

Hazardous Building Materials Survey Report

Of

**Former Boys and Girls Club
261 17th Street SE
Washington DC 20002**

Prepared For:

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KCI Job Order No.: 01070963.L

March 12, 2010

Executive Summary

KCI Associates of D.C. (KCI) was retained by the Government of District of Columbia, Department of Real Estate Service (Client) to conduct a Hazardous Building Materials Survey at the Former Boys and Girls Club located at 261 17th Street SE, Washington DC (“subject site”). This report was prepared in general accordance with KCI’s Proposal for *Phase II Site Assessments*, dated February 3, 2010. The report includes the Hazardous Materials Assessment for the subject site.

KCI performed an asbestos-containing materials (ACMs) survey of the subject site. The survey identified the following ACMs:

- Approximately 1,600 square feet of ductwork painted blue, located over the pool and pool mezzanine.
- Approximately 10 square feet of insulating panel in the sauna. The sauna is located in the sub-basement on the east center of the building.
- Approximately 500 linear feet of aircell pipe insulation (Accessible and Inaccessible) is located in various locations throughout the building, predominately associated with the heating system pipes within masonry walls.
- Approximately 100 pipe fittings aircell/mudded are located in various inaccessible locations throughout the building, predominately associated with the heating system pipes within masonry walls.
- Approximately 250 square feet of pipe insulation and fitting debris is located on the floor in the sub-basement boiler room, crawlspace and within the wall chasis throughout the building.
- Approximately 15,500 square feet of black mastic beneath the floor tiles throughout the building
- Approximately 15,500 square feet of 9” and 12” floor tiles of various colors and designs located throughout the building.
- Caulking (beige) on approximately 22 exterior windows (older style) located throughout the building
- Glazing (black) on approximately 13 windows (interior side) located in the gymnasium
- Three (3) vibration dampeners located in projection booth on third floor
- Interior boiler insulating materials including refractory brick and mortar, packings, caulking inside 1 boiler unit located in boiler room
- Approximately 17 fire doors located throughout the building
- Approximately 12,000 square feet of roofing material on the main building.

KCI conducted a Lead Based Paint (LBP) screening of representative areas throughout the building. This screening identified LBP on the following surfaces:

- Wood baseboard (yellow) throughout the building. Lead content : 1.8 mg/cm².
- Metal cage (black) located near the stairs throughout the building. Lead content: 1.6 mg/cm².
- Wood doors (blue) located throughout the building. Range of lead content: 1.4 – 2.2 mg/cm².
- Wood and metal door frames, jambs and associated trim (painted green, yellow, beige, white and blue) throughout the building. Range of lead content: 0.04 – 3.3 mg/cm².
- Metal fence (green) on the exterior of the building. Lead content: 3.8 mg/cm².
- Concrete flooring (grey) on stairs and stair landings throughout the building. Range of lead content 2.6 – 4.0 mg/cm².
- Metal stair components including handrail and post (black) throughout the building. Range of lead content: 0 – 3.9 mg/cm².
- Metal pipe (grey) located throughout the building. Lead content: 2 mg/cm².

- Metal radiators (all colors) located throughout the building. Range of lead content: 0.09 – 1.6 mg/cm².
- Brick and block walls (blue and white) located throughout the building. Range of lead content: 1.1 – 11.2 mg/cm².
- Wood walls and partitions (yellow, green and offwhite) located throughout the sub-basement level. Range of lead content: 2.6 – 3.7 mg/cm².
- Wood window components, including sashes, trim, sills and stools, (painted white, yellow, purple and brown) located throughout the building. Range of lead content: 0.80 – 2.1 mg/cm².
- All exterior building components painted beige. These components include the ornamental metal work at the cornice, metal grates over windows and masonry window sills. Range of lead content: 1.9 – 2.0 mg/cm²
- Wood covering the transoms (dark red) located on the exterior exit doors of the building. Lead content: 2.7 mg/cm².

KCI investigated potential sources of polychlorinated biphenyls and mercury containing equipment. The investigation identified the following:

- Approximately three hundred and twenty (320) light ballasts within the project site. Inspection of a representative sample of ballasts revealed that none contained a “No-PCB” label.
- Approximately six hundred and fifty (650) fluorescent light bulbs throughout the subject site.
- Approximately five (5) thermostats, which may contain mercury.

Based on our review of the data, KCI recommends the following actions:

- Remove and dispose of all friable and non-friable ACMs, which are anticipated to be affected by the proposed renovation activities in accordance with applicable federal, state, and local regulations.
- During renovation, it is recommended that the contractor should follow OSHA "Lead in Construction" standard, in conjunction with dust control and containment to prevent lead contamination of the surrounding areas, and the use of personal protective clothing to protect worker health and safety during renovation.
- Remove and dispose of the polychlorinated biphenyls and/or mercury containing equipment prior to renovation activities in accordance with the applicable federal, state and local regulations.

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1.0 Introduction

KCI Associates of DC (KCI) was retained by Government of District of Columbia, Department of Real Estate Service (Client) to conduct a Hazardous Building Materials Survey at the Former Boys and Girls Club located at 261 17th Street NW in Washington DC (“subject site”). This report was prepared in general accordance with KCI’s Proposal for *Phase II Site Assessments*, dated February 3, 2010. The report includes Hazardous Materials Assessment for the subject site.

The scope of work included:

1. visual observations of the building and property;
2. bulk sampling analysis and quantification of suspect asbestos-containing materials (ACMs);
3. analysis of selected painted surfaces for the presence of lead;
4. identification of PCB-containing equipment;
5. identification of mercury-containing equipment;
6. generation of this report documenting the findings.

2.0 Site Description

The Former Boys and Girls Club is located at 261 17th Street SE in Washington DC. The onsite structure includes a three-story main building with two levels of basement. Floor plans of the building are included as Appendix A.

3.0 Asbestos Containing Materials Survey

3.1 Building Survey

KCI’s Environmental Protection Agency (EPA) accredited asbestos building inspectors conducted a non-destructive ACM survey of the subject site to inspect the building for suspect materials between February 15, 2009 and February 26, 2010. The scope of work included a visual evaluation of potential ACMs, quantification of suspect ACMs and the collection of bulk samples of these materials.

Accessible areas of the building were investigated and suspect materials were sampled and quantified. Assumptions were made, as appropriate, concerning the presence and quantity of asbestos containing materials within inaccessible areas. Sample information was recorded on field sampling forms and chain of custody forms, and material quantity and location data were recorded on a room-by-room basis using dedicated field data sheets.

KCI’s building inspectors collected one hundred and sixteen (116) bulk samples of suspected ACMs. Bulk samples were collected using a chisel or a razor knife that was driven through the suspect material to the substrate to obtain a sample containing all discrete layers. Extreme care was taken to avoid fiber liberation during the inspection/sampling process. A fine mist of water was applied to the sample site, and any dust generated was wet wiped with disposable moist towelettes. The samples were then placed in re-sealable plastic bags and assigned unique identifiers that were recorded on the bags and on the bulk survey sampling sheets. The suspect asbestos bulk samples were submitted for analysis, along with chain-of-custody forms, to AMA Analytical Services, Inc., of Lanham, MD. AMA is accredited by the American Industrial Hygiene Association (AIHA #100470) and the National Institute of Standards and

Technology through the National Voluntary Laboratory Accreditation Program for Bulk Asbestos Analysis (NVLAP#101143-0). The ACM chain-of-custody forms are included in Appendix B.

