

4.4 Workplace Accident Preventions

4.4.1 Personal Protective Equipment (PPE)

According to the regulations, PPE is defined as all equipment that includes clothing affording protection against the weather that held at workplace and protects an individual against one or more risks to safety and health. According to *Part VI Act 514, Occupational Safety and Health Act (OSHA) 1994; Section 24; General Duties of Employee at Work* includes the detail items; (1) Take responsible care on PPE equipments (2) Co-operate with employer (3) Use PPE properly (4) Comply with instruction/ measures.

Six sets of regulations that require the provision and use of PPE in international stage includes; (1) The Noise at Work Regulations 1989, (2) The Construction (Head Protection) Regulations 1989, (3) The Ionizing Radiations Regulations 1999, (4) The Control of Lead at Work Regulations 2002, (5) The Control of Asbestos at Work Regulations 2002, and (6) The Control of Substances Hazardous to Health Regulations 2002 (as amended).

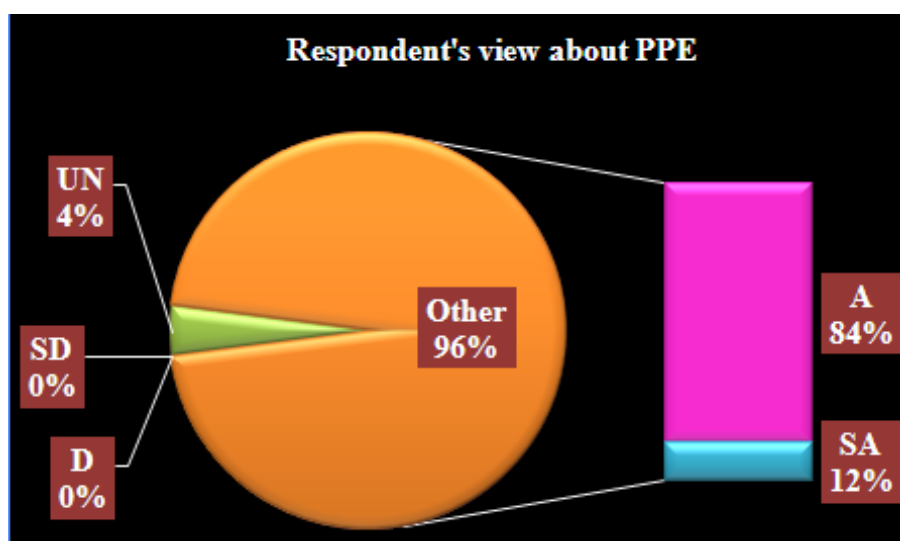


Figure 4.43: Respondent's view about PPE

From the questionnaires' analysis, Figure 4.43 shows that majority of the respondents claimed (84% agree and 12% strongly agree) that they know what PPE is. From surveys, at Company, employees are required to wear the PPE at all designated working area and must be responsible for reasonable care and maintenance of their PPE, meanwhile employers was responsible for the PPE training on the usage of it.

Table 4.17: PPE Level of Awareness (Mean and Std. Deviation)

PPE	Mean	Std. Deviation	Level
Wearing PPE while working is very important	4.23	0.42	High
Knowing PPE	4.08	0.39	High
Preferring to use PPE while working	3.87	0.72	High
Comfortable wearing PPE	3.70	0.73	High

In measuring the PPE result of the Company, the statically analysis in Table 4.17 above shows us the mean score and standard deviation result of PPE level awareness. The result reveals the mean score and standard deviation for each items were: wearing PPE while working is very important (mean=4.23, std.dev=0.42), know PPE (mean=4.08, std.dev=0.39), preferring to use PPE while working (mean=3.87, std.dev=0.72) and comfortable wearing PPE (mean=3.70, std.dev=0.73).

The highest item is, the respondents view on wearing PPE while working is very important and the lowest item is, comfortable wearing PPE. All items are in high level and employees are satisfied with the implementation of PPE in this Company. From the findings, the regulations required that PPE is properly assessed before use to ensure that it is suitable, maintained and stored properly (Refer Table 4.18 below).

