



COUNCIL ORDER No. 0015457

**BEFORE THE PLUMBING SUB- COUNCIL
On January 20, 2016**

IN THE MATTER OF the Safety Codes Act, Revised Statutes of Alberta 2000, Chapter S-1.

AND IN THE MATTER OF the Order dated August 14, 2015 issued by an Accredited Municipality (the Respondent) against a local business owner (the Appellant).

UPON REVIEWING the Order **AND UPON HEARING** the Appellant and the Respondent; **THIS COUNCIL ORDERS THAT** the Order is **VARIED**.

FROM:

1. You are required to install a DCVA backflow preventer or a RP backflow preventer on or before September 1, 2015.
2. You are required to arrange for an inspection by a Safety Codes Officer in the Plumbing Discipline to occur on or before September 3, 2015.

TO:

1. You are required to install a DCVA backflow preventer or a RP backflow preventer on or before March 1, 2016.
2. You are required to arrange for an inspection by a Safety Codes Officer in the Plumbing Discipline to occur on or before March 4, 2016.

Issue:

1. The Appeal concerns an industrial premise that is zoned as an Industrial (Business Service) District and has two hose bibbs protected with HCVB installed for individual protection. An assessment of the potential hazard indicates that this would be categorized as a moderate hazard. The work bay is not provided with zone protection via DCVA backflow preventer or a RP backflow preventer. Combining premise, individual and zone protection ensures that both the public and private potable water supply systems are protected from contamination.

Appearances, and Preliminary, Evidentiary or Procedural Matters:

2. Appearing for the Appellants, the Appeal Panel heard from a professional engineer who represented the Appellants.
3. Appearing for the Respondent, the Appeal Panel heard from 4 individuals:
 - a. Legal Counsel, for the Accredited Municipality
 - b. The Plumbing Safety Codes Officer who issued the order;
 - c. The Inspections and Licensing Manager, for the Accredited Municipality; and
 - d. The Inspection Supervisor, for the Accredited Municipality.
4. At the commencement of the hearing, the Appellant and Respondent confirmed there were no objections to any members of the hearing panel, and that the Safety Codes Council (Council) in general and the Appeal Panel in particular had jurisdiction to hear and decide the appeal.
5. The Chair then explained the process to be followed in hearing this appeal, and read out a list of the written material before the panel, consisting of the documents listed below in The Record, paragraph 8 as items a) to m). The Appellant and Respondent confirmed that there were no objections to any of the written material submitted to the Appeal Panel prior to the hearing.
6. During the Appellant's presentation, the Appellant provided a nine page document containing e-mail exchanges between the parties covering the period April 28 – May 31, 2015, some of which were already part of the Record. Copies of the document were provided to the Respondent and the Appeal Panel and submitted into the record as "Exhibit 1 Appellant". The Respondent had no objection to this document becoming part of the Record.
7. During the Respondent's presentation, the Respondent provided Exhibits 1 and 2 Respondent for consideration by the Appeal Panel. After reviewing the documents the Appellant agreed to their being provided to the Appeal Panel with the understanding they related to another premises, and the appellants representative did not manage this project and that another party was responsible. With this provision, the Appeal Panel Chair accepted the submissions marked as Exhibits 1 and 2 Respondent into the Record.

The Record:

8. The Appeal Panel considered, or had available for reference, the following documentation:
 - a) The Notice of Appeal dated August 25, 2015 (Pages 1 to 5)
 - b) Acknowledgement Letter Dated September 1, 2015 (Page 6)
 - c) Stay of Order Letter dated September 2, 2015 (Page 7)
 - d) Appeal Hearing Brief Preparation Guide (Page 8)
 - e) Written Notice of Appeal (pages 9 to 10)
 - f) Respondent request for postponement (page 11)

- g) Postponement Letter (page 12)
- h) Change of Date Written Notification of Hearing (page 13)
- i) Brief of the Appellant (page 15 to 24)
- j) Brief of the Respondent (page 200 to 271)
- k) Exhibit 1 Appellant – E-mail exchanges April 28 – May 31, 2015.
- l) Exhibit 1 Respondent - An e-mail dated July 28, 2015 to the Safety Codes Officer regarding another premises.
- m) Exhibit 2 Respondent – A photograph showing hose connection, again regarding another premises.