KCI did not perform a destructive survey of the subject site, rendering many areas (i.e. within wall chases) inaccessible during the building survey. KCI has made an attempt to estimate the types and quantities of ACM present in these areas based on a review of building plans; however, the actual types and quantities of ACMs in these inaccessible locations could differ materially from those estimated.

3.2 Laboratory Analytical Procedures and Methodologies

Two (2) different types of analysis were used to analyze the bulk samples for the presence of asbestos: Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM).

PLM is an optical microscopic technique that distinguishes the different types of asbestos fibers by their shape and unique optical properties. The technique is based on the refraction of light from various crystalline asbestos structures and the observation of the corresponding color changes through the microscope. All PLM analysis was performed following the methodologies documented in the EPA method 600/R-93/116, July 1993, "Method for the Determination of Asbestos in Bulk Building Materials". The TEM method (EALP 198.4) was used for samples where definitive results were not achieved through PLM analysis.

TEM analysis is a procedure where a beam of electrons is directed at the sample to be analyzed. The electrons are scattered by the surface irregularities of the sample and are subsequently collected over a narrow solid angle and focused by an objective lens onto a phosphorescent screen. TEM results in a high-resolution image and allows a greater degree of precision in identifying the presence or absence of asbestos fibers in a given sample substrate, as compared with PLM methods of analysis. TEM analysis was performed following the methodologies documented in the TEM New York ELAP Method 198.4.

3.3 Analytical Results

The analytical results for the bulk samples collected by KCI are summarized in Bulk Sample Log (Table 3.1) below. The asbestos certificates of analysis for the samples are included in Appendix C of this report.

Table 3.1 - Suspect Asbestos Bulk Sample Log						
Sample No.	Material Description	Sample Location	Analysis Type	Final Result/ Asbestos Type	Friability	Condition
F01	Ceiling Tile – white worm and dot	1 st Floor SE Corner	PLM	NAD	Friable	Fair
F02	Plaster – textured wall	1 st Floor SE Corner	PLM	NAD	Friable	Good
F03	Plaster – white skim	1 st Floor SE Corner	PLM	NAD	Friable	Good
F04	Plaster – grey base	1 st Floor SE Corner	PLM	NAD	Friable	Good
F05	Ceiling Tile – bright white worm and dot	1 st Floor SE Corner	PLM	NAD	Friable	Fair

Table 3.1 - Suspect Asbestos Bulk Sample Log

Sample No.	Material Description	Sample Location	Analysis Type	Final Result/ Asbestos Type	Friability	Condition
F06	Plaster – white skim	1 st Floor Bathroom	PLM	NAD	Friable	Good
F07	Plaster – grey base	1 st Floor Bathroom	PLM	NAD	Friable	Good
F08	Plaster – white skim	1 st Floor E Center	PLM	NAD	Friable	Good
F09	Plaster – grey base	1 st Floor E Center	PLM	NAD	Friable	Good
F10	1x1 Ceiling Tile – cork painted yellow	1 st Floor NE Corner	PLM	NAD	Friable	Poor
F12	Mastic Dots	1 st Floor NE Corner	PLM	NAD	Not Friable	Poor
F13	Joint Compound – white	1st Floor Northern Stairwell	PLM	NAD	Friable	Good
F14	Drywall	2 nd Floor Kitchen	PLM	NAD	Friable	Good
F15	Joint Compound – white	2 nd Floor Kitchen	PLM	NAD	Friable	Good
F16	Popcorn Ceiling – white	2 nd Floor Kitchen	PLM	NAD	Friable	Good
F17	Popcorn Ceiling – white	2 nd Floor Kitchen	PLM	NAD	Friable	Good
F18	Popcorn Ceiling – white	2 nd Floor Kitchen	PLM	NAD	Friable	Good
F19	Plaster – white skim	2 nd Floor Auditorium	PLM	NAD	Friable	Good
F20	Plaster – grey base	2 nd Floor Auditorium	PLM	NAD	Friable	Good
F21	Transite Duct	Pool Mezzanine	PLM	15%C	Not Friable	Good
F22	Wall Fiberboard	3rd Floor South Center – Dance Studio Storage	PLM	NAD	Friable	Good
F23	Plaster – grey base	3rd Floor South Center – Dance Studio Storage	PLM	NAD	Friable	Good
F24	Plaster – white skim	3rd Floor South Center – Dance Studio Storage	PLM	NAD	Friable	Good
F25	Window Caulk – white interior	3 rd Floor SE Corner – Dance Studio	PLM	NAD	Friable	Fair
F26	Window Caulk – brown exterior	3 rd Floor SE Corner – Dance Studio	PLM	NAD	Friable	Fair
F27	Plaster – white skim	3 rd Floor East Center – Library	PLM	NAD	Friable	Good
F28	Plaster – grey base	3 rd Floor East Center – Library	PLM	NAD	Friable	Good
F29	Trowelled-on Ceiling – white	Basement – pool bathroom	PLM	NAD	Friable	Good
F30	Trowelled-on Ceiling – white	Basement – pool bathroom	PLM	NAD	Friable	Good

Table 3.1 - Suspect Asbestos Bulk Sample Log						
Sample No.	Material Description	Sample Location	Analysis Type	Final Result/ Asbestos Type	Friability	Condition
F31	Trowelled-on Ceiling – white	Basement – pool bathroom	PLM	NAD	Friable	Good
F32	Ceramic Tile Grout – grey	Basement – pool bathroom	PLM	NAD	Not Friable	Good
F34	Ceramic Tile Grout – white	Basement – Hall to shower room	PLM	NAD	Not Friable	Good
F35	Popcorn Ceiling – white	Basement – girls’ dressing room	PLM	NAD	Friable	Good
F36	Popcorn Ceiling – white	Basement – girls’ dressing room	PLM	NAD	Friable	Good
F37	Joint Compound – white	Basement – bathroom in girls’ dressing room	PLM	NAD	Friable	Good
F38	Drywall	Basement – bathroom in girls’ dressing room	PLM	NAD	Friable	Good
F39	Pipe Insulation Wrap	Basement – boys’ dressing room trench	PLM	NAD	Not Friable	Fair
F40	Pipe Insulation Wrap	Basement – boys’ dressing room trench	PLM	NAD	Not Friable	Fair
F41	Pipe Insulation Wrap	Basement – boys’ dressing room trench	PLM	NAD	Not Friable	Fair
F42	Window glazing - black	Basement – interior of gymnasium window	TEM	2.0% C	Friable	Fair
F43	Drywall	Sub-basement Electrical Room	PLM	NAD	Friable	Good
F44	Joint compound – white	Sub-basement Electrical Room	PLM	NAD	Friable	Good
F45	Sauna Insulation Panel	Sub-basement SE Corner - sauna	PLM	15%C	Not Friable	Fair
F46	Pipe Insulation – mudded end	Sub-basement SE Corner	PLM	NAD	Friable	Fair
F47	Pipe Insulation – aircell	Sub-basement SE Corner	PLM	50%C	Friable	Poor
F48	Pipe Insulation – aircell	Sub-basement SE Corner	PLM	60%C	Friable	Poor
F49	Pipe Insulation –aircell	Sub-basement SE Corner	PLM	55%C	Friable	Poor
F50	Carpet Mastic – beige	1 st Floor SE Corner-below carpet	PLM	NAD	Not Friable	Good
F51	Parquet Mastic – black	1 st Floor Bathroom	TEM	1.2%	Not Friable	Good
F52	12x12 Floor Tile – brown w/ red and black patches	1 st Floor Hallway	PLM	2%C	Not Friable	Poor
F53	Mastic – black	1 st Floor Hallway-below F52	PLM	10%C	Not Friable	Fair
F54	24x24 Floor Tile – black border	1 st Floor Hallway	PLM	2%C	Not Friable	Fair
F55	Covebase – black	1 st Floor East Center Room	PLM	NAD	Not Friable	Fair

