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**IN THE MATTER OF THE SAFETY STANDARDS ACT  
SBS 2003, Chapter 39  
Pursuant to s. 38 of the Act**

**AND IN THE MATTER OF an appeal to the  
British Columbia Safety Standard Appeal Board**

**BETWEEN:**

**A Gas Contractor**

**Appellant**

**AND:**

**BC Safety Authority**

**Respondent**

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**REASONS FOR DECISION  
Appeal of Compliance Order**

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Board Members:

Abigail Fulton, Vice-Chair;  
Ed Bradbeer;  
Zigi Gadomski

**Introduction**

[1] This is an appeal filed by a gas contractor (the Appellant) to review a decision by the BC Safety Authority (the Respondent) to issue a Compliance Order on August 03, 2005, requiring the Appellant to remove a furnace he had installed and replace it with a model “approved” for mobile homes.

## **Background**

[2] The Appellant is a gasfitter. On June 02, 2005 a permit was issued to the Appellant for the installation of a furnace.

[3] On June 28, 2005 a gas inspection was conducted by the Respondent and a Certificate of Gas Inspection was issued stating that the furnace installed did not meet the code requirements for approval to install in a mobile home.

[4] On August 03, 2005 a Compliance Order was issued by the Respondent to the Appellant to remove the furnace noted as a Nordyne FR6RL-06OC-12F and replace it with a furnace model approved for use in a mobile home.

[5] On September 07, 2005 a second Certificate of Gas Inspection was issued by the Respondent indicating that pursuant to Code Section B149.1-00 – 3.1.4 the furnace was not approved for a mobile home installation. The Certificate of Inspection also indicated a number of additional concerns. The furnace had been tested for temperature rise and had not met the specifications of the manufacturer.

[6] The furnace had shut down on high limit at the time of testing. The furnace required a base. Combustion air was needed from the exterior of the mobile home. ABS Cellular Core was not approved for venting material. The furnace clocked out at 53 MBTU.

## **Issues**

[7] The Appellant's appeal is based on the grounds that the Respondent erred in rejecting the use of the Nordyne FR6RL-06OC-12F in the home in question. It is the Appellant's position that the home in question is a permanent structure and not a mobile home therefore the furnace was an acceptable unit for installation. He also maintains that the installation was done properly and in accordance with the applicable Code and the installation instructions for this unit.

## Analysis

[8] In hearing this appeal, the Board is bound by section 52 (1) of the *Safety Standards Act* which requires that the Board consider the maintenance and enhancement of public safety. In reviewing the case brought before it the Board must weigh the evidence and determine an outcome based on that consideration.

[9] The first question the Board was asked to consider was whether or not the home in question was in fact a mobile home.

[10] The manufacturer's literature that came with the Nordyne FR6RL-06OC-12F furnace that was installed in the home stated that the furnace was not suitable for installation in a mobile home. This was confirmed through phone calls with the manufacturer and this fact was not in dispute between the parties.

[11] Section 31 (1) of the Gas Safety Regulation [B.C. Reg. 103/2004] states that a gas appliance must not be installed unless it has been tested and certified by an approved certification agency, or approved by a Provincial Safety Manager operating under the *Safety Standards Act*.

[13] The Gas Safety Regulation [B.C. Reg. 103/2004] s. 30 (1) (a) incorporates the requirements of the CSA – B149.1 Natural Gas and Propane Installation Code (the "Code") into regulation. Section 3.1.4 of that Code states that an "appliance, accessory, component, equipment, or any other item shall be installed in accordance with the manufacturer's certified instructions and this Code."

[14] The furnace was not certified for use in a mobile home, neither had it been approved for that use by a Provincial Safety Manager, therefore it would be appropriate for the Safety Officer to reject the installation on the Certificate of Inspection if, in fact, the home in question could be classified as a mobile home.

[15] It was agreed by the parties that the structure had originally been a mobile home. The question arose whether the structure could still be considered "mobile". The home owner testified that the structure had never been moved during his ownership of 22 years and that he considered it to be a permanent fixed home. He

also indicated that the home rested on blocks of wood and concrete as well as some large railway ties.

[16] The Respondent relied heavily on photographs of a section of the underbody of the home, as well as the oral testimonies of the Safety Officer and Safety Manager to argue that the home would still be defined as mobile. The Safety Officer and the Safety Manager had attended the home, conducted the inspections of the furnace and looked beneath the home in the same area as was shown in the photographs. The photographs showed cement blocks and wood blocks holding up the structure as well as an old axle still attached to the home.

[17] The Code deals with the requirements for installing gas appliances in mobile homes as follows:

4.8.1 The installation of gas-burning appliances and supply piping in mobile homes shall be in accordance with CAN/CSA-Z240.4.1

4.8.2 When a vehicle ceases to be used as a mobile home or recreational vehicle and is placed at a location in a permanent fixed manner, the system shall comply with all applicable requirements of this Code.

4.8.3 An appliance in the application described in Clause 4.8.2 shall not be required to be certified specifically for use within a mobile home.

