

PROPOSED CHANGE

MODIFICATION PROPOSÉE

NBC05-DivB-06.02.01.01.(01)(i)-add-BPS-radon_ed.doc

Page: 1 of / de 3

Comment

Commentaires

Document	NBC 2005 CNB	Document
Provision	6.2.1.1.(1)	Exigence
Committee	ES-HSB Joint Task Group on Protection against Radon Ingress	Comité
Minutes		Procès-verbaux

EXISTING PROVISION

6.2.1.1. Good Engineering Practice

(See Appendix A.)

1) Heating, ventilating and air-conditioning systems, including mechanical refrigeration equipment, shall be designed, constructed and installed in conformance with good engineering practice such as that described in, but not limited to,

- a) the ASHRAE Handbooks and Standards,
- b) the HRAI Digest,
- c) the Hydronics Institute Manuals,
- d) the NFPA Standards,
- e) the SMACNA Manuals,
- f) the Industrial Ventilation Manual published by the American Conference of Governmental Industrial Hygienists,
- g) CAN/CSA-B214, "Installation Code for Hydronic Heating Systems," and
- h) CAN/CSA-Z317.2, "Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities."

PROPOSED CHANGE

Replace Sentence 6.2.1.1.(1) as follows:

Other Code Provisions Affected: None

6.2.1.1. Good Engineering Practice

(See Appendix A.)

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- e) the SMACNA Manuals,
- f) the Industrial Ventilation Manual published by the American Conference of Governmental Industrial Hygienists,
- g) CAN/CSA-B214, "Installation Code for Hydronic Heating Systems," ~~and~~
- h) CAN/CSA-Z317.2, "Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities," ~~and~~
- i) [EPA/625/R-92/016, "Radon Prevention in the Design and Construction of Schools and Other Large Buildings."](#)

RATIONALE

Problem

General

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NBC05-DivB-06.02.01.01.(01)(i)-add-BPS-radon_ed.doc

MODIFICATION PROPOSÉE

Page: 2 of / de 3

See the Summary of Significant Proposed Changes to NBC Parts 5, 6 and 9.

Technical

Radon is currently not explicitly mentioned in Part 6. Occupants in buildings to which Part 6 applies should, however, also be protected from the potential adverse effects of radon.

Proposed changes developed by the Joint Task Group on Protection Against Radon Ingress include a cross-reference to Part 6 from the proposed Subsection 9.13.4. (see related proposed change).

Justification – Explanation

General

See the Summary of Significant Proposed Changes to NBC Parts 5, 6 and 9.

Technical

The inserted Clause provides a good engineering practice reference on how to protect buildings against a potential high concentration of radon. Further guidance is provided in the appendix (see related proposed change).

Cost implications

Where the design of a ventilation system already incorporates measures to minimize the radon concentration, the incremental cost would be minimal.

Where the design of a building requires the design and installation of a radon mitigation system, the cost increase may be significant and will vary depending on the design of the building. Simple subfloor depressurization systems incorporated for new construction can cost up to \$2000 for a single suction pit and a single exhaust fan. The incorporation of radon suction pits in the building envelope can substantially reduce the cost for retrofitting.

Enforcement implications

This proposed change can be enforced within the existing infrastructure of inspection and enforcement.

Who is affected

Designers, builders, inspectors.

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISION

Provision: 6.2.1.1.(1)

Analysis:

Attributions

(a) to (c) and (e) to (h) [F40,F50,F51,F52,F54,F63-OH1.1]

Objective

OH1 Indoor Conditions

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISION

Provision: 6.2.1.1.(1)

Analysis: Unchanged

Attributions

(a) (b) (c) (e) (f) (h) (g) [F50,F51,F52,F54,F63-OH1.2,OH1.3]

Objective

OH1 Indoor Conditions

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISION

Provision: 6.2.1.1.(1)

Analysis: Unchanged

Attributions

[F50,F31,F63, F51,F54,F52-OS3.2,OS3.4]

Objective

OS3 Safety in Use

PROPOSED CHANGE

MODIFICATION PROPOSÉE

NBC05-DivB-06.02.01.01.(01)(i)-add-BPS-radon_ed.doc

Page: 3 of / de 3

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISION

Provision: 6.2.1.1.(1)

Analysis: Unchanged

Attributions

(d) [F01-OS1.1]

Objective

OS1 Fire Safety

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISION

Provision: 6.2.1.1.(1)

Analysis: Unchanged

Attributions

(a) to (e) [F31,F51-OP1.1]

Objective

OP1 Fire Protection of the Building

[Comment](#)

[Commentaires](#)