Table 3.1 - Suspect Asbestos Bulk Sample Log						
Sample No.	Material Description	Sample Location	Analysis Type	Final Result/ Asbestos Type	Friability	Condition
F56	Mastic – yellow	1 st Floor East Center Room – below F55	PLM	NAD	Not Friable	Good
F57	Carpet Mastic – beige	1 st Floor North Center	TEM	TR	Not Friable	Good
F58	Carpet Mastic – beige	1 st Floor North Stairwell	PLM	NAD	Not Friable	Good
F59	12x12 Floor Tile – grey	1 st Floor North Stairwell	PLM	2%C	Not Friable	Poor
F60	Mastic – black	1 st Floor North Stairwell – below F59	PLM	10%C	Not Friable	Fair
F61	Vinyl Stair Treads – black	1 st Floor North Stairwell	PLM	NAD	Not Friable	Good
F62	Mastic – beige	1 st Floor North Stairwell – below F61	PLM	NAD	Not Friable	Good
F63	Ceramic Tile Grout	2 nd Floor Bathroom	PLM	NAD	Not Friable	Good
F64	12x12 Floor Tile – green	2 nd Floor Kitchen	PLM	NAD	Not Friable	Fair
F65	Skim Patch – white, under 12x12 green tile	2 nd Floor Kitchen	PLM	NAD	Not Friable	Poor
F66	Mastic – black	2 nd Floor Kitchen– below F65	PLM	2%C	Not Friable	Fair
F67	Floor Tile – dark grey	2 nd Floor North Stairwell – below F59	PLM	3%C	Not Friable	Fair
F68	12x12 Floor Tile – white w/ tan patches	2 nd Floor Auditorium – upper layer	PLM	NAD	Not Friable	Good
F69	12x12 Floor Tile – bright blue	2 nd Floor Auditorium– upper layer	PLM	NAD	Not Friable	Good
F70	12x12 Floor Tile – dark blue	2 nd Floor Auditorium– upper layer	PLM	NAD	Not Friable	Good
F71	12x12 Floor Tile – green	2 nd Floor Auditorium– upper layer	PLM	NAD	Not Friable	Good
F72	12x12 Floor Tile – yellow	2 nd Floor Auditorium– upper layer	PLM	NAD	Not Friable	Good
F73	12x12 Floor Tile – red	2 nd Floor Auditorium– upper layer	PLM	NAD	Not Friable	Good
F74	Mastic - grey	2 nd Floor Auditorium – below F68 through F73	PLM	NAD	Not Friable	Good
F75	12x12 Floor Tile – grey w/ black patches	2 nd Floor Auditorium Closet	PLM	NAD	Not Friable	Fair
F76	Mastic - beige	2 nd Floor Auditorium Closet – below F75	PLM	NAD	Not Friable	Good
F77	Vinyl Flooring – blue-grey	Basement – gymnasium	PLM	NAD	Not Friable	Good
F78	Mastic – light grey	Basement – gymnasium – below F77	PLM	NAD	Not Friable	Good
F79	12x12 Floor Tile – blue w/ light blue specks	Basement – North Center Room	PLM	NAD	Not Friable	Fair

Table 3.1 - Suspect Asbestos Bulk Sample Log

Sample No.	Material Description	Sample Location	Analysis Type	Final Result/ Asbestos Type	Friability	Condition
F80	Mastic – yellow	Basement – North Center Room – below F79	PLM	NAD	Not Friable	Good
F81	Floor Tile – brown	Basement – North Center Room – below F79	PLM	2%C	Not Friable	Fair
F82	9x9 Floor tile – green	Above 3 rd Floor - projection booth	PLM	3%C	Not Friable	Poor
F83	Mastic – black	Above 3 rd Floor - projection booth – below F82	PLM	TR	Not Friable	Poor
F84	Covebase – blue	Basement – North Center Room	PLM	NAD	Not Friable	Good
F85	Mastic – off white	Basement – North Center Room – below F84	PLM	NAD	Not Friable	Good
F86	12x12 Floor Tile – white	Basement – north stairwell – below carpet	PLM	2%C	Not Friable	Fair
F87	Floor Tile – black	Basement – north stairwell– below F86	PLM	3%C	Not Friable	Fair
F88	Carpet Mastic – beige	Basement – north stairwell	PLM	NAD	Not Friable	Good
F89	Ceramic Tile Grout – white	Basement - Pool	PLM	NAD	Not Friable	Good
F90	Pipe Insulation – aircell	Basement - Pool	PLM	80%C	Friable	Poor
F91a	Pipe Insulation – aircell	Basement - Pool	PLM	70%C	Friable	Poor
F92a	Pipe Insulation – aircell	Basement - Pool	PLM	70%C	Friable	Poor
F91	Carpet Mastic – beige	Sub-basement - Hall	PLM	NAD	Not Friable	Good
F92	12x12 Floor Tile – dark red	3 rd Floor South Center Room	PLM	NAD	Not Friable	Good
F93	9x9 Floor Tile – brown w/ tan and pink streaks	3rd Floor South East Corner – dance studio	PLM	5%C	Not Friable	Fair
F94	Mastic - black	3rd Floor South East Corner – dance studio – below F93	PLM	3%C	Not Friable	Fair
F95	12x12 Floor tile – brown	3rd Floor – dance studio storage area	PLM	5%C	Not Friable	Good
F96	12x12 Floor Tile – black	3rd Floor – dance studio storage area	PLM	3%C	Not Friable	Good
F97	Mastic – black	3rd Floor – dance studio storage area – below F95&96	PLM	5%C	Not Friable	Good
F98	Plaster – textured wall	1 st Floor – SE Corner	PLM	NAD	Friable	Good
F99	Plaster – textured wall	1 st Floor – SE Corner	PLM	NAD	Friable	Good
F100	Plaster – white skim	3rd Floor – dance studio storage area	PLM	NAD	Friable	Good
F101	Plaster – grey base	3rd Floor – dance studio storage area	PLM	NAD	Friable	Good

