

Varification of Safety Document on Construction Sites in Malaysia

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Abstract – In order to prevent accidents at construction sites and also to prevent costly OSH fines, there is need for proper documentation of safety and health programs on sites. Records of item such as policy statement, training and promotion, minute of meetings, information distributed to employees should be kept etc. This will allow for review and updating continually and demonstrate a good faith effort toward the safety and health of employees at construction sites. The objective of the paper is to determine the level of compliance of the establishment of safety and health program and activities. This involves checking of occupational safety and health related document and records at construction sites. A standardized questionnaire were used in the documents checking at three (3) different sites selected within Kuala Lumpur and its environment, i.e the construction industry standard (CIS), refer to as CIS 10: 2008. An average score of 60.32% was obtained from the 3 sites, which mean that all documents as regard to potential and significant risks/hazards at the construction sites are averagely managed and documented, but still there are other work related activities at workplace that are not properly managed and documented. Therefore, a competent and responsible person be assigned to manage OHS records and documents on sites, in order to providing an effective OSH responsibility and to communicated to all levels including providing safety orientation and employing safety promotion through various means.

Keywords – Program; Activities; Construction; Responsibilities; Safety

1. Introduction

Organization create document daily, which are used to convey new ideas, provide direction, give instruction, describe processes, define specification etc. Documents are pieces of the organization's intellectual capital. It is a significant part of the intelligence of the organization. Documents are general in nature, so also are the safety document.

In recent years there has been speedy economic development most especially in the field of construction in Malaysia. The construction industry is currently being recognized as a major economic force as the industry produces 3.0% of the country GDP and with its fatality rate of more than 3 times of other workplace (SOCSCO 2000, Omaran 2008).

The Malaysia government is concern about this fatality rates and the government through the construction industry development board has put more emphasis on the OSH issues at construction sites.

The objective of the paper is to determine the level of compliance of the establishment of safety and health program and activities. This involves checking of occupational safety and health related document and records at construction sites. In order to prevent accidents at construction sites and also to prevent costly OSH fines,

there is need for proper documentation of safety and health programs on sites. Records of items such as policy statement, training and promotion, minute of meetings, information distributed to employees should be kept etc. This will allow for review and updating continually and demonstrate a good faith effort toward the safety and health of employees at construction sites.

Safety document contains, the health and safety program and health and safety activities: This according to Clifford, *et al* (2001), that in health and safety program, which is usually referred to as a policy and procedure manual or accident prevention standards, are document which are general in nature and provide general guidance on how the company handles safety-related issues. The safety program is the vehicle that is used to communicate the company philosophy. While health and safety activities focus on the site-specific activities and outline the appropriate element of the site's existing health and safety program to the related tasks.

Safety programs, a proactive approach are one of the best ways in improving site safety performance (Hislop 1991, Aksorn *et al* 2008). An effective safety program can substantially reduce accidents because it can help management to build up safer means of operations and create safe working environment for workers (Anton 1989, Abdelhamid and Evertt, 2000, Rowlinson 2003,

Aksorn *et al* 2008). Health and Safety program and activities is a requirement of all construction sites that employed more than five (5) employees.

According to Aksorn (2008), having safety programs, good safety culture can be embedded in organization because it can encourage mutual cooperation between management and workers in the operation of the programs and decision that affect their safety and health. Rowlinson (2003) identified the objectives of creating a safety program at construction sites as a means to prevent improper behavior that may lead to accidents, to ensure that problems are detected and reported, and to ensure that accidents are reported and handle accordingly.

2. OSH Document Pyramid.

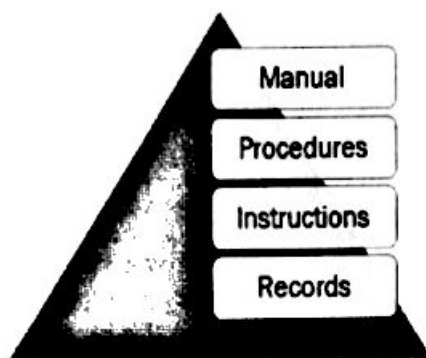


Figure 2.1 OSH Document Pyramid.

The pyramid above show the basic component of OSH document expected in construction site:

- i- **Manual.** Contain document of strategic importance and Compilation of policies with regards to the elements of management system such as: OSH Policy, Document Management Policy, Drug, Alcohol and Tobacco Usage Policy, Contractor Management Policy, etc.
- ii- **Procedure.** Contain tactical and operational document. Sets out particular course of action intended to achieve a result For example: Risk Management Procedure (result: minimize risk). Incident Investigation (result: find cause of incident) Document Control (result: controlled documents etc).
- iii- **Instruction.** Contain operational level, detailed directions to perform a specific task/action and normally performed by a single person or a team example: How to fill claim form, How to unload a tanker, How to clean chemical spill Etc.
- iv- **Records.** Are document providing permanent evidence of or information about past events. Some are required to be kept for legal purpose, Created to demonstrate performance or Created for monitoring purpose. Example is Document Management. The purpose of document control is to ensure: Document fulfills a useful purpose, Resources are not wasted on the distribution of unimportant or useless information, only valid information is published, Information is kept up to date, Information is provided in a form that can be used by

the people who need it and Classified, confidential, information is restricted.

