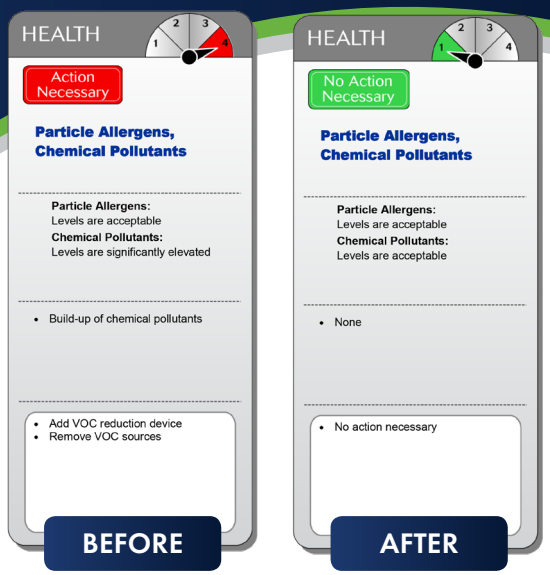
FIELD CONTROLS

CASE STUDY

GRANGER, INDIANA

Indoor Air Quality Management, Single-Family 2,000 sq.-ft. AOR Application



Indoor air is filled with particulates, gases and germs that can cause illness and aggravate asthma and other respiratory problems. In a single-family home in Indiana, residents were experiencing allergies and assumed the cause of their symptoms were from outside of the home.

Background

According to the U.S. Center for Disease Control (CDC), indoor air contains three types of pollutants: Germs, Particulates, and Gases. This pollution is a major source for allergic reactions. Efforts to make homes more energy efficient, such as weather stripping, sealants, and moisture barriers have tightened the home, reducing air changes, and trapping stale air inside.

Like many homeowners, the residents of a single-family home in Indiana would periodically not feel well at home and they thought a bug was going around and the family had a touch of the flu. After attending an Indoor Air Quality presentation by Field Controls' Midwest Regional Manager, Tim Begoske, at Mid-City Supply Elkhart, a homeowner contacted Tim Begoske. Begoske offered to place an indoor air quality monitor in the resident's home for five days. By chance, during the five-day test period, the family's son wasn't feeling well.

The test report was detailed and an easy to understand. The report data included temperature, humidity, particles, chemicals and carbon monoxide over the five-day test period. High levels of chemicals and particles—exceeding 100 times higher than what is safe for occupancy were noted—which was very surprising for the homeowner. Built in 2000, the home is a 2000 sq. ft. ranch with basement and attached garage, that is neat, clean, orderly and well maintained. Not overly tight but, insulated and efficient. The homeowner asked Field Controls for an explanation of the data and suggestions on how to resolve the problem.

Objective

The indoor air report identified elevated gas and particulate levels in the home and in some instances the levels exceeded 100 times higher than what is safe for occupancy. The solution is to dilute random entry of gases and particles in the home by introducing fresh outdoor air into the home. The fresh air will dilute the stale indoor air and as the indoor air circulates through out the home, particulates will be trapped to ensure indoor was clean.

Solution

Field Controls suggested a FCRA-11 right angle air cleaner for particle reduction and an FAV-7 (Fresh Air Ventilation Control and Fresh Air Damper) for gas reduction. These are three components of the Field Controls Healthy Home System. The Healthy Home System has several advantages over other methods for details contact Field Controls. Installation was complete in few hours and the air monitor was placed back in the home. After retesting, the report data confirmed the Healthy Home System worked. The levels of particulates and gases were significantly lowered to acceptable, non-existent levels. Since the installation of the Healthy Home System, the family has not had any reoccurring bouts with feeling ill.

Synopsis

Indoor air quality needs to be managed for occupant comfort, safety, and health. The ability of the Field Controls Healthy Home System (FAVC and damper to control the central fan of a home HVAC system combined with a media air cabinet), clearly manages incoming fresh air to reduce random particulate and gas entry, and dilute stale indoor air while circulating indoor air through the media air cabinet trapping particulates.

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