Table 4.18: Examples of Occupational Hazards and Types of PPE Available and Provide at Company

PROTECTION	DETAIL
Eye	- PPE : Safety spectacles, goggles and face shield Hazards : Metal, chemical, flying object, gas, dust
Head	- PPE : Safety helmets and heat resistant helmet Hazards : Head bumping, hair entanglement
Hand and arm	- PPE : Gloves Hazard : Cuts and punctures, chemicals, disease
Ear	- PPE : Earplugs, ear muff, hearing tests Hazard : Extremes noise
Feet	- PPE : Safety footwear, safety boots/ shoes Hazard : Slipping, cuts, punctures, falling objects

Table 4.19: The Feedback Result of Respondents Wearing and Using PPE Provided

Equipments	Percent
Goggles	100%
Gloves	99%
Safety helmet	97%
Safety signs/ information/posters	97%
Ear plug	96%
Safety rubber boots	96%
Safety nets	75%

Based on the results in Table 4.19 above, the respondents are aware of the importance of using all the safety equipments in this Company. Results in equipment and percentages are as follows; goggles (100%), gloves (99%), safety helmet (97%), safety signs/ information/ posters (97%), ear plug (96%), safety rubber boots (96%) and safety nets (75%). Most of the percentages in using the equipments are high, hence means that the employees are aware of the importance of using all the safety equipments in this Company.

In order to establish such programme, one must identify the applicable standards. The standards must then be thoroughly and carefully reviewed to determine what is required for compliance. From the interviews and surveys, the selection of PPE at Company also has met the Regulations' approval of *Act 514 (OSHA) 1994, Part VI – General Duties of Employees, Section 24; General Duties of Employees at Work.*

The following PPE listed below was provided at Company, proves that the management has a good responsibility on employee's safety and health.

1. Safety goggles with side shields in compliance with ANSI Z87.1-1989 standards
2. Safety helmet in compliance with ANSI Z89.1-1986, MS 183:1973 or equivalent
3. Safety shoes with hard toed and soled in compliance with ANSI Z41-1991 standards or equivalent
4. Ear plug to be worn in an area where the sound level is at or more than 85 dBA
5. Mouth mask and appropriate clothing as necessary

As a summary, the applicable of regular review for of all safety equipment was carried out to adequate the protection and the comfort levels in ensuring the physiological and physical well-being of employees. The employers had actively enforced, the uses of PPE as alternative technology, procedures could not be eliminated in reducing the hazard or exposure. At Company, ESH team provided the training and induction briefing on the importance of PPE as the requirement. Each employee had been trained to know the necessity of PPE towards the successful implementation of OSHMS. The use of the PPE in every situation must be required by programs which are implemented and enforced (Cote and Bugby, 1988).

4.4.2 Emergency Response

The requirement of emergency response is to protect employees and public from further danger, injury and to prevent the situation from getting worse. Figure 4.44 below shows an Accident Emergency Response flow chart at Company.

Figure 4.44: Accident Emergency Response Flow Chart

(i) Emergency Response Programme (ERP)

The requirement of emergency response is to protect employees and public from further danger, injury and to prevent the situation from getting worse. Jefferelli *et al.*, (2004) have mentioned in their research about overall view of elements within and ERP (see Figure 4.45 below). Figure 4.46 shows the illustrations on how to manage threat by having an ERP by Jefferelli *et al.*, (2003). The objectives of ERP are generally important in; (1) controlling fire and explosion, (2) handling industrial accident and dangerous occurrence, (3) activating rescue of casualties (4) minimize the damage.

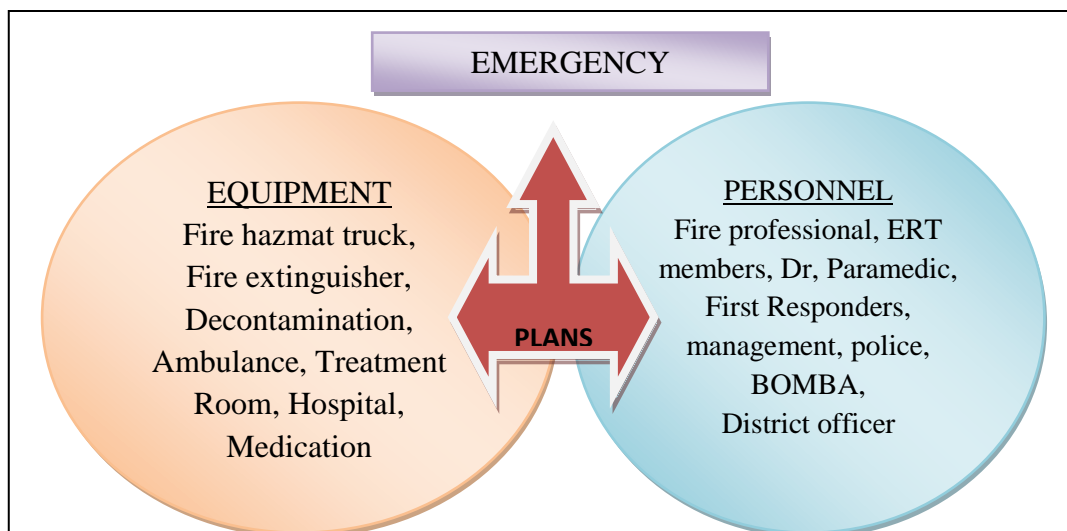


Figure 4.45: Overall View of Elements within and ERP (Jefferelli *et al.*, 2004)

