



Phenomenal Aire

Cold Plasma Generator Technology

Case Study: Casino IAQ Improvement

The American Lung Association states that secondhand smoke is a serious health hazard which causes more than 41,000 deaths per year. It can cause, or worsen, a wide range of health effects. Secondhand smoke contains hundreds of chemicals known to be toxic or carcinogenic including those such as: formaldehyde, benzene, vinyl chloride, acetaldehyde, and naphthalene.

Casinos are entertainment venues which still allow patrons to openly smoke while on the premises. The indoor air of a casino can have up to *fifty times (50X)* more cancer causing particles than outside air. For non-smoking patrons, their length of stay limits the duration to which they are exposed to secondhand smoke. However, casino workers are continuously exposed to hazardous levels of toxic secondhand smoke. Through the casino's heating, ventilation and air condition systems (HVAC), the smoke filled air can be distributed throughout the entire building space. This can affect patrons and workers who may or may not be immediately near a smoker. Regardless of exposure time, or proximity, it is a FACT that secondhand smoke poses health risks.

The use of Phenomenal Aire™ Cold Plasma Generator (CPG) technology will help to significantly reduce the distribution of unhealthy air by breaking down many of the chemicals associated with secondhand smoke. Any gaseous chemicals with an ionization potential less than twelve (< 12) are broken down within the plasma field created by Phenomenal Aire™ technology.

In June of 2016, an indoor air test was conducted in a casino located in California. The test was conducted over a two day time period. The intent of the test was to analyze the air quality associated with a specific HVAC system using its existing air filtration technology, and analysis of the same HVAC system incorporating Phenomenal Aire™ CPG technology.

Review and comparison of the attached test data demonstrates that Phenomenal Aire™ CPG technology helped mitigate the presence of smoke and assisted in improving the casino's indoor air quality.



