CITY OF VANCOUVER

REAL ESTATE & FACILITIES MANAGEMENT
Facilities Planning & Development

Hazardous Materials Survey of 1710 East Kent Ave, Vancouver, BC

Sampling Date: 2017-02-24 and 2017-03-10

Address: 1710 East Kent Ave, Vancouver, BC

Surveyor: Rebecca Yanciw

Previous sampling, YEAR (#): N/A

Purpose: HAZARDOUS MATERIALS MANAGEMENT SURVEY

Executive Summary

A City of Vancouver Hazardous Materials Technician has completed a hazardous materials management survey of 1710 East Kent Ave, Vancouver, BC.

A management survey only identifies the hazardous building materials that could be encountered or disturbed by building workers or occupants during routine repair and maintenance and by minor, foreseeable damage. This was a non-destructive survey; therefore hidden and below-ground materials were not addressed and any hidden materials which may contain asbestos, lead, PCBs or mercury should be assumed to be hazardous until sampling demonstrates otherwise.

HAZARDOUS MATERIALS	# Materials sampled and/or assessed	STATUS	RECOMMENDED ACTION
ASBESTOS	11	NOT DETECTED	NONE
LEAD-BASED PAINT & COATINGS	3	NOT DETECTED	NONE
MERCURY	n/a	LIKELY PRESENT	MONITOR
PCBs	n/a	LIKELY PRESENT	MONITOR
SHARPS	n/a	NOT PRESENT	NONE
BIOLOGICAL HAZARDS	n/a	NOT PRESENT	NONE
OZONE-DEPLETING SUBSTANCES	n/a	LIKELY PRESENT	MONITOR
RADIOACTIVE SUBSTANCES	n/a	LIKELY PRESENT	MONITOR
SILICA-CONTAINING MATERIALS	n/a	PRESENT	MONITOR

Scope of Work

- A visual inspection of all areas within the building located at 1710 East Kent Ave, Vancouver, BC for the presence of building materials suspected to contain asbestos (including vermiculite), lead, mould, and other hazards such as mercury, PCBs, rodent droppings, needles/sharps. Surficial sampling was conducted.

- An assessment of potentially hazardous materials, denoting their condition, potential for disturbance/damage, accessibility to workers or public, estimated quantity, if suspect asbestos containing, their friability, potential for fiber release and worker exposure was assessed.

- Collection and analysis of material samples from the buildings for the presence of suspect hazardous materials. With the exception of caulking and mastic compounds, and to avoid building envelop damage, samples of roofing materials were not collected.

- A risk assessment for the current condition of any damaged asbestos/lead containing materials determined to be present within the buildings including the priorities for removal/repairs.

- Recommendations for the removal/repair of any damaged hazardous materials determined to require immediate action.

Facility Description

The facility is a concrete structure currently used for paper printing. It includes two warehouse areas, upper floor offices, a washroom, storage room, lower floor office, and a mezzanine. The warehouse areas have concrete and cinderblock walls, concrete floor, and a metal Q-deck ceiling. The offices are finished with 2' x 4' ceiling tiles, drywall walls, and carpet on the floor. The washroom and storage room are finished with drywall with texture coat ceiling, drywall walls, and non-glazed ceramic tiles on the floor. The mezzanine is open to the warehouse area with drywall walls and 12" x 12" beige vinyl floor tiles.

Asbestos-Containing Material: Methodology and Results

Materials sampled were selected based on our experience and guidelines provided by WorkSafeBC (Safe Work Practices for Handling Asbestos). Building materials were assessed for potential asbestos content and eleven (11) have been analyzed for asbestos by COV-approved labs. Table 1 summarizes the results of the samples collected.

Table 1: Samples Collected for Asbestos Analysis

Sample Number	Material	Location	Results of Laboratory Analysis for Asbestos
A001	Drywall joint compound	Lower Floor Washroom Wall	None Detected
A002	Drywall joint compound	Lower Floor Storage Room Wall	None Detected
A003	Texture coat	Lower Floor Washroom Ceiling	None Detected
A004	12" x 12" beige vinyl floor tile	Mezzanine Floor above Washroom	None Detected
A005	Roofing Materials	South side of Roof	None Detected
A006	Roofing Materials	Mid Area of Roof	None Detected
A007	Roofing Materials	North side of Roof	None Detected
A008	Black Mastic	Perimeter of Roof	None Detected

A009	Grey Caulking	East side of Roof	None Detected
A010	Drywall Joint Compound	Upper Floor Office Wall	None Detected
A011	2' x 4' ceiling tile	Upper Floor Office Ceiling	None Detected

No asbestos-containing materials were identified in this building. Cinderblock walls may contain vermiculite insulation. No drilling was performed to access the inside of the bricks for this survey. The wall between 1710 East Kent and 1728 East Kent on the Roof may have concealed insulation. Destructive testing to access behind the wall was not performed during this survey.