Provisions of the Safety Codes Act:

9. The *Safety Codes Act* (S-1, RSA 2000), as amended provides, *inter alia*:

Part 1 Responsibilities

Owners, care and control

5 The owner of any thing, process or activity to which this Act applies shall ensure that it meets the requirements of this Act, that the thing is maintained as required by the regulations and that when the process or activity is undertaken it is done in a safe manner.

Part 5 Orders, Appeals

Council considers appeal

52(2) The Council may by order

- (a) Confirm, revoke or vary an order, suspension or cancellation appealed to it and as a term of its order may issue a written variance with respect to any thing, process or activity related to the subject-matter of the order if in its opinion the variance provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by this Act.

Provisions of the National Plumbing Code 2010 (NPC 2010):

10. The National Plumbing Code 2010 provides, *inter alia*:

Division B

Part 2 Plumbing Systems

2.6.2. Protection from Contamination

2.6.2.1. Connection of Systems

- 1) Except as provided in Sentence (2), connections to *potable water systems* shall be designed and installed so that non-*potable* water or substances that may render the water non-*potable* cannot enter the system.
- 2) A water treatment device or apparatus shall not be installed unless it can be demonstrated that the device or apparatus will not introduce substances into the system that may endanger health.

- 3) *Backflow preventers* shall be selected and installed in conformance with CSA B64.10, “Selection and Installation of Backflow Preventers.” (see Appendix A.)

Provisions of the Canadian Standard Association B64:

11. The CSA B64 November 2011 Clause 3.1 provides, *inter alia*:

Definitions

Hazard –

Minor hazard (MH) – any type of cross-connection or potential cross-connection that involves a substance that constitutes only a nuisance and that results in a reduction in only the aesthetic qualities of water. This category includes all connections described in Clause 5.1.3.2. involving water that might have been heated or cooled and connections that cannot create a danger to health.

Moderate hazard (MoH) – any minor hazard (MH) connection that has a low probability of becoming a severe hazard. This category includes, but is not limited to, connections involving water where the aesthetic qualities of the water have been reduced and, under certain conditions, can create a danger to health.

High or severe hazard (HH) – any type of cross-connection or potential cross-connection described in Clause 5.1.3.2. involving water that has additives or substances that, under any concentration, can create a danger to health.

Annex B (informative)

Guide to the assessment of hazards

NOTE: This Annex is not a mandatory part of this Standard.

B.1

To protect the municipal and private potable water supply systems from contamination, the authority administering the local cross-connection control program has several options available when determining the location of backflow preventers within industrial, commercial, and residential premises:

- a) The first option is based on a containment theory according to which backflow protection is installed on the incoming service, providing premises isolation that utilizes a minimum number of backflow preventers to isolate the municipal potable water system from the private system, but that does not protect the consumer from the source of contamination via internal cross-connections.
- b) The second option is based on internal protection: backflow preventers are either installed on individual water usages or zones of usage. This approach protects the private potable water system from internal contamination, but does not adequately protect the municipal potable water system, because of the complexity of the plumbing system (e.g., plumbing modifications and occupancy changes) that are inherent in industrial, commercial, or residential developments.

- c) The third option is based on combining premises, zone, and individual protection to ensure that both the public and private potable water supply systems are protected from contamination.

Position of the Parties

Appellants

From the Appellants' submissions and testimony the Appellants' position may be summarized as follows:

- 12.** The Appellant introduced a 9 page document (Exhibit 1 Appellant) to demonstrate his efforts to meet with or further discuss the SCOs decision regarding the need for a DCVA or RP backflow preventer in the work Bay. While some meetings did occur, several of his requests were refused or ignored, and some of the meetings were to discuss other matters.
- 13.** The Appellant began his testimony by referring the Panel Members (the Panel) to pages 16 and 17 of the Brief of the Appellant, noting his extensive and relevant experience.
- 14.** The Appellant assured the Panel he does not disagree with the National Plumbing Code and associated standards, just the safety codes officer's application of them.
- 15.** The Appellant said the "assessment" as referred to in CSA B64, and necessary to determine the "hazard", must be a true assessment and not "just a peek through the door." Just because there is a hose bib installed does not automatically mean the hazard is moderate or severe. The assessment must consider how the bay will be used.
- 16.** The safety codes officer (SCO) should have considered factors such as the likelihood of failure of the City water supply and its essential role in creating backflow conditions (extremely low), there never having been such an incident in the past 23 years to the Appellant's knowledge.
- 17.** The SCO should have interviewed both the owner and tenant of the Bay as the Appellant did, to determine the nature of the business and proposed use of the water supply in question.
- 18.** While this information was shared with the SCO in a series of e-mails, the SCO has relied entirely on Tables B.1 and B.2 of CSA B64, which are clearly identified as non-mandatory.
- 19.** There are only two ways to bring about potential contamination through backflow: external pressure greater than internal pressure, and failure of the City water pressure resulting in siphoning; both of which are extremely unlikely to occur.

