



September 2, 2008

Capital Projects Coordinator
Shoreline School District
18560 1st Avenue NE
Shoreline, WA 98155-2148

**RE: Aldercrest Annex Classroom and Gymnasium Buildings C, D and E (Former Kellogg Jr. High School), 2545 NE 200th Street, Shoreline, WA
Letter of "Good Faith" Inspection – PBS Project #40958.003**

PBS Engineering + Environmental (PBS) performed an inspection of the Shoreline School District's Aldercrest Junior High School Classroom Buildings (C & E) and Gymnasium (D) for the presence of asbestos-containing materials (ACMs), lead-containing paints, PCB-containing fluorescent light fixture ballasts, mercury-containing fluorescent light tubes, and underground storage tanks (USTs). The accessible areas of these buildings were inspected.

BACKGROUND

The buildings included in this investigation were constructed in 1961, and therefore would typically include suspect-ACMs. Buildings C and E were re-roofed approximately six years ago and thus the roofs of these two buildings were not inspected for suspect ACM. The intent of this investigation is to insure that Shoreline School District is in compliance with all federal, state and local regulations prior to demolition activities.

BUILDING DESCRIPTION

Classroom Buildings (Buildings C and E)

The classroom buildings are one-story, slab-on-grade structures consisting of classrooms and restrooms. The exterior walls are constructed of light-weight masonry block units and/or stucco. Interior finishes includes gypsum wallboard interior walls, 1"x2" nailed-on ceiling tiles and/or gypsum wallboard ceilings, floors are finished with 9"x9" floor tiles, 12"x12" floor tiles, bare concrete and carpet. Some tiled floors are covered with carpet. Bathroom floors are finished with 6"x6" red clay tiles.

Domestic water piping is insulated with fiberglass straight runs and hard-mudded fittings. Heating is electrical. Each building has its own hot water tank that supplies the restrooms and classroom sinks. The administrative office is located in Building E.

Gymnasium (Building D)

The Gymnasium Building is an over-height single-story structure with a partial basement and partial unexcavated crawlspace. The building consists of gymnasium, restrooms and storage

space on the main floor. The basement has the locker rooms and the mechanical space with hot water tank.

Interior floor finishes include hardwood floors in the gymnasium, 12" floor tile in the building lobby, ceramic tile in the restrooms, concrete floors in the locker rooms and 9" floor tile in janitor closets and athletic offices.

Interior wall and ceiling finishes includes gypsum wallboard and compressed wood fiber panels.

The building exterior is constructed of corrugated metal siding.

SURVEY PROCESS

Accessible areas of above-referenced Buildings were inspected by AHERA Certified Building Inspector Ernest Edwards (cert. # 1027847 exp. February 12, 2009) in August 2008. When observed, suspect ACMs were either assumed to contain asbestos or sampled, assigned a unique identification number and transmitted for analysis to Seattle Asbestos Test, LLC (NVLAP #200768-0) using chain-of-custody protocols. Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume. PBS noted the quantity, location and condition of ACMs encountered during this inspection.

All accessible areas included in this project were surveyed as part of this inspection. Inaccessible spaces are defined as those requiring selective demolition, fall protection or confined-space entry protocols to gain access. While PBS has presumed the presence of and endeavored to identify any ACM that may be found in the concealed locations, additional unidentified ACM may exist.

PBS reviewed historical asbestos survey data available from the previous PBS inspections and the Shoreline School District AHERA Management Plans. Pertinent information was used to develop sampling strategies and has been incorporated into our findings.

FINDINGS

Asbestos-Containing Materials (ACM)

Materials found to contain asbestos in concentrations greater than 1% as determined by PLM are outlined below:

Building C:

- Vinyl floor tile and mastic throughout (under carpet and exposed)
- Stainless steel sinks and drinking fountain with black/gray undercoatings
- Caulking at extreme edges of window frames and CMU exterior wall/roof deck intersection
- Black bulletin board mastic
- Gypsum wallboard (GWB) wall panel mastic throughout
- Mudded fittings on fiberglass-insulated pipes

Building D (Gymnasium):

- Mudded fittings on fiberglass-insulated pipes
- Incandescent light fixture heat shields
- 9"x9" Vinyl floor tile with non-asbestos mastic
- Joint compound associated with gypsum wallboard systems

Building E:

- 9"x9" Vinyl floor tile and mastic on concrete and/or wood
- Black mastic under carpet
- Stainless steel sinks and drinking fountain with black undercoating
- Caulking at extreme edges of window frames and CMU exterior wall/roof deck intersection
- Mudded fittings on fiberglass-insulated pipes
- GWB wall panel mastic throughout

Inaccessible areas encountered at the Aldercrest Classroom Buildings and Gymnasium consists of interstitial spaces in walls and ceilings, and parts of the unexcavated crawlspace under the Gymnasium. Concealed ACM that may exist at the school include, but are not limited to pipe fitting insulation and vapor barriers.

