YORKTOWN CENTRAL SCHOOL DISTRICT
YORKTOWN HEIGHTS, NEW YORK

FINAL

REPORT ON PCB WIPE SAMPLING: AUGUST 30, 2005

FRENCH HILL ELEMENTARY SCHOOL

September 2005

HDR | LMS
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Project No. 627-013

OBJECTIVE

The objective of this report by HDR|LMS is to document the PCB wipe sampling conducted at the French Hill School at 2051 Baldwin Road, Yorktown Heights, New York. The sampling was conducted pursuant to HDR|LMS' August 16, 2005 proposal to Yorktown Central School District (YCSD) and YCSD's subsequent acceptance on August 24.

SAMPLING

Sampling was conducted on August 30, following completion of the excavation of the PCB contaminated soil around the exterior of the building. The soil contamination is believed to be result of the scattering of PCB-containing window caulk during the removal of the original building windows approximately two years ago.

Six exterior building wipe samples and six wipe samples of interior surfaces were collected. In addition a wipe sample of building masonry caulk suspected to contain PCBs was also collected. Standard PCB wipe sampling protocols were employed. A stainless steel template, 10 centimeters (cm) on a side, was placed over the surface to be sampled. The wipes consisted of hexane-soaked gauze supplied by the analytical laboratory (STL-Newburgh). The area formed by the template was thoroughly wiped horizontally, vertically, and diagonally. The only exception to this protocol was for the wipe of the building caulk; wiping was done vertically over the area of the caulk bead 2 cm by 50 cm to obtain the standard 100 cm^2 wipe area.

The locations of the samples are indicated on the attached table. The attached sketch map provided by YCSD provides on orientation for these locations. Sampling was biased to locations near the soil remediation areas. Four of the wipes were collected at Room 23 where the highest levels of PCB contamination to the soil had been measured (40 mg/kg). The sampling encompassed one room exhaust vent (at Room 23), which is typical of the ventilation systems of most of the other rooms in the structure. One wipe sample was collected from the aluminum flashing of the roof.

In addition to the wipe samples, a sample of the building caulk was also collected for bulk PCB analysis. This caulk is the same material subjected to the wipe sample noted above.

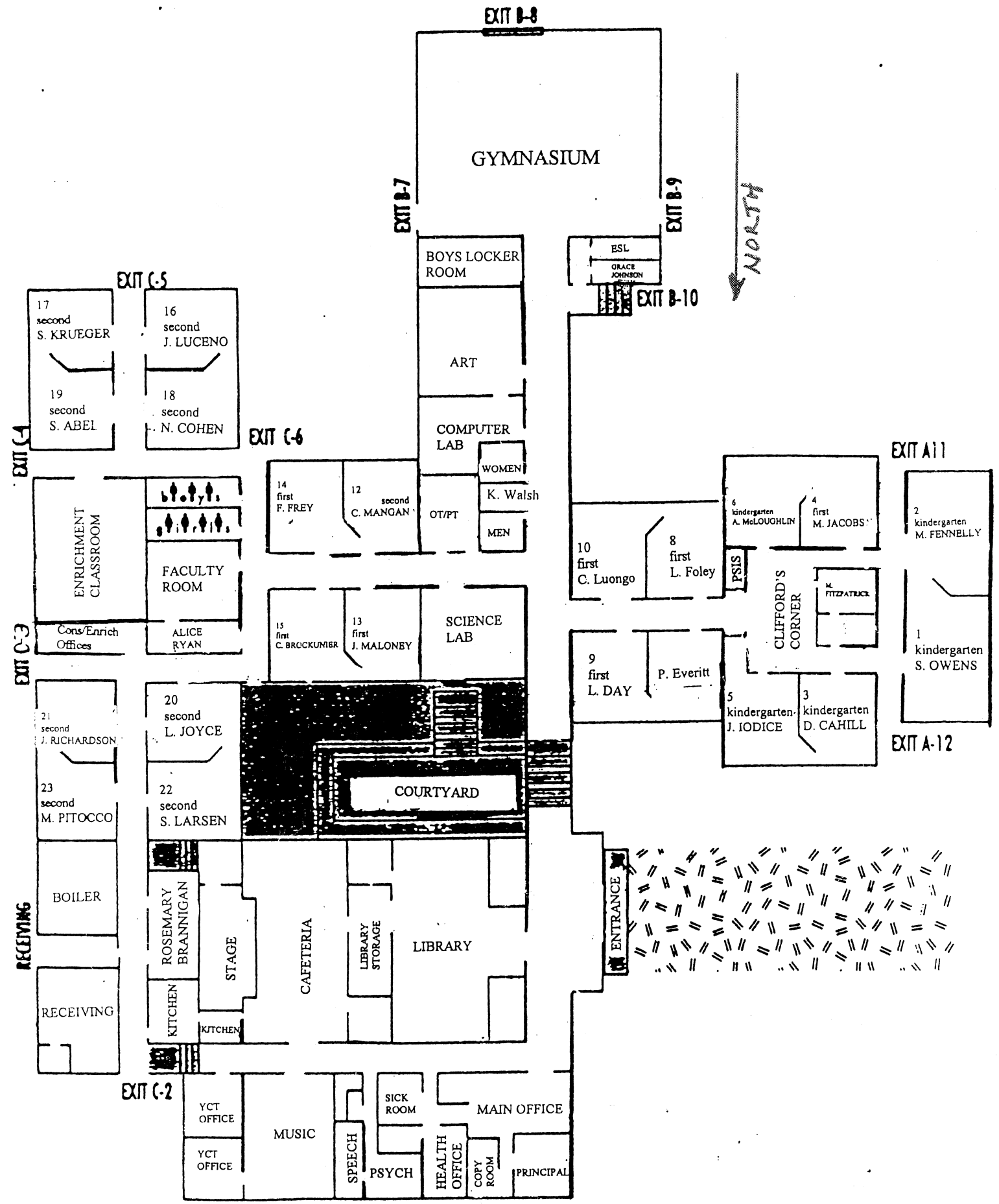
Summary of Results for Wipe Samples Collected August 30, 2005
French Hill Elementary School

