BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing AIBC, EGBC and BOABC

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Interpretation Date:	November 21, 2017
Building Code Edition:	BC Building Code 2012
Subject:	Vertical transition of combustible to non-combustible DWV pipe
Keywords:	Combustible DWV Piping, non-combustible DWV Piping, transition
Building Code Reference(s):	3.1.5.16., 3.1.9.1.(1), 3.1.9.4.(3), (4), (5); 9.10.9.7

Question:

Can a vertical transition from combustible plastic drain, waste and vent (DWV) pipe (on the bottom) to non-combustible cast iron DWW pipe (on the top) take place above a fire-rated slab in a multistorey building as long as a listed fire stop is used, such as cUL-F-B-2009, which includes the transition within the listed assembly?

Interpretation:

No.

The transition from combustible to non-combustible DWV pipe in cUL F-B-2009 was located above the floor slab in the unexposed side while the firestop system below the slab is in the fire exposed side. If the non-combustible pipe, after the transition, is extended through the floor above it makes the transition located on the fire exposed side if a fire occurs on the upper side of the floor slab where the transition takes place. During a fire condition above the slab the transition will fail leaving the non-combustible pipe open creating a chase through which flame and smoke can spread to the floor above (see attached illustration).

Clause 3.1.9.1.(1)(a) requires that the fire stop when subjected to the fire test method in CAN/ULC-S115 has the required fire-resistance rating. Since the transition has not been tested on the fire exposed side (within the test furnace) it would not be able to confirm if the fire stop has the required fire-resistance rating.

It is not acceptable for the transition from a combustible DWV pipe (on the bottom) to a non-combustible DWV pipe (on the top) to take place above the fire-rated slab if the non-combustible pipe

R. J. Light, Committee Chair

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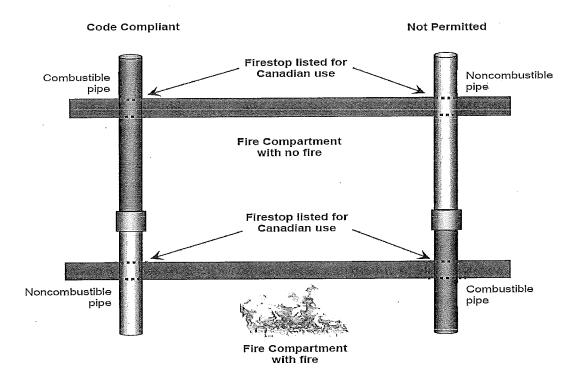
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is further extended through multi-storey fire separations above the slab even though the combustible pipe is protected by a firestop, such as cUL F-B-2009, which includes the transition within the listing unless the transition has been tested on the fire exposed side.



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