20. By requiring the installation of a DCVA or RP backflow preventer, the City is off-loading its responsibility to require and be satisfied the bay owner/tenant understands the risks and is responsible for the safety of the operation.
21. For the Order to assert, “this property does not provide zone protection via DCVA...or a RP backflow preventer” shows there is no understanding of the definition of “Zone Protection”. The building has a DCVA backflow preventer as have all the buildings the Appellant has been responsible for, acknowledging some have a RP backflow preventer.
22. The Appellant noted that none of the similar projects the Appellant has been involved in since 1992 have DCVA backflow preventers within the bays and there has never, to the Appellant’s knowledge, been an incident. Many buildings in the City do not have DCVA backflow preventers within bays as it has not been a standard within the City and is not necessary since there have been no incidents of contamination.
23. In response to a question from the Panel, it was determined that prior to the SCOs engagement 7 years ago this may in fact be true. The Appellant acknowledged that until this latest project, his company has not developed a similar project during the past 8 years so there may be a new City standard regarding this matter.
24. While the use of Tables B.1 and B.2 to assess risk maybe reasonable in some cases, their use is non-mandatory and intended for an unsophisticated approach to installations. The SCO does not have to, and should not refer to these tables since a proper “assessment” makes this inappropriate.
25. Regarding the Respondent’s submission (page 204, clause 18) that the occupancy of the Bay might change in the future and the new tenant use the hose bibbs inappropriately, the Appellant suggested the City should require reassessment of the hazard with any change in occupancy.
26. Regarding the Respondent’s submission (page 206, clause 27) that the appellant’s “assessment was inadequate” but was considered as part of the SCOs assessment, the Appellant said no one has ever suggested his work was inadequate, and he questions exactly how, “the Appellant’s assessment ...informed his own (the SCOs) assessment”.
27. Regarding the SCOs determination (page 26, clauses 28 – 30) that “due to the probability and potential that backflow could occur” there was “an identifiable risk of contamination” which contributed to his determination of a moderate hazard, the Appellant said the SCOs refusal to meet with him to discuss this assessment satisfies the Appellant that while the SCOs assessment of a moderate risk may be correct, the Appellant has been shown no evidence to confirm it.
28. Regarding the SCOs determination “there was an identifiable risk of contamination” (page 207, clause 34), the Appellant has not been told what the particular contaminant(s) might be, or exactly what “the specifics of the Bay” refer to.

29. The Appellant believes the City needs to do a better hazard assessment up front, and not simply jump to an easy solution provided by Tables B.1 and B.2, which are not effective and possibly leave the City liable.
30. The Appellant asked that the Panel rescind the August 14, 2015 Order.

Respondent

From the Respondent's submissions and testimony, the Respondent's position may be summarized as follows:

31. Referring to the written submission of the Municipality, the Respondent acknowledged an error in the document. On page 204, clause 20, there is reference to a photograph (Attachment 12) reported to have been taken "in a different bay, but within the same building" as the one under consideration by the Panel. The Respondent said the photograph was taken at a different building.
32. The Respondent believes the SCO's determination that there is a "moderate" risk of contamination of the potable water system, was reasonable, was made under his authority as a SCO, and should be upheld.
33. In response to a concern expressed by the Appellant, the Respondent said the SCO was under no obligation to serve the Order on the Building Owner, just the Unit Owner and Plumbing Contractor.
34. The Respondent acknowledged the evidence submitted by the Appellant requesting several meetings and confirmed not all his requests were granted. The SCO and Inspections Manager did meet the Appellant as they deemed necessary but at some point determined it would be more productive to proceed to an Order, and respond to any appeal as necessary.
35. The Respondent expressed concern that the Appellant has a vested interest in the outcome of this matter given his role in the overall project. The Panel were referred to a May 29, 2015 e-mail (Exhibit 1 Respondent and included in Exhibit 1 Appellant) from the Appellant to the SCO and Inspections Manager, in which he identifies himself as "the original Builder, Owner and now Condominium Manager", and continues with reference to not only safety, but "cost effectiveness". Given the possible vested interest, the assessment of the SCO should be given more weight.
36. The SCO began his testimony with a review of the Order. He said prior to issuing the Order, a meeting with the Appellant was held at City Hall on July 24, 2014 during which nothing was resolved.
37. The Respondent's concern is to ensure measures are in place to protect the other tenants both today and in the future.

