

HOSPITALITY AND CARBON MONOXIDE SAFETY PANEL

Boiler Accidents involving Carbon Monoxide at hotel and
apartment complexes in Texas.

Texas Carbon Monoxide Accidents

Robby D. Troutt

Chief Boiler Inspector

Texas Department of Licensing and Regulation

(512) 638-2727

Rob.troutt@tdlr.Texas.gov

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Types of Boiler Accidents

- As the Chief Boiler Inspector for the state of Texas, I have the responsibility of conducting all accidents involving any boiler installed in Texas.
- Three main types of boiler accidents investigated:
 - Water side failure-this type of failure usually results with an explosion of the water side of the boiler and sever property damage occurs as well as injuries and possible death to those who happen to be around.
 - Fire side failure-this type of failure also usually results with an explosion (usually in the furnace of the boiler), sever property damage as well as injuries and possible death to those who happen to be around.
 - Carbon Monoxide-This type of failure has been the most common and deadly type of accident in Texas over the last 15 years.

Water and Fire side accidents

- Since being employed by TDLR, I have conducted only 4 major fire or water side accident investigations.
- In all four cases, the boilers were completely destroyed, some cases parts of the boilers were found hundreds of yards away from where the boiler was installed.
- In two cases there were no injuries or deaths
- In one case there were only minor injuries
- In the final case there was one fatality.

Carbon Monoxide Accidents.

- Since being employed by TDLR, I have conducted more Carbon Monoxide accidents than I can remember.
- In all cases, CO accidents have occurred at Schools, Hospitals, Hotels and Apartment complexes.
- Hundreds of people have been treated and released for CO Exposure due to these accidents
- Two of these accidents involves 3 human and 1 animal fatalities

So where did most accidents occur?

- Hospitals-one confirmed case, two HVAC Technician were evaluating the hospitals boilers. When both fell ill at the same time, they got checked by medical staff and was diagnosed with CO Exposure. Immediate repairs were made to the boilers to resolve the problem.
- Schools-while there were more people diagnosed with CO Exposure at schools, than anywhere else, there have only been a few accidents (one due to an owl and one due to a plastic bag.
- Hotels-luckly, everyone staying or working at hotels in which an CO accident occurred were treated and released without any fatalities. However, there were by far more accidents at hotels than any type of location.

So where did most accidents occur?(cont)

- Apartment Complexes-accidents at this type of location occurred here more than at hospitals and schools combined, but was less than those occurring at a hotel. However, there were two human and one animal fatalities at one location and one fatality at another location.
- In both instances, more than one mistake that was made by builders, installers, and maintenance personnel that cost the lives of these people and animal.

So what did we do to solve the problem?

- TDLR added a rule to the Texas Boiler Safety Administrative Rules as follows:
- (a) Each boiler room containing one or more boilers from which carbon monoxide can be produced shall be equipped with a carbon monoxide detector with a manual reset.
- (1) The carbon monoxide detector and boiler(s) shall be interlocked to disable the burners when the measured level of CO rises above 50 ppm.
- (2) The carbon monoxide detector shall disable the burners upon loss of power to the detector.

So, what did we do to solve the problem? (cont.)

(3) The carbon monoxide detector shall be calibrated in accordance with the manufacturer's recommendations or every eighteen months after installation of the detector. A record of calibration shall be posted at or near the boiler, or be readily accessible to an inspector.

(4) The requirements in this subsection apply to boiler rooms in which new installations or reinstallations of one or more boilers are completed on or after September 1, 2020.



Thank you

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