City of Richmond
6911 No. 3 Road
Richmond, BC V6Y 2C1

Bulletin
Building Approvals Department
Building Inspections Section

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Hydronic/Radiant Heating Piping Installation

No.: BUILDING-05
Date: 1995-07-24
Revised: 2004-05-26

Purpose:

To inform owners, designers, and contractors of City requirements for Hydronic Heating Installation.

Background:

- For many years now the City has been inspecting Hydronic Heating installations.
- During this time the controversial subject of oxygen permeation through certain types of plastic piping has been investigated.
- The conclusion of this investigation indicates that only pipes with an oxygen barrier provide total elimination of the problem.
- Due to this fact and with the recommendation of the Residential Hot Water Heating Association we intend to enforce the issue by inspection.

Implementation:

- Effective for all building permits dated on or after August 15, 1995, all hydronic heating designs must include provisions to eliminate possible oxygen permeation.
- In order to ensure compliance, we will be inspecting all piping to the Residential Hot Water Heating Association Guidelines which states:
  "The material(s) and equipment used in the HRF panel system shall be selected to significantly reduce or eliminate oxygen permeation. One of the following methods shall be used to protect against system component corrosion.
  a) Use a tubing with an oxygen barrier. The rate of oxygen permeation recommended for tubing shall be the European DIN standard 4726 (0.1 grams/M³/Day at 50ºC.);
  b) Use a stainless steel or copper heat exchanger to isolate the radiant panel system from the boiler system; or
  c) Use all non-ferrous components in the heating/panel system."
- The boiler room drawing and confirmation of boiler type must be submitted to our office with the radiant panel design, prior to in-floor inspection.
- Inspection for use of acceptable product combinations will be made prior to final approval.
- Should you have any questions, comments or suggestions concerning this bulletin please contact Mr. John Stephens, Supervisor, Plumbing/Gas Inspections at (604) 276-4326.