Implementation of Contractor Safety Management System as a Requirement for Partners at a Petrochemical Company

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ABSTRACT

Introduction: Data Report Safety Performance Indicator for Oil and Gas Producers (OGP) in 2018 recorded 2 deaths at the company and 29 deaths occurred to the contractors, with Fatal Accident Rate (FAR) in the company of 0.31 accidents per 1 million working hours and in contractors of 1.20 accidents per 1 million work hours. PT Pupuk Kujang as a petrochemical company has a high-risk of implementation of Contractor Safety Management Systemn (CSMS) to protect safety of contractors. This research aims to evaluate the implementation of Contractor Safety Management System (CSMS). **Methods:** This study was a descriptive study with an observational method for data collection, and this study was cross-sectional. The variable studied was Contractor Safety Management System (CSMS) including CSMS stages and documents. **Results:** PT Pupuk Kujang has implemented six stages for the implementation of Contractor Safety Management System (CSMS), namely identification and risk assessment, prequalification, selection, initial work activities, assessment during work, and final assessment of work. However, some shortcomings were observed in the implementation of pre-qualification stage where before being declared to have passed the pre-qualification assessment stage, a local contractor has been appointed as the winner of the tender. **Conclusion:** The implementation of Contractor Safety Management System (CSMS) at PT Pupuk Kujang still does not run well because there are deficiencies in the prequalification stage.

Keywords: contractor safety management system, pt pupuk kujang, prequalification

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INTRODUCTION

Occupational Health and Safety is a system created for workers and employers as an effort to prevent occupational accidents and occupational diseases. The implementation of Occupational Health and Safety in a workplace is a responsibility of all parties, so it is hoped that all can play an active role according to their authorities and functions to be able to cultivate Occupational Health and Safety (OHS) in order to prevent occupational accidents and occupational diseases. The ultimate goal is to increase productivity in the workforce (Suma'mur, 2009).

Work accidents and occupational diseases arise as a result of contact between workers and the hazards of a job. According to OHSAS (18001: 2007), the hazard is a source, situation, or activity that has the potential to cause injury (accidents) and occupational diseases or a combination of these. Hazard is any situation or action that has the potential to cause harm, such as illness, injury, damage to property, damage to the work environment or a complete combination (Ramli, 2010).

According to data from the International Labor Organization (2018), there were 380,000 workers or 13.7% of the 2.78 million workers who died due to work accidents. In developing countries such as Indonesia, work accidents that occur are four times higher than those in industrialized countries (the International Labor Organization, 2018). Based on data from the Social Security Administering Agency for Employment (BPJS Ketenagakerjaan) in 2018 there were 157,313 work accidents and from January to September 2019 there were 130,923 accidents (Minister of Manpower, 2020).

Problems in Occupational Health and Safety must be resolved immediately, so a comprehensive and integrated occupational health and safety management system is needed in the workplace. In the Indonesian Goverment Regulation number 50 year 2012, it is stated that in every workplace that employs a workforce of 100 people or more and/or has potential hazards caused by the characteristics of the process or production materials that are potentially dangerous which can result in work

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accidents such as explosions, fires, pollution, and occupational diseases, it is mandatory to apply the Occupational Health and Safety Management System (OHSMS). OHSMS in the workplace is carried out as a unified unit (Minister of Manpower, 2012).

By law, the application of SMK3 has become a major requirement in every work implementation. All jobs, both project owners and contractors, are required to be able to carry out work safely and to reduce the potential for accidents. Minister of Manpower Number 13 of 2003 concerning Manpower, article 68 paragraph 1, states that all workers have the right to obtain protection for Occupational Health and Safety and moral in treatment that are in accordance with human dignity and religious values (Minister of Manpower, 2003).

Based on the five factors of the domino theory, it is illustrated that the occurrence of an accident or injury is influenced by 5 factors, namely Domino Habit; Domino Error; Domino Action, unsafe actions and conditions; Domino Accident; and Domino Injury. Of the five factors, unsafe actions and conditions are one of the factors in a work accident (Tarwaka, 2014).

Currently, large companies have used a lot of contractor services to carry out work such as what has been done by PT Pupuk Kujang which is engaged in the petrochemical sector . PT Pupuk Kujang has a high potential for hazards such as an explosion, leakage, and fire. Contractors as partners of PT Pupuk Kujang must get more attention because their performance can affect PT Pupuk Kujang. Thus, the company should control, audit and monitor and evaluate the performance of the contractors, in this case through the Contractor Safety Management System (CSMS).

Contractors are people or bodies that receive work and carry out work according to predetermined costs based on plans and regulations as well as predetermined conditions. A Contractor Safety Management System (CSMS) is a document that contains a control mechanism in an integrated form to ensure business standards in the management of occupational health and safety and environmental protection performance.