Table 3.1 - Suspect Asbestos Bulk Sample Log						
Sample No.	Material Description	Sample Location	Analysis Type	Final Result/Asbestos Type	Friability	Condition
F102	Plaster – white skim	3 rd Floor East Center - library	PLM	NAD	Friable	Good
F103	Plaster – grey base	3 rd Floor - East Center - Library	PLM	NAD	Friable	Good
F104	Plaster – white skim	1 st Floor - Entrance Hallway	PLM	NAD	Friable	Good
F105	Plaster – grey base	1 st Floor - Entrance Hallway	PLM	NAD	Friable	Good
F106	Plaster – white skim	2 nd Floor - Kitchen	PLM	NAD	Friable	Good
F107	Plaster – grey base	2 nd Floor - Kitchen	PLM	NAD	Friable	Good
F108	Door Caulk – white	Main Entrance - exterior	PLM	NAD	Not Friable	Fair
F109	Window Glazing - white	Main Entrance Transom - exterior	PLM	NAD	Friable	Fair
F110	Window Caulk - beige	Gymnasium Window - exterior	PLM	2%C	Not Friable	Fair
F111	Vibration Dampener	Basement – Boys’ dressing room	PLM	NAD	Not Friable	Fair
F112	12x12 Floor Tile – white w/ pink	2 nd Floor – Auditorium – beneath F68 through F73	PLM	2%C	Not Friable	Fair
F113	Insulation Wrap – white caulk	Sub-basement - Boiler Room	PLM	NAD	Not Friable	Fair
F114	Insulation Wrap – white caulk	Sub-basement - Boiler Room	PLM	NAD	Not Friable	Fair
F115	Insulation Wrap – white caulk	Sub-basement - Boiler Room	PLM	NAD	Not Friable	Fair
F116	Duct Seam Sealant	2 nd Floor - Kitchen	TEM	NAD	Not Friable	Good
Table Notes: NAD: No asbestos detected C: Chrysotile TR: Trace (≤ 1% Asbestos) Shaded materials contain >1% asbestos						

The EPA defines an asbestos containing material as "any material containing greater than one percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, Section 1, PLM." Based on the results of the asbestos analysis, twenty-nine (29) of the one hundred and sixteen (116) samples of suspect ACM were determined to contain greater than 1% asbestos by PLM/TEM analysis, and are therefore considered ACM under the EPA’s definition.

A summary of all suspect ACM identified during KCI's survey of the subject site is provided in the Table 3.2 below.

Table 3.2. Homogenous Materials Summary Table							
Uniq. ID	Material Description	Location in Building	Sample Number	Sample Results	Friability	Condition	Estimated Quantity
CT1	Ceiling Tile – white worm and dot	Throughout Building	F01	NAD	Friable	Fair	-
CT2	Ceiling Tile – bright white worm and dot	Throughout Building	F05	NAD	Friable	Fair	-
CT3	1x1 Ceiling Tile – cork painted yellow	Throughout Building	F10	NAD	Friable	Poor	-
P1	Plaster – textured wall	Throughout Building	F02, F98, F99	All NAD	Friable	Good	-
P2	Plaster – white skim	Throughout Building	F03, F06, F08, F19, F24, F27, F100, F102, F104, F106	All NAD	Friable	Good	-
P3	Plaster – grey base	Throughout Building	F04, F07, F09, F20, F23, F28, F101, F103, F015, F107	All NAD	Friable	Good	-
JC	Joint Compound – white	Throughout Building	F13, F15, F37, F44	All NAD	Friable	Good	-
P4	Popcorn Ceiling – white	Throughout Building	F16, F17, F18, F35, F36	All NAD	Friable	Good	-
P5	Trowelled-on Ceiling – white	Throughout Building	F29, F30, F31	All NAD	Friable	Good	-
DW	Drywall	Throughout Building	F14, F38, F43	All NAD	Friable	Good	-
TD	Transite Duct	Basement – Above Pool and Pool Mezzanine	F21	15%C	Not Friable	Good	1,600 SF
IP	Sauna Insulation Panel - transite	Sub-Basement West Center Room	F45	15%C	Not Friable	Fair	10 SF
WF	Wall Fiberboard	Throughout Building	F22	NAD	Friable	Good	-
PI1	Pipe Insulation – mudded end	Throughout Building	F46	NAD	Friable	Fair	-
PI2	Pipe Insulation – aircell (accessible)	Throughout Building	F47, F48, F49, F90, F91a, F92a	50%C, 60%C, 55%C, 80%C, 70%C, 70%C	Friable	Poor	150 LF
PI2a	Pipe Insulation – aircell (inaccessible)	Throughout Building - in Wall Chasis	F47, F48, F49, F90, F91a, F92a	50%C, 60%C, 55%C, 80%C, 70%C, 70%C	Friable	Unknown	350 LF
PI2b	Pipe Fitting Insulation – Aircell/mudded (inaccessible)	Throughout Building - in Wall Chasis	Not Sampled	Assumed	Friable	Unknown	100 EA

Table 3.2. Homogenous Materials Summary Table							
Uniq. ID	Material Description	Location in Building	Sample Number	Sample Results	Friability	Condition	Estimated Quantity
D	Pipe Insulation and Fitting Debris	Accessible areas in Sub-basement – (Boiler Room & Crawlspace) and inaccessible areas throughout the building (wall chasis)	Not Sampled	Assumed	Friable	Poor	250 SF
PI3	Pipe Insulation Wrap	Throughout Building	F39, F40, F41	All NAD	Not Friable	Fair	-
PI4	Insulation Wrap – white caulk	Sub-Basement – Boiler Room and Pool Crawl Space	F113, F114, F115	All NAD	Not Friable	Fair	-
FT1	9x9 Floor Tile – brown w/ tan and pink streaks	Throughout Building	F93	5%C	Not Friable	Fair	15,500 SF
FT2	9x9 Floor Tile – green		F82	3%C	Not Friable	Poor	
FT3	12x12 Floor Tile – brown w/ red and black patches		F52	2%C	Not Friable	Poor	
FT4	12x12 Floor Tile – green		F64	NAD	Not Friable	Fair	
FT5	12x12 Floor Tile – grey		F59	2%C	Not Friable	Poor	
FT6	12x12 Floor Tile – bright blue		F69	NAD	Not Friable	Good	
FT7	12x12 Floor Tile – green		F71	NAD	Not Friable	Good	
TF8	12x12 Floor Tile – yellow		F72	NAD	Not Friable	Good	
FT9	12x12 Floor Tile – red		F73	NAD	Not Friable	Good	
TF10	12x12 Floor Tile – dark blue		F70	NAD	Not Friable	Good	
FT11	12x12 Floor Tile – grey w/ black patches		F75	NAD	Not Friable	Good	
FT12	12x12 Floor Tile – blue w/ light blue specks		F79	NAD	Not Friable	Good	
FT13	12x12 Floor Tile – white		F86	2%C	Not Friable	Fair	
FT14	12x12 Floor tile – brown		F95	5%C	Not Friable	Good	
FT15	12x12 Floor Tile – black		F96	3%C	Not Friable	Good	
FT16	12x12 Floor Tile – dark red		F92	NAD	Not Friable	Good	
FT17	12x12 Floor Tile – white w/ pink		F112	2%C	Not Friable	Fair	
FT18	12x12 Floor Tile – white w/ tan patches		F68	NAD	Not Friable	Good	
FT19	Floor Tile border – black		F54	2%C	Not Friable	Fair	
FT20	Floor Tile – brown		F81	2%C	Not Friable	Fair	
FT21	Floor Tile – black		F87	3%C	Not Friable	Fair	
FT22	Floor Tile – dark grey		F67	3%C	Not Friable	Fair	

