

4.4.3 Effectiveness of Training & Program

In general, safety training is defined as knowledge of safety given to employees in order for them to work safely with no danger to their wellbeing (Law, Chan & Pun, 2006). The approach to develop an OSH training program is a proactive one that involves looking at the whole organization, the work environment and individual tasks. Training is therefore, essential for the effective implementation of organizations' OSH policy, plans and procedures. The Company recognizes the need to provide OSH training at all levels in ensuring that employees can effectively meet their responsibilities.

In addition, training refers to instruction and practice for acquiring skills and knowledge of rules, concepts, or attitudes necessary to function effectively in specified task situations. As noted in the OTA report (1985), training could also provide employees with ways to obtain added information about potential hazards and their control; they could gain skills to assume a more active role in implementing hazard control programs. With regard to OHS, the definition of training consists of instruction in hazard recognition and control measures, learning safe work practices and proper use of PPE, and acquiring knowledge of emergency procedures and preventive actions (Cohen & Colligan, 1998).

Safety training was seen to be a barrier to the implementation of OHSMS. The results of this study on safety training, however, differ from those reported in other studies such as Cohen and Jensen (1984); Cooper and Phillips (2004); Reber and Wallin (1984) (as cited in Huang *et al.*, 2006). An effective employees' participation program was determined by management support with a position to activities through provision of training, information and advice. Another behavioral aspect that should not be neglected is educational and training programs.

Table 4.22 below shows us the training that was done for employees in previous year 2010-2011.

Table 4.22:
OSH Training, HIRARC, Noise Conservation Program, ESH Awareness Campaign in Year 2010 and 2011

➤ Safe Work Procedures	
• Initial Development (22 nos.)	<i>Dec '10</i>
• 2 nd Development - new & revised (29 nos.)	<i>Apr '11</i>
• Implementation	<i>Jan '10 – Aug '11</i>
<hr/>	
➤ OSH Training & Exercises	
• Induction for new workers	<i>Started Jan 2010</i>
• OSH Awareness	<i>2x / week (started Jan 2011)</i>
• Chemical Safety	<i>1x / year (started - Mar 08)</i>
• Road Safety Training	<i>1x / month 2011</i>
• PPE Training	<i>Jan – Apr '2011</i>
• Hazard ID, Risk Assess. & Control (HIRARC)	<i>Jan – Apr '2011</i>
<hr/>	
➤ OSH Training & Exercises (cont'd)	
• Hearing Protection Awareness	<i>1x / 2 years (Jul '2011)</i>
• OSH Competent Persons	
• Overhead Crane & Forklift Operators	
<hr/>	
➤ OSH Training & Exercises (cont'd)	
• ERT	
• First-aid certification	
a. New	<i>1x / year (started – Jan '06)</i>
b. Refresher	<i>1x / 1–2 years</i>
c. Advanced	<i>3 persons by end '2011</i>
• Fire-fighting & Rescue certification	
a. Internal Training	<i>1x / year (started - Apr '06)</i>
b. External Fire-fighting & Rescue	
- BOMBA	<i>1x / year (started – 1 in 2004)</i>
- BOMBA	<i>2 in 2004/2005</i>
c. HAZMAT & Advance	
- BOMBA	<i>1x / 2 years by end '06 (-)</i>
i. ERT exercises	<i>1x / 2 weeks (started Jan '06)</i>
ii. Competition	<i>1x / year (started Nov '05)</i>
iii. Emergency drills	
a. Fire	<i>1x / year / area by end '06 (-)</i>
b. Chemical spillage	<i>1x / year / area by end '06 (-)</i>
<hr/>	
➤ Hazard ID, Risk Assessment & Risk Control (HIRARC)	
• Team Selection	<i>Jan '2011</i>
• Training	<i>Jan – Apr '2011</i>
• HIRARC Development	<i>Feb – Oct '2011</i>