38. Even a laundry tub with a hose in the water can cause a problem. Cross connections do not happen on purpose but are usually the result of ignorance, and backflow preventers do stop this from happening. The photograph on page 258 (taken at a different building) shows what can happen.
39. Also submitted during the hearing (Exhibit 2 Respondent) is a photograph providing another example of what can happen when measures are not in place to protect other tenants. Again, it is acknowledged this picture does not reflect an installation in the same building nor one in which the Appellant was involved.
40. The SCO also made reference to the May 29, 2015 e-mail (Exhibit 1 Respondent) referred to earlier, noting that in that instance the Appellant would assess “a hazard rating less than or equal to ‘Minor Hazard’”. Given the nature of the business involved, the SCO was concerned with this assessment.
41. In closing, the SCO said it is important to protect the other tenants from cross contamination, and a DCVA or RP backflow preventer, if installed initially prevents problems in the future,
42. The Inspections Manager reiterated, that as stated on page 205, clause 26, a change of use “does not trigger, or require, a re-evaluation of the potential hazards and probability of backflow occurring” unless of course, there are changes to the plumbing system and a new plumbing permit is required.
43. The Inspections Manager reinforced earlier testimony that there were several meetings and conversations with the appellant which refutes the Appellants testimony.
44. In response to questions from the Panel, the Respondent confirmed there was a City Bylaw in place to address cross contamination but for “Premise” isolation only. There is no requirement in the Bylaw for “Zone” isolation.
45. Also in response to a question from the Panel, the SCO said he cannot speak to practices before he began with the City, or with the actions of other SCOs, but for the past 7 years he has enforced the need for DCVA or RP backflow preventers in situations such as this.
46. In closing, the Respondent said the decision comes down to three things: the determination of hazard, whether Minor or Moderate; the fact that the SCO is the authority having jurisdiction (AHJ) and has the training, certification and experience to make a reasonable determination of hazard (which the City believes he has done); and the risk of undermining the safety codes system by revoking a “reasonable” decision of the AHJ.

There followed some discussion with the Technical Advisor from Alberta Municipal Affairs, to ensure all parties had an understanding of the difference between Premise, Zone, Area, and Individual protection.

Reasons for Decision (Findings of Fact and Law):

The Appeal Panel makes the following findings:

47. The premise in question is a single bay in a 33,000 sq. ft., 2 storey, 17 bay industrial condominium warehouse.
48. The building has a DCVA, (premise isolation), backflow preventer to prevent contamination of the municipal water supply.
49. The Bay has two hose bibbs with HCVB devices installed for individual protection. The Bay does not have a DCVA backflow preventer installed to provide zone isolation.
50. The tenant of the Bay has confirmed the proposed operation as Dry Goods Agriculture, Storage and Distribution, with no chemicals used or stored on site and no mixing of any goods requiring water. The tenant has also confirmed no industrial process requiring water or any other liquids is part of the operation.
51. The use of Tables B.1 and B.2, while not mandatory, is an approved method to determine risk and it is widely used as a guide. It also provides assurance of protection for future tenants who may use the water supply for a different purpose.
52. While the Appellant made reasonable arguments as to why, given the current tenant of the Bay, the hazard should be considered “minor”, the Panel gave more weight to the testimony of the SCO, given his training, experience and the fact that he is the authority having jurisdiction. Additionally the panel agrees that the intent of the B64.10 selection and installation of backflow preventers standard is backed up through specific clauses that references the use of hose bibbs as a minor hazard when applied to a residential development and upgrades the hazard to moderate, for industrial/ commercial use due to the ease of unauthorised connections.
53. The Panel accepts the testimony of the Respondent that this practice is consistently applied in the City at this time.

Dated at Edmonton, Alberta this 1st day of February 2016

Chair, Plumbing Sub-Council Appeal Panel