Sample ID	Total PCBs ($ug/100cm^2$)	Location Description
Exterior Wipes		
23WX	**10.9**	Room 23 window pane: hottest area from original soil sampling (40ppm). Middle of northernmost window.
23SX	5.8	Room 23 sill: Northern corner of southernmost window.
C5DX	8.7	Exit C-5 door: Right side door just to the right of door handle.
6SX	**34**	Room 6 sill: Eastern corner of easternmost window.
7MX	3.7	Room 7 masonry: Masonry 6-10" below westernmost window.
Roof-Wipe	0.92	Alcove above boiler room: Aluminum molding that forms border of the roof.
Interior Wipes		
23SI	0.58	Room 23 sill: Opposite exterior sill wipe.
23-Plenum	2.29	Room 23 exhaust (through roof) vent: Interior just inside grate covering.
ArtFI	<1.0	Art Room floor: Near middle of the northernmost window. The entire room has been cleaned and painted.
MusicWPI	0.22	Music Room window pane: Center of the middle window.
GYM WIW	0.64	Gym west wall: South of Exit B-9.
5SCI	<1.0	Room 5 screen: Western corner of westernmost window.
FH-Caulk Wipe	**22,700**	Strip near building entrance

Results summarized from Preliminary Report by STL-Newburgh and are subject to revision.

Concentrations in **bold** exceed EPA Spill Cleanup Criteria of 10 $ug/100cm^2$

Bulk sample of caulk strip collected near building entrance contained 60,000 mg/kg total PCBs.



FRENCH HILL ELEMENTARY SCHOOL

RESULTS

A copy of the STL-Newburgh report is presented in Appendix A and summarized in the attached table. The table presents the results of the wipe samples in units of ug of total PCBs per 100 cm^2 of surface area. The results for the bulk sample are presented in units of mg/kg. The table also shows the U.S. Environmental Protection Agency (EPA) standard for cleanup of PCB spills onto surface areas in unrestricted use sites – 10 ug/100 cm^2.

As indicated, the results for all interior wipes were all well within the EPA standard. Concentrations were less than 1 ug/cm^2, except for the wipe collected from inside the Room 23 exhaust vent which contained 2.29 ug/100 cm^2, about 20% of the cleanup criteria.

Two exterior wipes exceeded the EPA standard (the Room 23 window pane at 10.9 ug/100 cm^2 and the Room 6 window sill at 34 ug/100 cm^2). One other window sill wipe contained 5.8 ug/100 cm^2 (Room 23) and the exterior door wipe contained 8.7 ug/100 cm^2 (at Exit C-5), marginally compliant with the standard.

The bulk sample of the masonry caulk contained 60,000 mg/kg (equivalent to 6%) PCBs, confirming the presence of PCBs in that material. The wipe of the caulk yielded 22,700 ug/100 cm^2.

The presence of PCBs in the building wipes (other than the caulk) may be a result of a combination of dusting or erosion while the original window caulk was in place, dusting during the removal of the windows, and dusting during the soil remediation. Great care was taken during the remediation to avoid dusting and no such dusting was evident either visually or with the air monitoring equipment employed during that work. In addition, the sides of the building were pressure washed after completion of the remedial soil excavation. However, the presence of PCBs on the glass pane of the new windows demonstrates that at least some of the exterior building surface contamination occurred subsequent to the window replacement program two years ago.

RECOMMENDATIONS

The results for the building interior indicate that no further action is warranted inside the building.

The results for the building exterior indicate that decontamination of a limited number of surfaces is warranted: window panes, building sills, and doors. Although the EPA standard is not directly applicable for the building caulk, since the PCBs in the wipe sample were not a result of a spill, the magnitude of the PCB concentration in the wipe still justifies some action.

Since the PCBs remained present following a pressure wash of the building, cleaning of the building surfaces will be probably require the use of a chemical. Windows and doors should be readily amenable to such cleaning. The slate composition of the window sills may require more aggressive action, such as repeated soaking and cleaning. Not all of the windows, sills, and doors may require cleaning, which would be indicated by further sampling.

Were the masonry caulk wipe test concentrations the result of a spill (rather than the caulk product, itself), the EPA standard would not allow encapsulation of the PCBs in the caulk, because the wipe concentration is too high, and physical removal of the material would be required. However, that standard is not applicable, and there is no known requirement for proactive removal of building materials that contain PCBs. Accordingly, sealing the caulk to at least a height of 6 feet (the height at which the EPA distinguishes low and high contact areas), would appear to be a prudent, relatively low cost action, pending further guidance or standard setting at the state or federal level. On-going inspection of the sealant will be required to verify its future integrity.