Based on the data from the International Association of Oil and Gas Producers (2018) on the Safety Performance Indicator for Oil and Gas Producers (OGP) in 2018, 2 deaths were reported and 21% of reported working hours were related to employees at the company. Meanwhile, there were 29 deaths occurred to contractors with the working hours of 79%. In addition, it was also noted that the Fatal Accident Rate (FAR) in the company was 0.31 accidents per 1 million working hours and in contractors was 1.20 accidents per 1 million working hours. The data show that the highest number of accidents occurred to contractors, greater than that to the company itself (Santoso, Wahyuni and Kurniawan, 2015).

The application of a Contractor Safety Management System (CSMS) at PT Pupuk Kujang is an effort to select and manage the safety of contractors and suppliers in order to minimize the risk of hazards that can cause losses to companies, visitors, and the surrounding community. Thus, the purpose of this study is to evaluate the implementation of the Contractor Safety Management System (CSMS) at PT Pupuk Kujang.

METHODS

This research was a descriptive study with observational method for data collection l. Based on the time of the research, this research was a cross-sectional study.

This research was conducted at PT Pupuk Kujang which is located at Jl. Jend. A. Yani No. 29 Cikampek, West Java, from February to April 2018. The object to be evaluated was the implementation of the Contractor Safety Management System (CSMS), including the CSMS stages and CSMS documents. The CSMS stages included risk identification and assessment, pre-qualification, selection, initial work activities, assessment during work, and final work assessment. Data collection was carried out by observation and document study. Data analysis was performed by comparing the existing procedures at PT Pupuk Kujang with CSMS activities at each stage.

RESULTS

PT Pupuk Kujang has implemented an Occupational Health and Safety Management System (SMK3) as an effort to control contractor management issues, in addition to maintaining these values with the form of responsibility and concern for contractors and other third parties. The implementation of CSMS at PT Pupuk Kujang has been around since 2014.

The implementation of CSMS at PT Pupuk Kujang is to ensure that contractors provide safety protection to employees and the equipment they

Table 1. Form Identification and Risk Assessment

Identification and Risk Assessment Form					
No	**Potential Hazard**	**Work Unit**	**Probability**	**Impact**	**Level of Risk**
Made by			Approved by		
Superintendent			Manager		

manage. This can be done by reducing the level of accident risks at work towards workers, making sure the safety of the operating facilities and the workplace environment, as well as implementing the government Occupational Health and Safety (OHS) norms, rules and regulations and internal regulations at PT Pupuk Kujang.

In the implementation of CSMS at PT Kujang fertilizer, there are several work units involved, namely the work unit requesting goods or services, the work unit implementing the procurement of goods or services, and the Occupational Health and Safety (OHS) officers as people in charge of OHS. Moreover, there are six (6) stages of the implementation of CSMS at PT Kujang fertilizer, which are as follows:

Identification and Risk Assessment

Risk identification and assessment is the initial stage of the implementation of CSMS, which aims to identify environmental and safety risks, health-related attendance and work performed by contractors. At this stage, an initial assessment is carried out by the work unit requesting goods or services from the contractors in collaboration with the Department of Health, Safety and Environment (HSE), Occupational Health and Safety (OHS) Section.

In the risk assessment, several points must be considered, namely the type of work performed, the location of the work, the length of work, the materials or equipment used, the potential consequences of the incident, the experience of the contractors, and the potential exposure to hazards in the workplace for all worker personnels and the social impacts. The risk assessment at PT Pupuk Kujang is based on the levels of risk which are divided into three levels, namely high, medium and low levels, based on the type of work to be carried out.

Prequalification

The pre-Qualification stage is the stage for screening potential contractors and ensuring that contractors have the necessary experience and skills to carry out activities in a safe, environmentally friendly, and sensitive manner to the social impacts on local communities. The pre-qualification stage is carried out for all types of work except for work with a low-risk category that is done outside the operating area and is not under the direct supervision of the company, provided that jobs with low risk that previously have frequent accidents and minor incidents are included in the high-risk job category of the pre qualification stage.

Verification of documents by the verification team will evaluate the contractors' pre-qualification assessment and, if necessary, the verification team will carry out verification to the contractor company. Contractors who pass the selection will get CSMS certificates according to their high, medium, and low-risk levels. Contractors who have passed this

