Industrial hygiene (IH) is both the art and science of anticipation, recognition, evaluation and control of risk factors that adversely affect physical, mental and social health. The goal of an effective IH program is to eliminate or reduce exposure to potentially harmful substances or conditions. Periodic workplace evaluations should be made to assure the effectiveness of the implemented controls and determine the need for continued surveillance.

The risk posed by an airborne contaminant is best identified by comparing measured air concentrations to occupational exposure limits/guidelines (OELs) established by reputable organizations such as:

- The Occupational Safety and Health Administration (OSHA), permissible exposure limits (PELs)
- The National Institute for Occupational Safety and Health (NIOSH), recommended exposure limits (RELs)
- The American Conference of Governmental Industrial Hygienists, threshold limit values (TLVs)
- The American Industrial Hygiene Association, workplace environmental exposure levels (WEELs)

It is also possible that OELs don't exist for compounds of concern. In these cases, other sources should be investigated in order to arrive at an OEL such as material safety data sheets (MSDSs) and industry-specific literature.

The OELs have been published in order to provide for a “safe” working environment; however, by no means should it be assumed that these levels will protect all workers. The OELs are only to act as guidelines and not a fine line between safe and dangerous concentrations. It is prudent industrial hygiene to minimize concentrations to which all workers are exposed to the extent possible.