➤ Safety and Housekeeping Inspection	
• Inspection by Safety Personnel	<i>Daily</i>
• Inspection by SHE Committee	<i>1x / month</i>
➤ SHE Committee Meeting	
• Main Committee and Sub-Committee	<i>Monthly</i>
➤ Noise Conservation Program	
• Noise Monitoring (when there are changes in process)	<i>Year 2010 & 2011</i>
• Audiometric tests	<i>1x / 2 years (2010 & 2011)</i>
• Hearing Protection Awareness Training	<i>1x / 2 years (Jul '2011)</i>
➤ SHE Awareness Campaign	<i>1x / year (Jul '2011)</i>
• Safety Talks	<i>1x / month 2011</i>
• Exhibition & Video Shows	<i>1x / month 2011</i>
• Emergency Demonstration	
• Health Promotion Program	<i>1x / month 2011</i>
➤ CHRA (<i>when there are changes in work units or 1x / 5 years</i>)	<i>Jan – May '11</i>
- no exposure monitoring required	
- some areas need medical examination	
➤ CIMAH (<i>when there are changes in the plant or 1x / 3 years</i>)	
• Hydrogen Storage	<i>Jan – May '11</i>
➤ OHSAS 18000 Certification	<i>start Sep '08</i>

According to Root (2005), the organizations must provide training programs in order to increase awareness and provide safe working environment. The extent of employee safety and health training is dependent upon employee occupational factors, company resources available to finance training, importance placed on safety and other organizational factors (Borstorff & Lowe, 2010).

Figure 4.47: Some of the Training Program Done by Company

Figure 4.47 shows some of the training program done by the Company in Year 2011. This training has generally been provided especially for the management, supervisors, employees, and occasional visitors to areas of risks and hazards and also been provided to account for new or changed risks whenever procedures are altered or new equipment introduced. Training was repeated periodically and supported by feasible incentives. The ESH Training Schedule that was done in Year 2011 was shown in Appendix 44.

Based on this scheduled, the Company has done some training for employees which involved; (1) How to handle fire extinguisher (2) PPE (3) Safety and Health auditing (4) Emergency Preparedness and Response Plan (5) Construction Safety (6) Accident Investigation and Reporting (7) General Office Safety (8) Confined Space Safety.

Other than that, the management has conducted the Fire Drill Training in Year 2010 (Figure 4.48), Internal Firefighting and Rescue Training in Year 2009 (Figure 4.49), Bomba Firefighter and Rescue Training in Year 2008 (Figure 4.50). In the matter of the best way to implement required training, OSHA has training guidelines to assist employers in furnishing safety and health information and instruction to employees (OSHA, 1988).

Figure 4.48: Fire Drill Training in Year 2010

Figure 4.49: Internal Firefighting and Rescue Training in Year 2009

Figure 4.50: *Bomba* Firefighting and Rescue Training in Year 2008

Table 4.23: Effectiveness of Training and Program

Effectiveness of Training and Programme	Mean	Std. Dev.	Level
Training programme for safety health	4.43	0.537	High
Briefing of hand tools and machinery	4.34	0.607	High
Emergency training	4.24	0.474	High
Respect by management and fellow employees	4.17	0.473	High
Attending the safety programme & training	4.11	0.549	High
Received the in-house training	4.01	0.414	High
Great deal of stress on job	3.69	0.677	High

Table 4.23 above highlights all items measured in the effectiveness of training and program. The most important item is about effectiveness in training program for safety and health (mean=4.43, std.dev=0.537), briefing of hand tools and machinery (mean=4.34, std.dev=0.607), emergency training (mean=4.24, std.dev=0.474) and respect by management and fellow employees (mean=4.17, std.dev=0.473), attending the safety programme & training (mean=4.11, std.dev=0.549), received in-house training (mean=4.01, std.dev=0.414) and the lowest item is great deal of stress on job (mean=3.69, std.dev=0.677).

All items were high in mean score and it means that the effectiveness of training and program in this Company declared as effectively. Some employers seem to be more reluctant to cooperate and an emergency exercises shall be adequately documented. Service providers and contractors must be contractually required to submit to the employer adequate training documentation before starting of their assignment.

From observation in this study, the employees at Company will improves their effectiveness by; (1) attending the training which is of good quality achieved in employees participations scheme, (2) involved in continuous training programmers, especially those that address relevant safety problems normally encountered would be most helpful in upgrading skills, (3) attending for courses which enable to keep abreast of latest technology, latest safety measures and development findings on matters.