Table 3.2. Homogenous Materials Summary Table							
Uniq. ID	Material Description	Location in Building	Sample Number	Sample Results	Friability	Condition	Estimated Quantity
F1	Vinyl Flooring – blue-grey	Throughout Building	F77	NAD	Not Friable	Good	-
F2	Vinyl Stair Treads – black	Stairwells throughout the building	F61	NAD	Not Friable	Good	-
F3	Skim Patch – white, under 12x12 green tile	2 nd Floor Kitchen	F65	NAD	Not Friable	Poor	-
TG1	Ceramic Tile Grout – grey	Throughout Building	F32	NAD	Not Friable	Good	-
TG2	Ceramic Tile Grout	Throughout Building	F63	NAD	Not Friable	Good	-
TG3	Ceramic Tile Grout – white	Throughout Building	F34, F89	All NAD	Not Friable	Good	-
M1	Carpet Mastic – beige	Throughout Building	F50, F57, F58, F91	NAD, TR, NAD, NAD	Not Friable	Good	-
M2	Parquet Mastic – black	First Floor Bathroom	F51	1.2%	Not Friable	Good	100 SF
M3	Mastic – black	Throughout Building - beneath floor tiles	F53, F60, F66, F83, F94, F97	10%C, 10%C, 2%C, TR, 3%C, 5%C	Not Friable	Poor*	15,500 SF
M4	Mastic - beige	Throughout Building	F62, F76, F88	All NAD	Not Friable	Good	-
M5	Mastic – off white	Throughout Building	F85	NAD	Not Friable	Good	-
M6	Mastic – light grey	Throughout Building	F78	NAD	Not Friable	Good	-
M7	Mastic - grey	Throughout Building	F74	NAD	Not Friable	Good	-
M8	Mastic – yellow	Throughout Building	F56, F80	All NAD	Not Friable	Good	-
M9	Mastic Dots	Throughout Building	F12	NAD	Not Friable	Poor	-
CB1	Covebase – blue	Throughout Building	F84	NAD	Not Friable	Good	-
CB2	Covebase – black	Throughout Building	F55	NAD	Not Friable	Fair	-
DC	Door Caulk – white	On Exterior Doors Throughout Building	F108	NAD	Not Friable	Fair	-
WC1	Window Caulk – white interior	Throughout Building	F25	NAD	Friable	Fair	-
WC2	Window Caulk – brown exterior	Throughout Building	F26	NAD	Friable	Fair	-
WC3	Window Caulk - beige	Exterior of windows in gymnasium and basement, and the southernmost pool window	F110	2%C	Not Friable	Fair	22 EA
WG1	Window Glazing - black	Basement – Interior of gymnasium windows	F42	2.0%C	Friable	Fair	13 EA
WG2	Window Glazing - white	Throughout Building	F109	NAD	Friable	Fair	--
DS	Duct Seam Sealant – grey	2 nd Floor Kitchen	F116	NAD	Not Friable	Good	--
VD1	Vibration Dampener	Basement – Boys' Dressing Room	F111	NAD	Friable	Fair	1 EA

Table 3.2. Homogenous Materials Summary Table							
Uniq. ID	Material Description	Location in Building	Sample Number	Sample Results	Friability	Condition	Estimated Quantity
VD2	Vibration Dampener	Above 3 rd Floor - Projection Booth Room	Not Sampled	Assumed Positive	Not Friable	Fair	4 EA
R	Roofing Materials	Roof	Not Sampled	Assumed Positive	Not Friable	Unknown	12,000 SF
BI	Interior Boiler Materials	Sub-Basement – Boiler Room	Not Sampled	Assumed Positive	Not Friable	Unknown	1 boiler
FD	Fire Doors	Throughout Building	Not Sampled	Assumed Positive	Not Friable	Fair	17 EA
Table Notes: SF: Square Feet LF: Linear Feet EA: Each Shaded materials contain > 1% asbestos *the most severe condition was noted for a homogenous material				Types of Asbestos: A: Amosite C: Chrysotile PS: Positive Stop Rule for analyzing samples NAD: No Asbestos Detected TR: <1% Asbestos			

Clarification of the methods and underlying rationale used to determine the quantity and location of several of the materials considered to be asbestos containing materials follows:

- **Transite Duct:** Approximately 1,600 square feet of ductwork painted blue, located over the pool and pool mezzanine. (Refer to photo #1&2 in Appendix E)
- **Transite Panel:** Approximately 10 square feet of insulating panel in the sauna. The sauna is located in the sub-basement on the east center of the building. (Refer to photo #3 in Appendix E)
- **Pipe Insulation (Aircell) (Accessible and Inaccessible):** Approximately 500 linear feet of aircell pipe insulation is located in various locations throughout the building, predominately within masonry walls. Since this was a non-destructive survey, KCI could not investigate the presence of ACM pipe insulation within masonry building components and hence KCI has assumed that ACM pipe insulation is present wherever heating system pipes pass through masonry components. (Refer to photo #4, 5,6,7,8,9,10,11,12 & 13 in Appendix E)

KCI estimated locations and approximate quantities of aircell insulation including but not limited to the following:

- 15 linear feet behind a vertical bulkhead in the first floor northeast corner office
 - 200 linear feet located inside the masonry walls in the gymnasium
 - 15 linear feet in the southwest corner of the pool
 - 160 linear feet inside the masonry wall at the north end of the pool
 - 15 linear feet in the sauna room
 - 10 linear feet in trench under the north stairs
- **Pipe Fitting Insulation (Aircell/Mudded) (Inaccessible):** KCI has assumed that approximately 100 pipe fittings are located in various locations throughout the building, predominately associated with the heating system pipes within masonry walls. Since this was a non-destructive survey, KCI could not investigate the presence of pipe fitting insulation within inaccessible areas.

For the purpose of the survey, KCI has assumed that pipe fitting insulation throughout the building is an ACM.

- **Pipe Insulation and Fitting Debris:** KCI observed pipe insulation and fitting debris located on the floor in the sub-basement boiler room and crawlspace. Additionally KCI has assumed that ACM debris is located within the wall chasis throughout the building. For the purpose of this report, KCI has assumed that this debris is an ACM. (Refer to Phot #17 in Appendix E)
- **Floor Tile Mastic (black):** KCI has determined that black, asbestos-containing mastic is under all floor tile and parquet in the building. This includes 4,150 square feet in the basement, 2,600 square feet in the first floor, 3,000 square feet on the second floor, and 5,750 square feet on the third floor.
- **Floor Tiles (All types colors and designs):** KCI has determined that all 9” floor tiles (green and brown with tan- pink streaks) contain asbestos. KCI has also determined that 12” floor tiles (white with pink specks, brown with red & black patches, black, grey, white, brown) contain asbestos. These 9” and/or 12” asbestos containing floor tiles were observed beneath the 12” non-asbestos containing floor tiles and below carpet. Hence, KCI has assumed that all rooms that contain at least one layer of floor tile contain some asbestos-containing floor tile. This includes 4,150 square feet in the basement, 2,600 square feet in the first floor, 3,000 square feet on the second floor, and 5,750 square feet on the third floor..
- **Window Caulk (beige, exterior):** The exterior of the 22 older-style windows contain, asbestos-containing beige caulk. Refer to Photo #14 in Appendix E for different types of older –style windows. The locations are depicted on the Floor Plans in Appendix A, and include:
 - 13 windows in the gymnasium
 - 4 below-grade windows in the basement
 - The southernmost window in the pool area.
- **Window Glazing (interior, black):** The interior of 13 windows in the gymnasium contain a black, asbestos-containing glazing. (Refer to Photo #15 in Appendix E)
- **Vibration Dampeners:** Although analysis of the damaged vibration dampener in the boys’ dressing room in basement did not detect asbestos, the other, intact vibration dampeners throughout the building were not sampled to maintain the structural integrity and have been assumed to contain asbestos. KCI observed three vibration dampeners in the projection booth on the third floor. (Refer to Photo #16 in Appendix E)
- **Interior boiler insulating materials including:** Refractory brick and mortar, packings, gaskets, caulking, etc. are assumed to be present within the one boiler located in the basement. The interiors of the boilers were inaccessible for direct observation or sampling. Therefore, all interior boiler insulating materials have been assumed to be asbestos containing materials.
- **Fire Doors:** KCI identified 17 fire doors throughout the building. The doors were not sampled as part of this non-destructive survey and have been assumed to contain asbestos.
- **Roofing Materials:** KCI has assumed that approximately 12,000 square feet of roofing material contains asbestos.