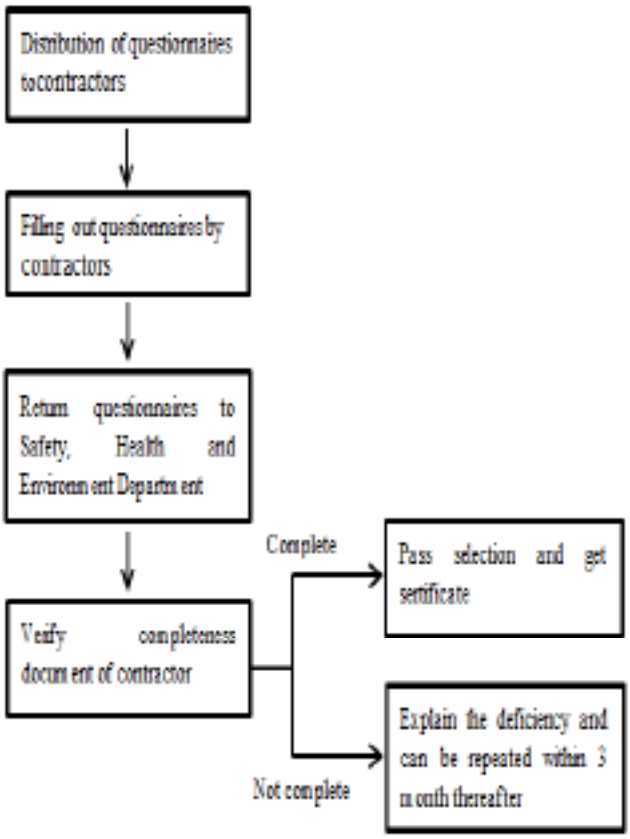

Figure 1. Prequalifiation Stage

Table 2. Assessment of the Prequalification Stage at PT Pupuk Kujang in 2018

Risk	Value
High Risk	Total Score ≥55
Moderate Risk	40 ≤ Total Score <55
Low Risk	25 ≤ Total Score <40
Under Standard	<25

stage will also be included in the Company Partner List.

Meanwhile, for the risk assessment at the pre-qualification stage, there are 3 categories of risk levels, namely low, medium, and high levels, which are listed in the applicable procedures at PT Pupuk Kujang. Specifically, the first work with a low-risk level is not required to follow the pre-qualification stage, selection, initial work activities, and assessments during work. In this work, the contractors are required to follow a final assessment of the work.

Second, jobs with a moderate level of risk are not required to follow the pre-qualification, selection, and initial job activities. In this work, the contractors are required to follow an assessment during the work in progress and a final assessment of the work.

Third, jobs with a high level of risk are required to follow all the requirements of the Health Safety and Environment (HSE) process starting from hazard identification risk assessment, pre-qualification, selection, initial work activities, assessment during the work in progress, and final work assessment.

In the assessment stage for the pre-qualification of prospective contractors, the four aspects are used as an assessment, namely management commitment, coaching, procedures, and equipment. The assessment of the pre-qualification stage is carried out by the verification team by assessing the pre-qualification questionnaire of the contractors and verification through inspection of the contractors' facilities and by auditing the suitability of the prospective contractors' pre-qualification documents.

The following are the minimum criteria for the prospective contractors to pass the pre-qualification stage for Health Safety and Environment (HSE).

If the contractors do not pass the pre-qualification stage, i.e. the pre-qualification documents do not match the actual conditions or those present at the contractors office, the contractors will explain their shortcomings and input to improve Health Safety and Environment (HSE) management performance, and they can repeat the pre-qualification process within three months after the previous pre-qualification.

Table 3. Minimum specification requirements of OccupationalHealth, Safety and Environment (HSE)

DAFTAR PERSYARATAN K3 MINIMAL CALON KONTRAKTOR SESUAI TINGKAT RISIKO PEKERJAAN

Persyaratan	Kategori Risiko		
	Rendah (R)	Sedang (S)	Tinggi (T)
Dokumen Aplikasi			
Company Profile	X	O	V
Accident Record	V	V	V
Sertifikat keahlian K3	O	V	V
Daftar Peralatan yang dipergunakan	X	O	V
Daftar APD	V	V	V
Sertifikat SMK3	X	O	V
Verifikasi Dokumen	V	V	V
Nilai Verifikasi	Min 40 %	Min 50 %	Min 70 %

X : Tidak Perlu
V : Harus dilakukan
O : Opsional

Selection

The selection stage is conducted to select and determine prospective contractors who meet the requirements of the Occupational Health and Safety (OHS) aspects, company procedures, as well as technical, economic, and commercial requirements carried out by the Procurement Department of goods/services. The results of the Health, Safety and Environment (HSE) selection for prospective contractors in the pre-qualification stage are used as a reference for the selection of prospective contractors and are part of the document for the process of procuring goods or services.

Contractors who participate in the auction are announced through the mass media, and it means that they have passed the pre-qualification stage, so they are invited to the aanwijzing stage. Aanwijzing stage is a meeting to provide instructions and explanations regarding the terms and conditions set out in the Terms of Request (TOR).

After the aanwijzing stage, a technical bidding stage will be carried out regarding the integrity facts and a commercial offering in relation to the funds to be agreed upon. The contractors are required to make a bid proposal from a financial, technical, and Health, Safety and Environment (HSE) perspective which is made in the form of a tender document which contains the HSE Plan and identification of hazards that must be considered,

HSE monitoring procedures and plans, and HSE minimum specification requirements. The following are the minimum Occupational Health and Safety specifications that must be met by the contractors according to the level of risk of the work to be carried out.