Lead-Based Paints and Coatings: Methodology and Results

Total Lead in Paint
Three (3) representative samples of paint were collected to test for the presence of lead. The samples were analyzed at a COV-approved lab for total lead.

Information from the U.S. Occupational Safety and Health Administration (OSHA) suggests that the improper removal of lead paint containing 600 mg/kg lead results in airborne lead concentrations that exceed half of the exposure limit. Depending on the potential receptors and the work to be performed, paints with lead contents as low as 90 mg/kg can also result in dangerous airborne lead levels. **A task-, and site-specific risk assessment must be conducted by City of Vancouver's Hazardous Materials Team to determine if an Exposure Control Plan and safe work procedures are required** (Lead-Containing Paints and Coatings: Preventing Exposure in the Construction Industry, WSBC 2011).

All three (3) of the paint samples collected were below the suggested exposure prevention limit of 600 mg/kg paint (Table 2).

Leachable Results of Lead in Paint: No samples were analyzed for leachable lead. Lead-based paint must be tested for leachable lead prior to disposal to determine if they are hazardous waste as defined by BC Ministry of Environment.

Table 2: Lead-based Paints and Leachable/Hazardous Waste Paints (Lead)

Colour	Location	TOTAL LEAD (mg/kg)	EXCEED EXPOSURE PREVENTION CRITERIA? (600 mg/kg)	CHPA LEAD-BASED PAINT? (90 mg/kg)	TCLP LEAD (mg/L)	HAZ WASTE? (Y/N)
White	Washroom Drywall Wall	<12	NO	NO	-	-
White	Storage Room Cinderblock Wall	19.3	NO	NO	-	-
Cream	Exterior Concrete Siding	27.5	NO	NO	-	-

Note: Concentrations above 600 mg/kg are highlighted and in bold:
TCLP: Toxicity Characterization Leaching Procedure
CHPA: Canadian Hazardous Products Act

Other Hazards

Mercury: Fluorescent light bulbs which may contain mercury must be disposed of in accordance with BC Ministry of Environment regulations.

PCBs: Fluorescent light fixtures in this property may contain PCBs within the light ballasts. The ballasts should be removed from the light fixture and placed in a secured area for inspection. If they are determined to contain PCBs

they must be disposed of in accordance with BC Ministry of Environment regulations.

Sharps/Needles: None observed

Biological Hazards: No significant mould or other biological hazards observed.

Ozone-Depleting Substances: Refrigeration units may contain CFCs and must therefore be disposed of in accordance with the BC Ministry of Environment's "Ozone-Depleting Substances and Halocarbons Regulations" (2004). The units must be treated as CFC-containing until it has been determined otherwise.

Radioactive Substances: None observed

Silica-Containing Materials: Present in concrete foundation and cinderblock walls and may be present in ceramic tiles, stucco and drywall.

Other Hazards and Notes: None observed

If any of these hazardous materials are to be disturbed, contact City of Vancouver Hazardous Material Team for assistance with risk assessment, control and disposal procedures.

Risk Assessment and Recommendations

Prior to renovation or demolition activities, the hazardous materials identified in this report must be safely contained before disturbance. Depending on the areas to be renovated or demolished, additional destructive sampling may be required to identify hazardous building materials that were not accessed during this survey. Should any materials be uncovered that are suspected to contain hazardous building materials that have not been sampled, work on the affected area should stop immediately and the City of Vancouver should be contacted.

Asbestos
The cinderblock walls may contain vermiculite. The roof wall between 1710 East Kent and 1728 East Kent may have insulation concealed behind the wall. The cinderblock and roof walls are in good condition and do not require immediate action.

Silica
Present in concrete foundation, concrete and cinderblock walls, and may be present in drywall and ceramic tiles. In the event where materials containing silica are disturbed, safe work procedures must be followed in compliance with the requirements of the WorkSafeBC Occupational Health & Safety Regulation (current edition).

Report Prepared by City of Vancouver Hazardous Materials Team

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Per: Rebecca Yanciw, Hazardous Materials Technician

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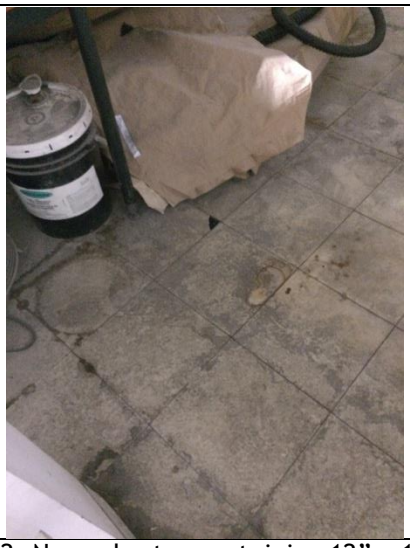
Reviewed by: Roger Johnson, Hazardous Materials Team Coordinator