[18] The CSA Special Publication B149HB – 05 Natural Gas and Propane Code handbook provides some guidelines for the determination of when a mobile home ceases to be a mobile home as follows:

“ The determination of when a mobile home ceases to be used as a mobile home, and is considered to be a permanently fixed structure, is far more important in practice (see clause 4.8.2). In general, once the means of transportation (wheels, axles and towing gear) are removed and a permanent support system, to which the mobile home is securely attached, is provided, the mobile home is deemed to be a permanent fixed structure. Consult the authority having jurisdiction for further clarifications.”

[19] The handbook provides further clarification on the intent and rationale behind clause 4.8 in the Code:

“The intent of Clause 4.8 is to place the installation of gas-burning appliances and supply piping in mobile homes under CSA Standard Z240.4.1, to which they are certified. It is also intended to define when a mobile home is converted to a permanently fixed structure the applicable Code requirements for the entire system serving the structure.

Mobile homes pose special requirements for gas-burning appliance installations, hence the installation of gas-burning appliances and supply piping must be addressed under a separate standard. The installation of piping from the supply line to the point of connection to a mobile home must conform to the requirements of the authority having jurisdiction, since local experience has proven more effective in assuring acceptable methods of connection, rather than try to have one standard method of connection for the various geographical areas of the country.

When mobile homes are converted into permanently fixed dwellings or structures, they are assumed to be like normal buildings, and therefore all applicable requirements of the Code must be met.”

[20] The determination of whether a home can be defined as a mobile home clearly depends on a number of factors. Is it affixed to the ground? Is there a permanent support structure? Has it been stripped of wheels, axles and towing gear? These are ‘general’ indicators only. There may be other factors that could be taken into account as well. Ultimately, the authority with jurisdiction over this matter ought to be consulted. Such a consultation did not take place in this instance. In any case, the information provided to the Board on this issue was inconclusive. There appeared to be an axle still attached, but the wheel was gone. The home had not been moved in at least 22 years indicating an intent to make it permanent. The support system did not appear to be permanently affixed to the ground, but that was not conclusively shown and there may indeed have been some more permanent supports other than those shown in photographs and observed. The structure may or may not be a mobile home and the Board is not prepared to rule on this point.

[21] It is the Board’s opinion, however, that the inability to define the structure as mobile or not, does not alter the requirement that the furnace be properly and safely installed given the structural information available. The installation would still need to follow the requirements outlined in the Code and applicable regulations.

[22] Section 57 of the Gas Safety Regulations [B.C. Reg. 103/2004] states:

- 57** A person who connects gas to an appliance must do all of the following:
- (a) adjust and test each appliance the person connects so that it will operate in accordance with the manufacturer’s specifications;
  - (b) adjust the input rate to the required rate by
    - (i) replacing a fixed orifice size,

- (ii) changing the adjustment of an adjustable orifice, or
- (iii) if a regulator is provided, by readjusting the gas pressure regulator outlet;
- (c) ensure that the appliance vents in a safe and proper manner.

[23] CSA – B149.1 Natural Gas and Propane Installation Code, Section 4.3.1 states:

Before leaving an installation, the installer shall ensure that an appliance, accessory, component, or equipment installed by him complies with the code requirements and the person initially activating the appliance shall ensure that the appliance is in safe working order.

[24] The issue before the Board, therefore, becomes whether or not the furnace was installed correctly and if not, whether the safety of the public was compromised.

[25] Based on the evidence provided regarding the installation of the furnace, the following safety issues were identified by the Board:

1. There was no filter.
2. The combustion air piping was not complete
3. The sub-base from the previous furnace had to be altered to accommodate the new furnace, and the alterations were not visible to inspection.
4. The temperature rise did not fall within the specifications of the manufacturer, indicating that the duct work was not adequate for the normal use of the furnace.

[26] The lack of a filter in the furnace is a deficiency that, while potentially harmful to the furnace and a possible safety hazard, should be easily correctable. The other three safety issues, however, cause more concern.

[27] The incomplete combustion air piping can cause a problem as the burner would be short of air which in turn could result in problems with carbon monoxide and aldehyde gases. This would clearly be a safety concern for the home owner.

[28] The alteration of the sub-base for the furnace without the ability of inspection would be unacceptable in any furnace installation. There is simply no way to ascertain if a proper base has been installed and therefore the potential for a fire hazard may exist compromising the safety of the home owner.

[29] The temperature rise noted by the two separate tests done by the Respondent suggests a potential problem with the duct work. While the cause of this problem has not been clearly identified, the mere fact that the rise falls outside the manufacturer's specifications is indicative that a problem exists, which in turn could compromise the safety of the home owner.

[30] These safety issues are present regardless of whether the home in question is defined as "mobile" or "permanent". It may be possible for the Nordyne FR6RL-06OC-12F furnace to be installed in a home that was formerly a mobile home, however, the home would have to be altered to comply with the Code requirements and allow a proper installation.

[31] In the case of the home in question, the duct work within the structure does not appear to be adequate for the type of furnace that has been installed, nor was the installation completed in accordance with the applicable Code provisions. Therefore, the Respondent did not err in rejecting the furnace or in issuing the resulting Compliance Order. The safety of the home owner and the public must be the paramount concern.

**Decision:**

[32] The Board hereby dismisses the appeal.

[33] Expenses of the appeal proceeding were not requested and none are awarded.