O'Reilly, Talbot & Okun
ENGINEERING ASSOCIATES

March 9, 2018
File No. 5171-06-01

Mr. Paul Comerford, Director of Facilities Management
Worcester Public Schools
20 Irving Street
Worcester, MA 01609, MA 02035

RE: February 2018 PCB BMP Quarterly Status Report
Burncoat High School

Dear Mr. Comerford,

In accordance with the Worcester Public School's (WPS) request, O'Reilly Talbot & Okun Associates, Inc. (OTO) is pleased to present this quarterly independent status report of the Best Management Practices (BMPs) implemented at the Burncoat Memorial High School (Burncoat) to reduce potential exposures to polychlorinated biphenyls (PCBs). WPS and its staff are responsible for implementing the BMPs, and OTO conducts quarterly evaluations to provide WPS management with an independent assessment of their effectiveness.

As you know, certain building materials used in the construction and renovation of school buildings during the period between 1950 and 1980 may contain PCBs. The US Environmental Protection Agency (USEPA) has recommended that a BMP program be implemented in schools either built or renovated during this period. Burncoat was constructed during this period.

Note that WPS also requested OTO to conduct indoor air monitoring for PCBs at Burncoat and that the second round of sampling was recently completed. The reports of air testing have been provided in separate reports, although we note that all results were well below USEPA guidelines for PCB concentrations in school air in each sampling round.

Best Management Practices

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 describes 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 cloths 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 items 6 all school lavatories are equipped with soap and water. Item 7 is not relevant to a high school environment.

Assessment of BMPs at Burncoat High School

We conducted our BMP assessment at Burncoat on Tuesday, February 20, 2018. We reviewed the operation of the HVAC/air handling equipment with school engineering staff. The system underwent a significant overhaul approximately one year ago and was operating properly at the time of the BMP assessment.

OTO observed 47 rooms selected at random during the assessment at Burncoat, or roughly 50% of rooms within the school. Our observations of these rooms focused on the presence of dust on windows, window sill and window frames as well as the condition of the Univent systems that provide heating and ventilation air vents. The rooms we observed included:

- The cafeteria;
- Kitchen;
- Library,
- Faculty break rooms;
- Administrative offices;
- Selected classrooms, and
- Hallway areas.

Our general observations are summarized on Table 1 (attached); representative photographs are also attached. We discussed cleaning procedures with school staff 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, the implementation of the BMPs at Burncoat is very effective. The vents to the HVAC plenum that serves most of the building were free of significant dust and debris. The observed windowsills and blinds exhibited little dust. The storage of educational materials on windowsills and air vents, which was observed in previous visits, has been curtailed.

Other USEPA Recommendation 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.

As you know, WPS removed all suspect PCB containing FLBs in 2012. There are no suspected PCB FLBs remaining in the school system.

Also in 2012, WPS encapsulated the suspect PCB containing caulk around all of the windows at Burncoat 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 amended on an as-needed basis to maintain its condition.

Finally, it should be mentioned that WPS is in the process of applying for to the state sponsored financing program that will help with the replacement of the school in approximately seven years. When Burncoat is replaced, the suspect PCB containing materials will be removed and disposed of in accordance with USEPA requirements.

Conclusions and Recommendations

In conclusion, it is our opinion that the BMPs are being implemented in an effective manner. We recommend that the next quarterly on-site visit be conducted in May 2018.

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

Very truly yours,
O'Reilly, Talbot & Okun Associates, Inc.