4.0 Lead-Based Paint (LBP) Screening

KCI's Lead Inspector performed a LBP screening of the subject site in order to characterize interior and exterior painted surfaces for lead content. The following painted structures were surveyed for LBP: doors, door components, window components, walls, floors, stair components, radiators, and support columns.

The testing for lead content in paints was performed with Thermo Scientific Niton XLp (model # XLp 300) x-ray fluorescence (XRF) Spectrum Analyzer, an instrument which detects lead in the field by reading the fluorescence emanating from a painted surface when exposed to small amounts of radiation. XRF readings are expressed in mg/cm², a mass per area reading. LBP is defined as ≥ 1.0 mg/cm² by the DC Lead-Based Paint Abatement and Control Act of 1996.

The LBP screening included one hundred and thirty-six (136) XRF readings including twelve (12) calibration readings. Table 4.1 summarizes the results of the LBP screening. The LBP datasheets are included in Appendix D of this report.

Table 4.1: Lead in Paint - Analytical Results							
Sample	Substrate	Component	Color	Location / Description		XRF Reading (mg/cm ²)	LBP
Cal1	Wood	SRM2573	Red	Calibration	-	1.1	N/A
Cal2	Wood	SRM2573	Red	Calibration	-	1.0	N/A
Cal3	Wood	SRM2573	Red	Calibration	-	1.0	N/A
F01	Plaster	Wall	White	1st Floor SE Corner	D	0.17	N
F02	Drywall	Wall	White	1st Floor SE Corner	B	0.20	N
F03	Wood	Window Stool	White	1st Floor SE Corner	A	1.7	Y
F04	Wood	Window Frame	White	1st Floor SE Corner	A	0.09	N
F05	Metal	Radiator	Brown	1st Floor SE Corner	A	0.13	N
F06	Wood	Door Frame	Yellow	1st Floor Bathroom	C	1.7	Y
F07	Plaster	Wall	White	1nd Floor Bathroom	B	0.40	N
F08	Wood	Door	Yellow	1rd Floor Bathroom	C	0.04	N
F09	Wood	Door Frame	Yellow	1st Floor Stairs	A	0.04	N
F10	Wood	Door	Yellow	1nd Floor Stairs	A	0.0	N
F11	Plaster	Window Stool	Yellow	1nd Floor Stairs	A	0.60	N
F12	Plaster	Wall	Yellow	Main Entrance Hallway	C	0.0	N
F13	Wood	Wall	Yellow	Main Entrance Hallway	D	0.04	N
F14	Wood	Door Frame	Yellow	Main Entrance Hallway	D	1.0	Y
F15	Wood	Door	Yellow	Main Entrance Hallway	D	0.02	N
F16	Wood	Door Frame	Yellow	1st Floor E Center Office	C	1.6	Y
F17	Wood	Door	Yellow	1nd Floor E Center Office	C	0.03	N
F18	Plaster	Wall	Yellow	1rd Floor E Center Office	C	0.05	N
F19	Metal	Window Stool	White	1th Floor E Center Office	C	0.05	N
F20	Wood	Window Sash	White	1th Floor E Center Office	A	0.80	N
F21	Plaster	Wall	Yellow	1st Floor N Center Office	D	0.26	N
F22	Metal	Door Frame	Green	1st Floor NE Corner Office	D	1.8	Y
F23	Wood	Door	Green	1st Floor NE Corner Office	D	0.0	N
F24	Wood	Window Stool	Yellow	1st Floor N Center Office	A	1.9	Y

Table 4.1: Lead in Paint - Analytical Results

Sample	Substrate	Component	Color	Location / Description		XRF Reading (mg/cm ²)	LBP
F25	Wood	Wall	Yellow	1st Floor N Center Office	B	0.21	N
F26	Metal	Radiator	Yellow	1st Floor N Center Office	A	1.6	Y
F27	Wood	Baseboard	Yellow	1st Floor N Center Office	C	1.8	Y
F28	Wood	Door	Blue	2nd Floor N Stairs	-	1.4	Y
F29	Wood	Door Frame	Blue	2nd Floor N Stairs	-	3.3	Y
F30	Block	Wall	Blue	2nd Floor N Stairs	A	1.1	Y
F31	Block	Wall	White	2nd Floor N Stairs	A	0.0	N
F32	Metal	Handrail	Black	2nd Floor N Stairs	A	0.80	N
F33	Metal	Pipe	Black	2nd Floor N Stairs	A	0.0	N
F34	Wood	Door Frame	Blue	2nd Floor Bathroom	B	2.1	Y
F35	Wood	Door	Blue	2nd Floor Bathroom	B	2.2	Y
F36	Brick	Wall	White	2nd Floor Bathroom	A	1.8	Y
F37	Brick	Wall	Blue	Hallway outside 2nd Floor Bathroom	A	1.2	Y
F38	Wood	Door	Grey	2nd Floor Kitchen	B	0.01	N
F39	Wood	Door Frame	Blue	2nd Floor Kitchen	-	2.3	Y
F40	Drywall	Wall	Yellow	2nd Floor Kitchen	-	0.01	N
F41	Wood	Wall	White	2nd Floor Kitchen	C	0.0	N
F42	Wood	Window Frame	Brown	2nd Floor Kitchen	C	0.60	N
F43	Metal	Door Frame	Yellow	2nd Floor Kitchen	C	0.06	N
F44	Drywall	Wall	White	2nd Floor Kitchen	C	0.02	N
F45	Metal	Door	White	2nd Floor Kitchen	B	0.0	N
F46	Metal	Door	Green	2nd Floor Kitchen	B	0.01	N
F47	Wood	Door Frame	Green	2nd Floor Kitchen	B	2.2	Y
F48	Concrete	Column	Purple	2nd Floor Auditorium	A	0.60	N
F49	Wood	Wall	Purple	2nd Floor Auditorium	A	0.10	N
F50	Metal	Radiator	Purple	2nd Floor Auditorium	D	1.3	Y
F51	Wood	Window Frame	Purple	2nd Floor Auditorium	D	1.0	Y
F52	Plaster	Wall	White	2nd Floor Auditorium Storage	D	0.07	N
F53	Block	Wall	Peach	2nd Floor Auditorium	-	0.0	N
F54	Metal	Door Frame	White	2nd Floor Auditorium	-	2.3	Y
F55	Wood	Stage	Purple	2nd Floor Auditorium Stage	D	0.0	N
F56	Wood	Baseboard	Purple	2nd Floor Auditorium Stage	D	0.22	N
F57	Metal	Door	Green	2nd Floor Auditorium	D	0.0	N
F58	Wood	Door Frame	Green	2nd Floor Auditorium	D	1.5	Y
F59	Block	Wall	White	2nd Floor Auditorium	A	0.15	N
F60	Block	Baseboard	Blue	2nd Floor Auditorium	A	0.16	N
F61	Plaster	Wall	White	2nd Floor Auditorium	C	0.02	N
F62	Metal	Handrail	Black	2nd Floor SE Stairs		3.9	Y
F63	Brick	Wall	Blue	2nd Floor SE Stairs	C	0.16	N
F64	Brick	Wall	White	2nd Floor SE Stairs	C	0.25	N
F65	Concrete	Floor	Grey	Basement - Pool Mezzanine	-	0.02	N
F66	Metal	Handrail	Blue	Basement - Pool Mezzanine	-	1.0	Y
F67	Transite	Exhaust Duct	Blue	Basement - Pool Mezzanine	-	0.0	N