PHOTOS: ATTACHED

LABORATORY REPORTS: AVAILABLE

PHOTOS: 1710 East Kent Ave, Vancouver, BC

	
Photo 1: Non-asbestos containing roofing material	Photo 2: Non-asbestos containing 12” x 12” beige floor tiles with non-asbestos underlying mastic

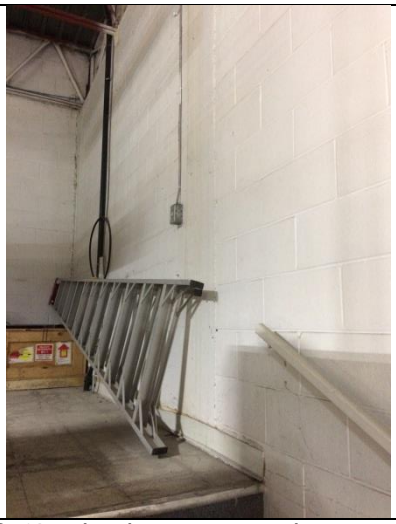



Photo 3: Non-lead containing white paint on cinderblock walls. Cinderblock walls may contain vermiculite.	Photo 4: Non-lead containing exterior paint.

LABORATORY REPORTS: 1710 East Kent Ave, Vancouver, BC

ACM ENVIRONMENTAL CORPORATION

Asbestos Bulk Sample Results

Client: City of Vancouver
Location: 1710/1728 East Kent Avenue South, Vancouver, BC
Submitted By: Rebecca Yanciw (via courier)
Project #: 17-11827
Date: 24-Feb-17
Submission Date: 24-Feb-17

The samples below have been analyzed in accordance with NIOSH Method 9002, Issue 2.

				ASBESTOS RESULT		OTHER FIBRES DETECTED		NON-FIBROUS MATERIALS		
SAMPLE NUMBER	SAMPLE LOCATION & DESCRIPTION	PHASE / LAYER DESCRIPTION	PHASE / LAYER CONTENT % (Vol/Vol)	TYPE	CONTENT % (Vol/Vol)	TYPE	CONTENT % (Vol/Vol)	TYPE	CONTENT % (Vol/Vol)	LAB ANALYST
17-11827.0001	A001 - 1710 Washroom DWJC on Wall Drywall Joint Compound	1) Paint 2) White Mud Compound 3) Paper 4) White Mud Compound 5) Paper 6) Gypsum	2% 70% 2% 20% 2% 4%	None Detected None Detected None Detected None Detected None Detected None Detected	N/A N/A N/A N/A N/A N/A	None Detected None Detected Cellulose None Detected Cellulose Cellulose	N/A N/A 100% N/A 100% 1-5%	Paint Mud Compound None Detected Mud Compound None Detected Gypsum	100% 100% N/A 100% N/A 95-99%	PL
17-11827.0002	A002 - 1710 Storage Room DWJC on Wall Drywall Joint Compound	1) Paint 2) White Mud Compound 3) Paper 4) White Mud Compound	2% 70% 2% 26%	None Detected None Detected None Detected None Detected	N/A N/A N/A N/A	None Detected None Detected Cellulose None Detected	N/A N/A 100% N/A	Paint Mud Compound None Detected Mud Compound	100% 100% N/A 100%	PL
17-11827.0003	A003 - 1710 Washroom Texture Coat on Ceiling Texture Coat	1) Paint 2) White Texture Compound	2% 98%	None Detected None Detected	N/A N/A	None Detected Cellulose	N/A 4%	Paint Texture Compound	100% 96%	PL
17-11827.0004	A004 - 1710 Mezz. 12x12 Beige Vinyl Floor Tile Vinyl Floor Tile	1) Beige Vinyl Material 2) Soft Black Mastic	98% 2%	None Detected None Detected	N/A N/A	None Detected None Detected	N/A N/A	Vinyl, Glass, Quartz Tar, Adhesive	100% 100%	PL
17-11827.0005	A005 - 1710 Roofing Materials Roofing Material	1) Small Grey/Brown Rocks 2) Multi-Layers of Soft Black Mastic 3) Multi-Layers of Black Fibrous Felt 4) Brown Fibrous Material	12% 20% 56% 12%	None Detected None Detected None Detected None Detected	N/A N/A N/A N/A	None Detected None Detected Glass, Synthetics Cellulose	N/A N/A 30% 100%	Rocks Tar, Adhesive Tar, Adhesive None Detected	100% 100% 70% N/A	PL

ACM ENVIRONMENTAL CORPORATION

Proficiency is obtained through the American Industrial Hygiene Association AIHA

LABORATORY REPORTS: 1710 East Kent Ave, Vancouver, BC

ACM ENVIRONMENTAL CORPORATION

Asbestos Bulk Sample Results

Client: City of Vancouver
Location: 1710 East Kent Avenue, Vancouver, BC
Submitted By: Rebecca Yanciw (via courier)

Project #: 17-11873
Date: 17-Mar-17
Submission Date: 10-Mar-17

The samples below have been analyzed in accordance with NIOSH Method 9002, Issue 2.