Thomas B. Speight, CHMM
Project Manager

James D. Okun, LSP
Principal

Attachments

Table 1 – Summary of Observations for Burncoat High School
Selected Photographs from Burncoat High School

Table 1 - Summary of BMP Observations
Burncoat High School
179 Burncoat Street
Worcester, MA 01606
February 20, 2018

Room	Condition of Caulk	Condition of Plenum Vents/Radiators	Dust Accumulation
A1	VG	NA	VG
A5 - Staff Conf. Room	VG	VG	VG
A8	VG	VG	VG
A14	VG	VG	Some
A18	VG	VG	VG
Doorway by main office	VG	NA	VG
B2	VG	VG	VG
B5A	VG	VG	VG
B6	VG	VG	VG
B11	VG	VG	Some
B17	VG	VG	VG
Chemical storage room	VG	VG	VG
Hallway by B1	VG	VG	VG
C1A	VG	VG	VG
C3	VG	VG	VG
C4	VG	VG	VG
C5	VG	VG	VG
C6	VG	VG	VG
C8	VG	VG	VG
C12	VG	VG	VG
C19	VG	VG	VG
C21	VG	VG	VG
D3	VG	VG	VG
D4	VG	VG	VG
D5	VG	VG	VG
D6A	VG	VG	VG
D8	VG	VG	VG
D14	VG	VG	VG
D16	VG	VG	VG
D18	VG	VG	VG
D20	VG	VG	VG
D24	VG	VG	VG
E-3	VG	VG	Some
E-4	VG	VG	VG
E-5	VG	VG	VG
E-6	VG	VG	Some
E-8	VG	VG	Some
Hallway by E-wing	VG	N/A	Some
F2	VG	VG	Some
F4 - Media Arts	VG	VG	VG
F6	VG	VG	VG
G-wing Hallway	VG	N/A	Some
Exterior doorway in cafeteria	VG	VG	VG
Courtyard access between D and B wings	VG	N/A	VG
Main Office	VG	VG	VG
Teachers' dining room and lounge	VG	VG	VG
Guidance Offices	VG	N/A	VG

CATEGORIZATION

Dust

Very good = minimal dust or debris
Some = enough dust to leave a residue on a gloved finger
Moderate = visible accumulations of dust
Significant = thick layer of dust

Plenum Vents

Very good = minimal dust or debris
Some = enough dust to leave a residue on a gloved finger
Moderate = visible accumulations of dust
Significant = thick layer of dust

Caulk

Very Good = Overcaulking is intact, with no visible debris
Good = Overcaulking is generally intact but for minor patching
Needs repair = Overcaulking missing or damaged

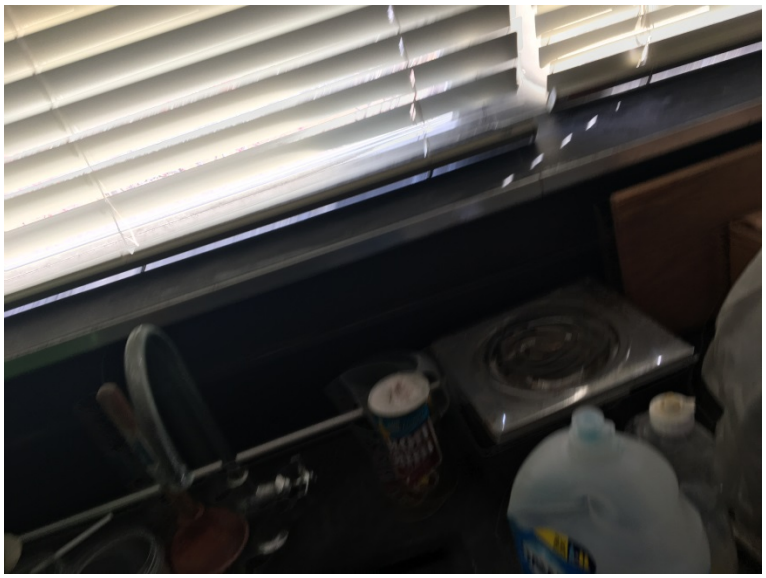
Site Photographs

Photograph 1: Typical window unit, room A18

Photograph 2: Caulking torn by opening window, room A18

Site Photographs

Photograph 3: Window and windowsill, room 10



Photograph 4: Windowsill in chemical storage room

Site Photographs

Photograph 5: Example of materials obstructing windowsill

Photograph 6: Repaired caulk around window in room D6A