Table 4.1: Lead in Paint - Analytical Results

Sample	Substrate	Component	Color	Location / Description		XRF Reading (mg/cm ²)	LBP
F68	Concrete	Wall	White	Basement - Pool Mezzanine	B	0.0	N
F69	Concrete	Ceiling	Blue	Basement - Pool Mezzanine	-	0.0	N
F70	Metal	Cage	Black	2nd Floor SE Stairs	-	1.6	Y
F71	Metal	Post	Black	2nd Floor SE Stairs	-	3.4	Y
F72	Block	Wall	Blue	2nd Floor SE Stairs	-	0.16	N
F73	Metal	Door	Grey	Basement - Gymnasium	-	0.0	N
F74	Metal	Door Frame	Grey	Basement - Gymnasium	-	0.0	N
F75	Concrete	Wall	Blue	Basement - Gymnasium	C	0.05	N
F76	Concrete	Wall	White	Basement - Gymnasium	C	0.02	N
F77	Concrete	Floor	Grey	Basement - Boys' Dressing Room	D	0.01	N
F78	Brick	Wall	White	Basement - Boys' Dressing Room	D	0.40	N
F79	Wood	Window Frame	Brown	Basement - Boys' Dressing Room	D	1.2	Y
F80	Metal	Pipe	Grey	Basement - Boys' Dressing Room	D	2.0	Y
F81	Metal	Radiator	White	Basement - N Center	-	0.09	N
F82	Concrete	Stair Riser	Grey	Basement - N Stairs	-	3.0	Y
F83	Ceramic	Pool	Light Blue	Basement - Pool Area	-	0.04	N
F84	Wood	Wall	Yellow	Sub-basement	A	0.0	N
F85	Wood	Wall	Yellow	Sub-basement	A	3.2	Y
F86	Wood	Wall	Yellow	Sub-basement	A	2.9	Y
F87	Wood	Door	Yellow	Sub-basement	B	0.01	N
F88	Block	Wall	Blue	Sub-basement	B	11.2	Y
F89	Block	Wall	Blue	Sub-basement	A	2.7	Y
F90	Block	Wall	White	Sub-basement	C	0.05	N
F91	Block	Wall	White	Sub-basement	D	2.7	Y
F92	Wood	Window Frame	White	Sub-basement - Elect room (inner window)	A	0.03	N
F93	Wood	Wall	Off-white	Sub-basement - Elect room	A	3.7	Y
F94	Block	Wall	Off-white	Sub-basement	C	0.06	N
F95	Wood	Wall	Green	Sub-basement	-	2.6	Y
F96	Brick	Wall	Pale Green	Sub-basement - Storage room	-	0.60	N
F97	Block	Wall	Off-white	Sub-basement - mural	-	0.13	N
F98	Brick	Wall	Off-white	Sub-basement - mural	-	0.40	N
F99	Concrete	Floor	Grey	3rd Floor S Stairs	-	2.6	Y
F100	Drywall	Wall	White	3rd Floor	-	0.0	N
F101	Plaster	Wall	Purple	3rd Floor - Hallway	A	0.30	N
F102	Metal	Radiator	Purple	3rd Floor - Hallway	A	1.3	Y
F103	Plaster	Wall	Purple	3rd Floor - E Center Room	B	0.01	N
F104	Wood	Window Frame	Purple	3rd Floor - E Center Room	A	1.0	Y
F105	Wood	Window Sill	Purple	3rd Floor - E Center Room	A	2.1	Y
F106	Metal	Door Frame	Beige	3rd Floor	C	1.9	Y
F107	Block	Wall	White	3rd Floor - Hallway	A	0.0	N

Table 4.1: Lead in Paint - Analytical Results

Sample	Substrate	Component	Color	Location / Description		XRF Reading (mg/cm ²)	LBP
F108	Wood	Wall	Purple	3rd Floor - S Center Room	D	0.0	N
F109	Drywall	Wall	Light Purple	3rd Floor - S Center Room	B	0.0	N
F110	Plaster	Wall	Light Blue	3rd Floor - S Center Room	A	0.90	N
F111	Wood	Door	Red	Exterior - Main Entrance	A	0.0	N
F112	Masonry	Exterior window sill	Beige	Exterior - Main Entrance	A	2.0	Y
F113	Metal	Handrail	Black	Exterior - Main Entrance	A	0.0	N
F114	Metal	Window Grate	Beige	Exterior - Boys' Dressing Room		2.0	Y
F115	Metal	Fence	Green	Exterior - South Side	B	3.8	Y
F116	Metal	Handrail	Black	Exterior - South Side	-	0.40	N
Cal4	Wood	SRM2573	Red	Calibration	-	1.2	N/A
Cal5	Wood	SRM2573	Red	Calibration	-	1.2	N/A
Cal6	Wood	SRM2573	Red	Calibration	-	1.2	N/A
Cal7	Wood	SRM2573	Red	Calibration	-	1.1	N/A
Cal8	Wood	SRM2573	Red	Calibration	-	1.0	N/A
Cal9	Wood	SRM2573	Red	Calibration	-	1.2	N/A
F120	Concrete	Ceiling	Grey	Sub-basement - Boiler Room	-	0.29	N
F121	Brick	Wall	Grey	Sub-basement - Boiler Room	-	0.30	N
F122	Concrete	Stair Riser	Grey	1st Floor - N Stairs	-	4.0	Y
F123	Concrete	Ceiling	Yellow	1st Floor - Main Entrance	-	0.15	N
F124	Concrete	Ceiling	Yellow	1st Floor - SE Corner	-	0.02	N
F125	Wood	Wood Covering Transom	Dark Red	Exterior South Side - west door	-	2.7	Y
F126	Metal	Door	Red	Exterior South Side - west door	-	0.00	N
F127	Metal	Door	Red	Exterior South Side - middle door	-	0.00	N
Cal10	Wood	SRM2573	Red	Calibration	-	1.20	N/A
Cal11	Wood	SRM2573	Red	Calibration	-	1.10	N/A
Cal12	Wood	SRM2573	Red	Calibration	-	1.20	N/A

Notes:
Wall A refers to the wall at the front of the property (facing the main entrance); walls B, C, and D follow in a clockwise direction.
Shaded materials contain ≥ 1.0 mg/cm² lead.

Based on the results of the LBP screening, it was determined that the following surfaces contain LBP:

- Wood baseboard painted yellow throughout the building. Lead content: 1.80 mg/cm².
- Metal and wood door frames and associated components (jambs, trims, etc.) painted yellow, green, beige, blue and white throughout the building. Range of lead content: 1.0 – 3.3 mg/cm².
- Wood doors painted blue throughout the building. Range of lead content 1.4 – 2.2 mg/cm².
- Metal stair and stair components painted black throughout the building. Range of lead content 0 – 3.9 mg/cm².
- Metal cage (black) located near the stairs throughout the building. Lead content: 1.6 mg/cm².
- Concrete flooring (grey) on stairs and stair landings throughout the building. Range of lead content 3.0 – 4.0 mg/cm².
- Metal pipe (grey) located throughout the building. Lead content: 2 mg/cm².
- Metal radiators (all colors) located throughout the building. Range of lead content: 0.09 – 1.6 mg/cm².

