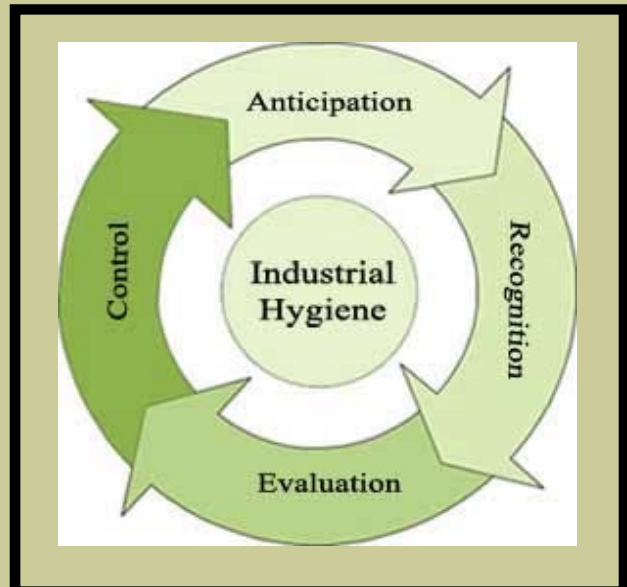


# KAIZEN ENVIRONNEWS

## WHAT IS INDUSTRIAL HYGIENE?

Industrial Hygiene concerns itself with the control of occupational diseases that arise out of and during the course of employment. According to the American Hygiene Association, industrial hygiene is “that science and art devoted to the anticipation, recognition, evaluation and control of those environmental factors or stresses arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort or inefficiency among the workers of the community”.

Correcting occupational health hazards is the responsibility of management because such hazards can cause legal compensable illnesses and can also impair employees’ health to the extent that time is lost from the job or employees work at less than full capacity.



<http://images.google.com/jm/imgres?imgurl=http://ehs.columbia.edu/Images/IH-1.jpg&imgrefurl>

## INDUSTRIAL HYGIENE INCLUDES:



[http://www.kendro.com/com/CMA/Images/Image\\_42050.jpg](http://www.kendro.com/com/CMA/Images/Image_42050.jpg)

- Investigating and assessing the workplace for hazards and potential dangers to health and safety.
- Making recommendations to improve the safety of workers and the surrounding community.
- Training and educating workers about job-related risks.
- Ensuring compliance with the law

# AN EFFECTIVE INDUSTRIAL HYGIENE PROGRAM

There are three (3) key concepts which must be applied in an effective program of Industrial Hygiene;

## 1. RECOGNITION - Knowledge of stresses arising out of industrial operations and processes.

Stresses may take the following forms:

### a) Chemical hazards...

- Generally represents the majority of exposures
- Can be substances used in your processes or
- Purchased chemicals from outside sources
- Can exist in the form of solids, liquids, gases, mists, fumes and vapors

### b) Biological Hazards...

- Microbiological – such as bacteria, viruses, moulds and protozoa;
- Macrobiological – such as insects, parasites, - plants and animals

### c) Ergonomic Hazards...

- **Physical Stressors** such as repetitive motion, heavy lifting, awkward or static postures, fatigue, excessive force, direct pressure and over exertion.
- **Psychological Stressors** such as monotony, perceptual confusion or overload.

### d) Physical hazards...

- Noise
- Vibration
- Temperature extremes
- Electromagnetic radiation
- Illumination
- Ionizing (X Rays)
- Non Ionizing (Lasers, microwaves, infrared and radio waves)

## 2. EVALUATION - A judgment or decision involving measurement of stress and based on past experience.

Obviously, each workplace is different, and conditions can change from day to day. To evaluate degree of exposure, the concentration of a contaminant is determined, according to the terms, units or percentages which appear in the standards on levels of exposure published by the **American Conference of Governmental Industrial Hygienists (ACGIH)**. In order to evaluate the extent of exposure to various hazards, it is necessary to monitor the environment. All monitoring is done with two questions in mind:

- What pollutants exist in the environment?
- How much of each pollutant is there?

### Methods of Sampling:

A practical method of detecting airborne contaminants is to physically collect air samples from the breathing zone of a worker and then have them analysed in a laboratory by various “wet chemistry” procedures. However, the preferred method is detection by a direct reading instrument which allows continuous monitoring of a contaminant in an employee’s breathing zone.

**Instruments:** Air sampling instruments used in the evaluation of air borne occupational health hazards may for the most part be classified as either direct reading instruments, which provide an immediate indication of the level of a contaminant in a measured amount of air, or sample collection devices, which collect a known amount of contaminant for subsequent laboratory analysis.