According to Kirkpatrick (1967), training evaluations in the general literature can take four forms; (1) Reaction; typically this is done through evaluation sheets completed at the end of the training (2) Knowledge Gain (or Skills Acquired); Knowledge of facts and principles is usually evaluated via pre/ post paper-and-pencil tests or quizzes (3)

Behavior Change; For this purpose, reports by the trainees themselves (self appraisals) of their on-the-job performance, or observations by peers, supervisors, instructors can be used (4) Results; training impacts at the organization level can require an extended time line especially in using injury/ illness outcomes owing to infrequency.

As conclusion, there are some benefits from training performance. Earlier studies discovered the link between safety training and increased safety performance (Huang *et al.*, 2006). An association relating to training and the improvement of safety and health working situation such as; (1) management support to safety training (2) goals setting (3) feedback from management (4) incentives and rewards were critical in enhancing safety performance (Sattler and Lippy, 1997).

In this regard, a variety of management actions were noted that it deserves particular mention. In one set of studies, they played roles in reinforcing and sustaining the learned behaviors (Zohar & Fussfeld, 1981). Supervisors were directed to increase their surveillance (Millican *et al.*, 1981), or consider staff compliance in performance evaluations (Lynch *et al.*, 1990). The reports on training plans in response to the OSHA foundry show benefits of increased worker knowledge of hazards, professing greater adherence to safe work practices and protective behaviors (Parkinson *et al.*, 1989).

In addition, safety training was seen to be a barrier to the implementation of OHSMS. The results of this study on safety training, however, differ from those reported in other studies such as Cohen and Jensen (1984); Cooper and Phillips (2004); Reber and Wallin (1984). In their studies, Huang *et al.*, (2006) noted that safety training was reported to have significant consequence in enhancing safety performance and related to low number of accident.

(i) First Aid Training

The aims of first aid are to preserve life, to prevent further harm, and to promote recovery. In compliance with OSH Act, on the provision of health care facilities in the workplace, the employers have take responsibilities in provided the following item at Company; (1) In Plant, (2) Each department has a First Aid Kit with qualified First Aider is available, (3) Employees was qualified by Red Crescent and St. John Ambulance, (4) First Aid Service at Supervisor's office. The First Aid Treatment Manual was in Appendix 45, (5) Qualified first-aid was provided at all times and appropriately equipped first-aid stations were easily accessible throughout workplace, (6) The eye-wash stations and emergency showers was provided close to all workstations where the recommended first-aid response is to immediate flushing with water, and (7) Provided equipped first-aid room. Figure 4.51 shows the employees' first aid training that has been done regularly every year.

Figure 4.51: First Aid Training was done by Company in Year 2011

Past surveys have shown that most in-house assessments of training programs measure only trainee reactions of how well they liked the instruction (Smeltzer, 1979; Smith, 1980; Parker, 1984, Alliger & Janak, 1989). Increasingly, however, there is the call for more extensive training evaluations to verify the benefits as witness this exercise (Blomberg *et al.*, 1988).

(ii) Fire Drill and Emergency Evacuation

The main objective of Fire Drill and Emergency Evacuation procedure is to provide an orderly ERP for all occupants. The Fire Services Act (1988) has states the need for premises in obtaining a fire certificate which the details required to obtain this certificate had listed in the Fire Services (Fire Certificate) Regulations 2001. This training had adequately covered the knowledge of materials, equipment, tools, hazards and control, potential risks to health, precautions to prevent exposure, hygiene requirements, wearing and use of PPE and also incidents and accidents.

The OSHA set of voluntary training guidelines to assist employers in furnishing safety and health information and instruction to employees (OSHA, 1988) mimics most of the same elements within an OSH context. An example report of Simulation Exercise Fire Drill and Evacuation was done at Compact Energy at Xx Company on 18 January 2011 was stated in Appendix 46 where it was successfully done where the employee evacuate the building within 3 minute in the allocation time. The training to the ERT compact energy must be carried out to ensure the ERT team are well training in the technically during the real incident. The Proposal Layout Plan for Fire Drill and Evacuation at SMP Department was shown in Appendix 47.

As conclusion, Huang *et al.*, (2006) noted that safety training was reported to have significant consequence in enhancing safety performance and related to low number of accident. This will also ensure that the significant elements will not be the barriers to the implementation of OHSMS.