Asbestos-containing mastic exists between layers of gypsum wallboard (GWB) in various locations in Buildings C and E. This material was observed on interior walls beneath finish-layer GWB on partition walls and beneath exterior windows. Selective demolition revealed that the mastic is applied in patches, and is inconsistent in coverage. This material was not observed on walls with single-layer GWB finishes.

Asbestos-containing joint compound associated with non-asbestos gypsum wallboard (GWB) assemblies was found in the Gymnasium. The presence of asbestos in the joint compound requires personnel impacting the material to adhere to regulatory requirements outlined in WAC 296-62-17712(2) and training as outlined in WAC 296-62-07722(5) and WAC 296-62-0728. Personal protective equipment and proper work practices are required pending the completion of a negative exposure assessment. Such an assessment may include air monitoring of workers' breathing zones. Refer to WISHA Regional Directive 23.30 for additional information.

Lead-Containing Paint (LCP)

Bulk paint chip samples were taken of representative painted finishes and analyzed for total lead content to determine the extent of LCP in the project areas. The majority of the lead samples analyzed by Atomic Absorption were determined to have lead in them. Analytical results of the interior and exterior coatings ranged from <0.0047% to 1.0000% lead. For locations and results of lead sampling see attachments.

Polychlorinated-Biphenyls (PCBs)

Several types of fluorescent light fixtures are present at Aldercrest Junior High. PBS investigated approximately 10% of each type. Approximately 90% of the ballasts inspected had "No PCB's" labeling. Unlabeled ballasts are considered PCB-containing.

Mercury-Containing Components

Various fluorescent lamps (tubes) are known to contain mercury vapors. Mercury is known to be toxic to mammals. All fluorescent lamps are presumed to be mercury-containing. PBS investigated and counted a total of 1,542 (4-foot) and 8 (8-foot) suspect lamps. In addition, there were several boxes of stored fluorescent tubes in building "E".

Underground Storage Tanks (USTs)

No underground storage tanks were encountered. These buildings have electric heat.

RECOMMENDATIONS

ACM

PBS recommends that all exposed and concealed ACM to be impacted by the demolition be removed prior to construction activities. A qualified Washington State licensed asbestos abatement contractor should be employed to remove all such ACM according to applicable local, state and federal regulations.

The possibility exists that additional ACM may be present in wall and ceiling cavities. Any material not previously identified in this survey that the contractor encounters should be sampled to determine its asbestos content prior to impact. Contract language should include a contingency for the removal of any ACM encountered during demolition not identified in these documents.

Lead-Containing Paint (LCP)

The presence of lead in painted coatings requires construction work to be performed in compliance with State and Federal regulations. Employers of personnel impacting lead-containing paint and coatings are required to perform a negative exposure assessment, or provide proper training, respiratory protection and medical surveillance as outlined in WAC 296-155 and 40 CFR Part 745.

The presence of LCP requires that construction debris be characterized to determine disposal requirements under WAC 173-303, Dangerous Waste. Samples of building components representative of the waste stream for Toxicity Characteristic Leachate Procedure (TCLP) as described in 40 CFR 261, Appendix II were collected and analyzed. Based on the results of this testing, the demolition debris will not require special handling related to lead.

PCB-Containing Components

Fluorescent light fixture ballasts without labeling should be properly removed, stored, transported and disposed of according to applicable regulations. Any leakage of such ballasts should be cleaned up by properly trained and protected personnel.

Mercury-Containing Components

Various fluorescent lamps (tubes) are known to contain mercury vapors. Mercury is known to be toxic to mammals. All fluorescent lamps are presumed to be mercury-containing. PBS recommends that all fluorescent lamps be handled and recycled in accordance with applicable regulations during demolition activities. Breakage of lamps is to be prevented, and lamps should be properly packaged and recycled or disposed of at a facility permitted to accept such material.

Estimated abatement and demolition costs associated with the removal of materials identified above are attached.

Report prepared by:

Report reviewed by:

Ernest Edwards
AHERA Building Inspector #1027847
(Exp. 2/12/09)

Brian Stanford
Project Manager

Attachments (7):

PBS PLM Asbestos Sample Inventory (Previous and Recent)
PBS PLM Laboratory Analysis (Previous and Recent)
PBS PLM Chain of Custody (Previous and Recent)
PBS Lead Sample Inventory (Previous and Recent)
PBS Lead Laboratory Analysis (Previous)
PBS Lead Chain of Custody (Previous)
PBS Building Inspector Certification