## 3. CONTROL - Isolation, substitution, change of process, wet methods, local exhaust ventilation, general or dilution ventilation, personal protective equipment, housekeeping, training and education.

# KAIZEN AND INDUSTRIAL HYGIENE

The **PROJECTServices** Division of **Kaizen** executes environmental consulting and contracting in the form of project works. The division has three service sections one of which is Measurement. Our **PROJECTServices** team has the ability to conduct comprehensive industrial hygiene and safety monitoring services for clients. Some of which include the following:



- Indoor Air Quality Testing
- Noise Monitoring
- Radiation Testing
- Particulate Matter
- Microbial Testing
- Vibration Testing
- Light Intensity
- Ventilation Testing
- Total & Specific Volatile Organic Compounds

A **PROJECTServices** representative would be delighted to come visit you to further discuss these services and assist in providing the solution to any of your needs. Additional information can also be sourced at [www.kaizen-tt.com](http://www.kaizen-tt.com). The **PROJECTServices** division includes a 24-hr Call-Out / Rapid Response at **352-0121**. The following are some of the equipment used by the **PROJECTServices** Division for industrial hygiene and safety monitoring services



The **DUSTTRAK Aerosol Monitor** is a portable, battery-operated laser photometer with real-time mass concentration readout and data logging capability.

The monitor provides reliable exposure assessment by measuring particle concentrations corresponding to respirable size, PM<sub>10</sub>, PM<sub>2.5</sub> or PM<sub>1.0</sub> size fractions.

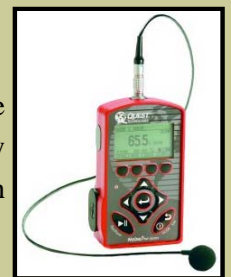


The **Extech Heavy Duty Light Meter** utilizes precision silicon photo diode and spectral response filter. It also features a backlight for readings in low light levels.



The **HavPro** is a fully integrated 3-channel instrument for obtaining tri-axial vibration measurements. This basic monitor is the ideal screening tool for quickly and simply determining the presence and magnitude of hazardous hand-arm and whole-body vibration levels. This instrument conforms to the requirements of the human vibration standards including ISO 8041, IEC 60651, IEC60804 and Class 1 requirements of IEC 61672-1, plus the latest human vibration standards of the EU Vibration Directive.

Quest Technologies **NoisePro** series consists of four advanced instruments for occupational noise exposure assessment. Settings can be auto-configured to meet specific regulatory standards by selecting the standard's name from a list of predefined setups. Multiple virtual dosimeters in each instrument permit assessments against more than one standard simultaneously.



The rugged **MiniRAE 2000** is the smallest pumped handheld volatile organic compound (VOC) monitor on the market. Its Photoionization Detector's (PID) extended range of 0-10,000 ppm makes it an ideal instrument for applications from environmental site surveying to HazMat/Homeland Security.

## **CONFINED SPACE ENTRY & HAZMAT TRAINING AT KAIZEN**

Ensuring our Emergency Response Team is continuing professional development, Kaizen, in collaboration with F.I.R.S.T. of Texas, has conducted a twenty four (24) Hazardous Material Technician Training with (27) twenty seven of our employees under the tutorage of Mr. Tom. Henderson who has over twenty (20) years experience in industrial hygiene, health safety and management .

Members of the Ministry of Energy and Energy Industries, Environmental Management Authority, Trinidad and Tobago Fire Service, Police Service and Defense Force were invited to attend. Training focused on recognizing and evaluating a hazardous materials incident, organizing the response team, protecting response personnel, identifying and using response resources, implementing basic control measures and refining decision-making skills to protect the public and the environment.



## **THE OFFICIAL LAUNCH OF KAIZEN FUZUN STEEL!!**



Band members of Kaizen Fuzun Steel

Kaizen is a very proud sponsor of the Steel Pan Ensemble “**Kaizen Fuzun Steel**”.

The band was launched on the 27<sup>th</sup> August 2009 at the Naparima Bowl, San Fernando among hundreds which included The Honorable Canadian High Commissioner, Deputy Mayor of San Fernando, Minister of State in the Ministry of Planning, Housing and the Environment as well as family members, friends, and pan lovers from all over the country!



Her Excellency Ms. Karen Mc Donald - High Commissioner for Canada her husband and Douglas de Freitas Kaizen Fuzun Steel Chairman



Board Members having a chat after the show.



Band Members performing at the launch

**Kaizen Environmental Services (Trinidad) Limited**

**Unit # 8, Rajkumar Street, Mission Road, Freeport.**

**Phone: (868) 299-0009; Fax: (868) 673-6420**

**[www.kaizen-tt.com](http://www.kaizen-tt.com)**