- Wood windows and window components, including sashes, trim, sills and stools, (painted white, yellow, purple and brown) located throughout the building. Range of lead content: 0.80 – 2.1 mg/cm².
- Brick and block walls (blue and white) located throughout the building. Range of lead content: 1.1 – 11.2 mg/cm².
- Wood walls and partitions (yellow, green and offwhite) located throughout the sub-basement level. Range of lead content: 2.6 – 3.7 mg/cm².
- All exterior building components painted beige. These components include the ornamental metal work at the cornice, metal grates over windows and masonry window sills. Range of lead content: 1.9 – 2.0 mg/cm²
- Metal fence (green) on the exterior of the building. Lead content: 3.8 mg/cm².
- Wood covering the transoms (dark red) located on the exterior exit doors of the building. Lead content: 2.7 mg/cm².

5.0 Potential Sources of Polychlorinated Biphenyls (PCBs)

Polychlorinated biphenyls (PCBs) are synthetic organic chemicals used in some electrical transformers, hydraulic systems, fluorescent light ballasts, electrical panels, or other similar equipment. PCBs can be found in liquid, solid or vapor form and are usually colorless or light yellow. The production of PCBs was stopped in the U.S. in 1977 because of mounting evidence that they accumulate in the environment and cause harmful effects.

PCB content in electrical transformers has been categorized into three classifications by the federal government. Those units that contain less than 50 parts per million (ppm) are defined as non-PCB. Units that contain between 50 ppm and less than 500 ppm of PCBs are defined as PCB-contaminated. Units with a PCB content of 500 ppm and greater are classified as PCB transformers.

KCI observed fluorescent lights throughout the subject site. Light ballasts manufactured prior to 1979 could contain PCBs. Generally, the ballast will contain about a teaspoon of concentrated (900,000 ppm or greater) PCBs sealed inside the capacitor. The capacitor is usually surrounded by a tarlike potting material, which is in turn enclosed in the ballast box. Based on the age of the on-site building, it is possible that PCB-containing ballasts exist within the building.

KCI's survey for equipment that could contain PCBs included an inspection of a representative number of fluorescent light ballasts. KCI inspected approximately ten (10) light ballasts; however, due to time and budgetary restraints, not all light ballasts were inspected. Of the light ballasts inspected, KCI was not able to identify the "No-PCB" labels on any of the ballasts. No staining or leaking was observed from the inspected ballasts. During KCI's inspection, it was estimated that approximately three hundred and twenty (320) ballasts are present within the project site.

6.0 Potential Mercury Containing Equipment

KCI observed approximately six hundred and fifty (650) fluorescent light bulbs throughout the subject site. Fluorescent lamps frequently contain quantities of mercury sufficient to fail the toxicity characteristic. Further, KCI observed approximately five (5) thermostats throughout the subject site, which may contain mercury.

Although the removal and disposal of mercury containing equipment is not currently regulated by the EPA, KCI recommends that potential mercury containing equipment be removed and disposed of and/or recycled properly.

7.0 Conclusions and Recommendations

7.1 Asbestos Containing Material

Based on the analysis results, the following materials have been determined to be asbestos containing materials:

- Approximately 1,600 square feet of ductwork painted blue, located over the pool and pool mezzanine.
- Approximately 10 square feet of insulating panel in the sauna. The sauna is located in the sub-basement on the east center of the building.
- Approximately 500 linear feet of aircell pipe insulation (Accessible and Inaccessible) is located in various locations throughout the building, predominately associated with the heating system pipes within masonry walls.
- Approximately 100 pipe fittings aircell/mudded are located in various inaccessible locations throughout the building, predominately associated with the heating system pipes within masonry walls.
- Approximately 250 square feet of pipe insulation and fitting debris is located on the floor in the sub-basement boiler room, crawlspace and within the wall chasis throughout the building.
- Approximately 15,500 square feet of black mastic beneath the floor tiles throughout the building
- Approximately 15,500 square feet of 9" and 12" floor tiles of various colors and designs located throughout the building.
- Caulking (beige) on approximately 22 exterior windows (older style) located throughout the building
- Glazing (black) on approximately 13 windows (interior side) located in the gymnasium
- Three (3) vibration dampeners located in projection booth on third floor
- Interior boiler insulating materials including refractory brick and mortar, packings, caulking inside 1 boiler unit located in boiler room
- Approximately 17 fire doors located throughout the building
- Approximately 12,000 square feet of roofing material on the main building.

Based on our review of the data, KCI recommends removing and disposing of all friable and non-friable ACMs that are anticipated to be affected by the proposed renovation activities in accordance with applicable federal, state, and local regulations. Photos of asbestos-containing materials have been included in Appendix E.

7.2 Lead Based Paint

Forty five (45) of the one hundred and twenty-four (124) XRF readings, identified LBP on components in the subject site. In summary, LBP was detected on metal stairs and stair components (black), metal cage (black) near the stairs, metal and wood door components (yellow, green, beige, blue and white), wood doors (blue), wood baseboard (yellow), metal radiators (all colors) wood windows and window components (white, yellow, purple and brown), painted concrete stairs and stair landings (grey), brick

and block walls (blue and white), wood walls and partitions (yellow, green and off-white), exterior building components (beige), metal fence (green) and wood transom (dark red).

Primarily the lead in paint on a renovation project is regulated in two (2) ways: 1) airborne lead dust by the U.S. Occupational Safety and Health Administration (OSHA), and 2) lead in waste by the toxicity characteristic leachate procedure (TCLP) by EPA.

During renovation, it is recommended that the contractor follow the OSHA "Lead in Construction" standard, in conjunction with dust control and containment to prevent lead contamination of the surrounding areas, and the use of personal protective clothing to protect worker health and safety during renovation.

7.3 PCB and Mercury Containing Equipment

KCI has estimated that approximately 320 light ballasts exist within the project site. KCI inspected a representative sample of these light ballasts in order to ascertain information regarding the PCB content of the ballasts. Of the light ballasts inspected, KCI was not able to identify the "No-PCB" labels on each of the inspected ballasts. During renovations or demolition, KCI recommends that all fluorescent light ballasts be inspected for "No-PCB" labels. If such labels are not observed, KCI recommends that the manufacturer be contacted regarding the PCB classification of the ballasts. Any ballasts that are not specifically labeled as "No-PCB" should be assumed to contain more than 50 ppm PCBs unless tested and proven otherwise. If the ballasts are found to contain PCBs, KCI recommends that the light ballasts be disposed of according to state and federal regulation.

7.4 Mercury Containing Equipment

KCI observed approximately six hundred and fifty (650) fluorescent light bulbs throughout the subject site. Fluorescent lamps frequently contain quantities of mercury sufficient to fail the toxicity characteristic. KCI recommends that all potential mercury-containing lamps be removed, treated as hazardous waste, and disposed of and/or recycled properly.

KCI observed approximately five (5) thermostats, which may contain mercury. KCI recommends that all potentially mercury-containing thermostats be removed, treated as hazardous waste, and disposed of and/or recycled properly.

8.0 Disclaimer

This report has been prepared by KCI Technologies, Inc. exclusively for our Client and their Authorized Representatives. KCI implies no warranty to the accuracy of information provided to them by the Client or outside agents and transmitted herein.

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