

Researches Laboratories Safety Management Approaches in Developing Countries

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My experiences and evaluation in all my safety classes and presentations indicated a lack of safety organizational institution in even high educational academies which MSc and PhD student's studies. For first time in my presentation in 2008, I present a lecture in which I explained challenges safety issues in both educational and research laboratories. Sustainable safety laboratories needs organizational safety foundation for comprehensive protection of employees, students, university masters and environment as well as put safety standards in laboratories increasing assurances for environment health and safety sustainability. Along with social economy progress in developing countries high educational systems develop rapidly. Entering New science and technology to laboratories as research bases, so systematic safety and protection must be brought to actions. Both students and masters in addition laboratory devices and environment are subject to protection.

Safety organization deploys with safety committee forming as the first step, all persons, principals, experts and office employees, guards, involved in laboratories must be involved in safety protocol. Risks assessment is the next step to predict safety considerations in laboratory operation, provision of personnel protective equipments and safe laboratory waste disposal manner. Safety and biosafety officers as in charge authorized specialist for monitoring laboratory safety status are very important factors for laboratory safety and protection integrity. Chemical and biological laboratory materials for laboratory exams and research application may have potential hazards.

Laboratory manufacturing factories and institutes have obligation for providing material safety datasheet (MSDS), labels for safe working and handling laboratory material including risks alert (R) and safety cautions (S) labels in their production container packages according to UN and global standards for hazard substances control.

MSDS must be provided in acceptable visibility and assuring of deep understanding MSDS contents by all persons such as students and masters, lab employees are very serious for laboratory safety and protections. Laboratory designing, facilities and utilities must be tailored to laboratory performances level and all safety and security predictions such as chemical and biosafety cabinets, emergency shower, fire extinguishers, emergency exit ways must be considered in the laboratory designing. Safety manuals which provided all necessary information and safety precautions must be provided and easy accessible for all employees, students new coming employees and periodically revised for any changes.

Safety documentation for all laboratory instructions, inventories and accident reports, training histories and schedules must be filed and kept in safety office for any further investigations or inspections. All laboratory materials must be handled, stored and disposed in safe manner according to MSDS instructions. Keeping large volume laboratory material must be avoided and dangerous lab material must have limited access for safety and security considerations. Laboratory waste disposing must be classified according to their risks for environment, natural resources and should be disposed in safe manners.

Every day in the world laboratory accidents brings deadly damages even in developed countries and high level universities. All universities in the developing countries must revise all safety status in their institutes in order to increase maximum assuring of laboratory safety and protections. Laboratory damages and hazards may be irreversible or even deadly. Loss of lives and property damage may occur in short time such as explosion and in longtime such as chronic disease for allergy or cancers. Environment hazard impactions on natural resources are other risks in lacking laboratory safety protocols.

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