3. Materials and Methods

A standardized questionnaire were used in the documents checking at three (3) different sites selected within Kuala Lumpur and its environment, i.e the construction industry standard (CIS), refer to as CIS 10: 2008. For the purpose of the work, the following conditions are applicable to the three (3) selected sites:

- a- Must be a building/civil engineering construction sites,
- b- Its contract price must be above 20m Malaysian Ringgit, and
- c- The progress of the work must be between 25 – 75% completions.

There are 63 questionnaires available as contain in the construction industry standard for document check, thus some questions may not be applicable to some sites. The following formula was developed in order to determine the level of compliances to the safety and health programs and activities on sites:

$$\frac{\text{Total number of 'C' scored}}{63 - \text{number of 'NA'}} \times 100 = \text{Percentage of level of compliances}$$

Where; 'C' = obtained scores. 'NA' = not applicable.

3.1. Basic Criteria

The following were the basic criteria, for document check consider for the work:

- a- **OSH Polley.** There are 6 questions under the OSH policy which are aim at examine the company OSH policy statement and to see if the policy is written in local language and also to ascertain who signed the policy statement.
- b- **OSH Organisation.** There are 11 questions which are aim at verifying the document that contain duties and responsibilities and how those duties and responsibilities are communicated to the respected person.
- c- **HIRARC.** Hazard Identification, Risks Assessment and Risks Control. Contain 5 questions, which are aim at examine, if HIRARC are incorporated in safety induction training module and also to examine if HIRARC are continuously updated and maintained.
- d- **Training and Promotion.** Consist of 8 questions, aim at determining if OSH training programs are available and conducted, at the same time to determine if promotion of OSH by audio and video are being practiced.
- e- **Machinery Management.** contain 5 questions, which are aim at examine document related to hazardous materials and non-hazardous

- materials and also to examine document related to waste management procedures.
- f- **Emergency Response Plan (ERP).** Contain 4 questions, which are aim at checking the availability of copies of ERP.
 - g- **Accident Investigation and Reporting.** There are 8 questions, which are aim at examine the availability of accidents investigation and reporting procedure and to examine the document that show that these involves in accidents investigation and reporting are properly trained for the job.
 - h- **Records Management and Performance Monitoring.** There are 9 questions which are aims at examine the availability of OSH record management procedure and alsq to determine who is responsible for managing the OSH records and documents.

check and verified are properly documented and well managed by the sites officers. While those of site B are not properly documented and well managed i.e poorly documented and managed by the sites officers. Therefore, the average score obtained from the three sites are 60.32%, i.e 3-star in ranking which mean that all documents as regard to potential and significant risks/hazards at the construction site are averagely managed and documented, but still there are other work related activities at workplace that are not properly managed and documented.

Table 2 show the combined scores of document check of the three sites i.e scores obtained and the total scores.

4. Result and Discussion

Table 1. show the score of the five sites:

Table 1. Result of Scores of the Five Sites.

Site A	Site B	Site C
88.33%	35%	57.63%

Source: Researcher Analysis.

From the Table, site A has the highest score i.e 88.33%While site B has the lowest scores i.e 35%. As for site A, it mean that virtually all the document as regard to safety and health in construction sites that need to be

Table 2. Score of Three Sites on Document Check.

Components	Obtained scores	Total scores.
OSH policy.	28	30
OSH organization.	38	55
HIRARC	15	25
Training and Promotion	24	40
Machinery Management	21	31
Material Management	11	23
Emergency Response Plan (ERP)	11	20
Accident investigation and reporting.	9	19
Records Management and performance monitoring.	31	45

Source: Researcher Analysis.

Also Figure 2 shows the performances of the 9 basic criteria:

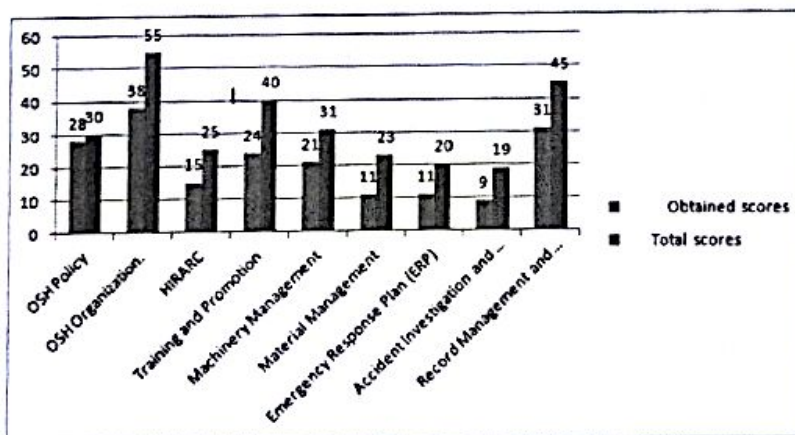


Figure 2. Chart of the Combined Scores of Document Check of the Five Sites.

From both the table and the figure above, accident investigation and reporting perform below average and this mean no proper procedure for accident investigation and most accident that occur are not properly documented and managed. Other components that need improvement are OSH organisation, training and promotion and record management and performances.

5. Conclusion and Recommendation

Effective documentation involves an arrangement in a structured ways in order to serve a well-defined purpose. This study identified 9 basic critical point of safety program implementation, in which the study conclusion was drawn from. Therefore, it was concluded that safety program and activities documents at construction sites are averagely documented and managed, and that a few medium program and activities at workplace are being neglected.

The study recommended that safety programs have to be more formal, thereby providing an effective OSH

responsibility and communicated to all levels including providing safety orientation and employing safety promotion through various means. Furthermore, it was recommended that a competent and responsible person be assigned to manage OHS records and documents on site.

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