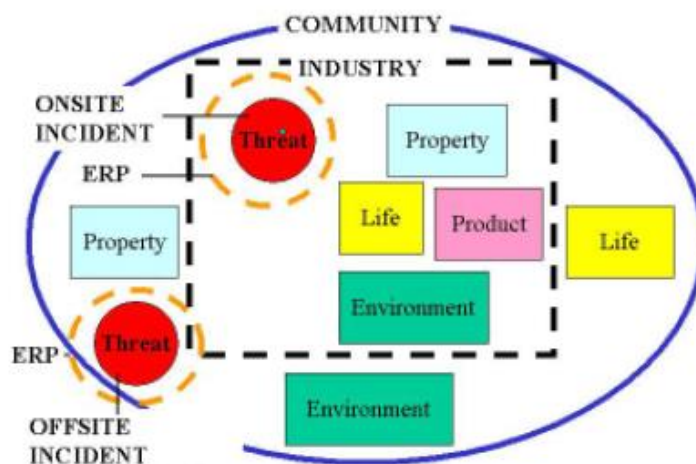


Figure 4.46: Managing Threat by Having an ERP (Jefferelli *et al.*, 2003)

Table 4.20: ERP at Company

Item	Prevention Measure Taken
Fire and Explosion	The prevention through good housekeeping, employee's prompt action, proper firefighting equipment storage and common sense precaution
Fire Alarm System	Fire Alarm Control Panel indicates the detectors, break glasses, flow switches and pumps have located at strategic location. Under normal operating conditions, it will distinctively audible to employees
Immediate Action in Emergency Situations	Switching off the supply in electrical contact problem and divert the traffic, in road traffic accident. In fire and falling rock accidents, remove the casualty (not in spinal injuries)
Evacuation Plan	Evacuation drill will be held at least once a year and emergency exits and routes have clearly identified by clear signs. Make sure the Break Glasses and Alarm System are in good condition and not blocked

In Malaysia, there are specific laws, regulations and guidelines published related to Emergency Response. From findings in this study, accidents' prevention at the workplace was done by having their own ERT team. This requirement was done to fulfill the Regulation on *Act 514 (OSHA) 1994, Part IV –General Duties of Employers and Self-employed Person; Section 15 General Duties of Employers and Self-employed Persons to Their Employees; Practicable Sec. 3 (2); (1) severity of Hazard (2) Knowledge of Hazard and Risk involved*. The OSH (Control of Industrial major Hazards Installation) Regulations 1996 have stated the need for such industries in creating their own ERP.

The ERP at Company was stated in Table 4.20, while Company' ERT Organization and ERP Procedure was shown in Appendix 42 and Appendix 43, which involves the following items; (1) Fire and Explosion (2) Fire Alarm System (3) Immediate Action in Emergency Situations (4) Evacuation plan.

(ii) Emergency Response Team (ERT)

Towards safety and health at workplaces, ESH Department has established the ERT Training every month. As example, the ERT Training which has been done in September 2011, are discussed in detail in summary below, while the ERT Training Attendance Year 2011 is shown in Table 4.21.

ERT Training Summary

During the ongoing training, the ERT has performed the Fire Drill and Evacuation which took place at the Xx Admin Building on 29th September 2011 with the scenario of Fire fighting, Rescue and Paramedic that involving internal section Central Control Room, Fire Tank and Ambulance Service. ESH Department also invited other subsidiaries in the complex to observe the drill activity and conduct the post mortem.

The purpose of conducted in house training for the ERT members is to expose in responding the Paramedic, Fire and Rescue Emergency situation that endangers life and properties with the module basic training module of First Aider, Fire fighting Squad and Rescue activity that conducted by Jabatan Pertahanan Awam Malaysia (JPAM), Daerah Kuala Langat, beginning from July 2011 until December 2011. With existing members and recruiting new members of 312 totals of 121 who has attended the training.

a) SMP	52 Member
b) CASTER	52 Member
c) HSM	62 Member
d) CRMC & ARP	50 Member
e) ADMIN	17 Member
f) WISMA	22 Member
g) SCRAP SECTION	17 Member
h) COILYARD/STORE/W.BRIDGE	10 Member
i) WTP	14 Member
Total member	312 Member

