallway	VG	VG	VG	8th from right, upper pane, bottom seam, 6" caulk missing. 6th from right, top pane, bottom seam, 4" caulk missing
308	VG	VG	M	---
312	VG	VG	VG	---

CATEGORIZATION

Very good = minimal dust or debris

Little = enough dust to leave a residue on a gloved finger

Moderate = visible accumulations of dust

Significant = thick layer of dust