				ASBESTOS RESULT		OTHER FIBRES DETECTED		NON-FIBROUS MATERIALS		
SAMPLE NUMBER	SAMPLE LOCATION & DESCRIPTION	PHASE / LAYER DESCRIPTION	PHASE / LAYER CONTENT % (Vol/Vol)	TYPE	CONTENT % (Vol/Vol)	TYPE	CONTENT % (Vol/Vol)	TYPE	CONTENT % (Vol/Vol)	LAB ANALYST
17-11873.0001	A006 - Roofing Materials - Mid Roof Roof Materials	1) Soft Black Mastic	20%	None Detected	N/A	None Detected	N/A	Tar, Adhesive	100%	PL
		2) Black Fibrous Felt	30%	None Detected	N/A	Glass	25%	Tar, Adhesive	75%	
		3) Black Fibrous Felt	20%	None Detected	N/A	Synthetics	38%	Tar, Adhesive	62%	
		4) Black Fibrous Felt	30%	None Detected	N/A	Cellulose	42%	Tar, Adhesive	58%	
17-11873.0002	A007 - Roof Materials - North Roof Roof Materials	1) Small Grey Rocks	12%	None Detected	N/A	None Detected	N/A	Rocks	100%	PL
		2) Multi-Layers of Soft Black Mastic	38%	None Detected	N/A	None Detected	N/A	Tar, Adhesive	100%	
		3) Multi-Layers of Black Fibrous Felt	50%	None Detected	N/A	Glass, Synthetics	35%	Tar, Adhesive	65%	
17-11873.0003	A008 - Perimeter Roof Black Mastic Black Mastic	1) Soft Black Mastic	100%	None Detected	N/A	None Detected	N/A	Tar, Adhesive	100%	PL
17-11873.0004	A009 - Perimeter East Roof Grey Caulking Caulking	1) Paint	2%	None Detected	N/A	None Detected	N/A	Paint	100%	PL
		2) Stretchy Clear Caulking Compound	98%	None Detected	N/A	None Detected	N/A	Caulking Compound	100%	
17-11873.0005	A010 - DWJC - UF Office Wall Drywall Joint Compound	1) Paint	2%	None Detected	N/A	None Detected	N/A	Paint	100%	PL
		2) White Mud Compound	66%	None Detected	N/A	None Detected	N/A	Mud Compound	100%	
		3) Paper	2%	None Detected	N/A	Cellulose	100%	None Detected	N/A	
		4) White Mud Compound	30%	None Detected	N/A	None Detected	N/A	Mud Compound	100%	
17-11873.0006	A011 - 2X4 CT - UF Office Wall Ceiling Tile	1) Paint	2%	None Detected	N/A	None Detected	N/A	Paint	100%	PL
		2) Brown Fibrous Mixture	98%	None Detected	N/A	Glass, Cellulose	40-60%	Fillers, Perlite	40-60%	

LABORATORY REPORTS: 1710 East Kent Ave, Vancouver, BC

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Maxxam Job #: B713667
Report Date: 2017/02/27

City of Vancouver
Client Project #: 700260657
Site Location: 1710/1728 EAST KENT AVE, VANCOUVER
Your P.O. #: 4700002203
Sampler Initials: RY

LEAD IN PAINT CHIPS (PAINT)

Maxxam ID		QP5213		QP5214		QP5215		
Sampling Date		2017/02/24 12:00		2017/02/24 12:00		2017/02/24 12:00		
COC Number		08435782		08435782		08435782		
	UNITS	L001 - WHITE PAINT ON WASHROOM WALL (1710)	RDL	L002 - WHITE PAINT ON WASHROOM WALL (1710)	RDL	L003 - CREAM PAINT ON EXTERIOR (1710)	RDL	QC Batch
Total Metals by ICP								
Total Lead (Pb)	mg/kg	<12 (1)	12	19.3 (1)	9.0	27.5	3.0	8562751

RDL = Reportable Detection Limit
(1) Detection limits raised due to insufficient sample volume.

Maxxam ID		QP5216		
Sampling Date		2017/02/24 12:00		
COC Number		08435782		
	UNITS	L004 - GREY PAINT ON EXTERIOR (1728)	RDL	QC Batch
Total Metals by ICP				
Total Lead (Pb)	mg/kg	<12 (1)	12	8562751

RDL = Reportable Detection Limit
(1) Detection limits raised due to insufficient sample volume.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386