At the selection stage, apart from referring to the results of the questionnaire, it also refers to the aanwijzing stage of technical administration, which then will evaluated according to the criteria used by the company. From the results of the evaluation of the contractors, the bidding is later conducted regarding the Occupational Safety and Health and (HSE), as well as technical, and financial aspects. Contractors are selected based on the lowest financial bid. Contractors who pass the selection must sign a statement that has been agreed upon and in accordance with the company procedures.

Initial Work Stage

Activity is the stage of work implementation provided that the contractors have met all document requirements and other unfulfilled requirements.

Initial work activities are carried out to ensure that relevant aspects of the risk assessment and all other Health, Safety and Environment (HSE) aspects of the contract are communicated and understood by all parties prior to contract execution. There is a checklist of Health, Safety and Environment (HSE) inspection which is used by the supervisor in inspecting the initial work activities.

Assessment Phase during Work in Progress

Assessment during work is aimed at ensuring that the work carried out is in accordance with the agreed program and plan as well as the Occupational Health and Safety needs found at work. During the work, contractors, including workers and sub-contractors, are required to comply with OHS procedures, regulations, OHS standards, and norms applicable in the company.

Supervision and evaluation during the assessment stage during work are carried out by the HSE Department and the work unit in charge of activities. These activities are carried out periodically (at least 1 x a month), and become a benchmark in the implementation of ongoing work using the contractors' Occupational Health and Safety (OHS) evaluation sheet, the work implementation stage concerning the implementation of the company's OHS provisions, near misses, accidents, and housekeeping of the work areas.

Final Job Assessment Stage

At the final assessment stage of the HSE Department's work, the work units requesting/using goods/services and job supervisors conduct a final audit of the contractors' OHS performance, either individually or jointly. The results of the audit are documented and mutually communicated between the HSE Department, work units requesting/ using goods/services, related work units, and job supervisors.

The results of the evaluation of the final HSE performance assessment are used for selection considerations in the subsequent supervision of goods/services at PT Pupuk Kujang. In this final stage, rewards and punishments will be given in accordance with applicable regulations.

DISCUSSION

From the results of the observational analysis, it was found that CSMS at PT. Kujang fertilizer is still not going well. The following is a discussion of the results of CSMS observations, starting from the hazard identification and risk assessment stage , pre- qualification, selection, initial work activities, and assessments during work.

Hazard Identification and Risk Assessment

Risk assessment is the process of evaluating risks arising from hazards, taking into account the adequacy of existing controls, and the process of determining whether the risk is still acceptable or not (Lukiatsinto and Widajati, 2014).

The risk assessment stage at PT Pupuk Kujang is in accordance with the procedures for the Upstream Oil and Gas Business Activities Executive Agency (BP MIGAS) regarding the Work Safety and Health Management System for Cooperation Contract for Contractors (KKS). PT Pupuk Kujang has carried out a risk assessment which refers to the procedure for identifying hazards and environmental Aspects at PT Pupuk Kujang. Risk assessment is divided into three levels, in accordance with the statement by the International Association of Oil and Gas Producers (2010) regarding HSSE Management point 1.3 Risk Assessment.

In carrying out a risk assessment, it is necessary to determine what type of work the contractors will do. Each type of work has the potential to harm HSE aspects on a different scale. At this stage, job applicants collaborates with the HSE Department to be able to carry out hazard identification and

risk assessment. Hazard identification and risk assessment are used as controls to prevent workplace accidents. According to Suma'mur (2009), risk control must be carried out as early as possible so as not to result in large losses.

This category corresponds to the risk criteria that exist in PT HPU, namely low, medium and high risks. The application of risk criteria must be in line with the selected risk assessment matrix and take into account the expected consequences and specified probabilities as shown in Figure 1. The risk criteria will be determined at the beginning of risk management and subject to periodic reviews (Setianingrum and Susilowati, 2020).

In another study at PT Badak NGL, vendor registration was still done manually, in which the vendor came directly to the company. The process of determining risk classification in the field of work was conducted by filling out the CSMS (Contractor Safety Management System) and SHEQMS (Safety Health, Environmental and Quality Management Systems) questionnaires. (Tombilayuk, Wuriandhika and Zaini, 2019)

The result of this study is also in line with the study on the hazard identification and risk assessment in the coal mining contractor company at Site XYZ. The study was carried out comprehensively by identifying all hazards and not missing any potential hazards because they would be continued in the further analysis. Previously, the superintendent would explain how to identify the hazards in the area for which they were responsible for. The risk assessment carried out in this contractor company included 5 aspects of HSE, namely safety, health, environment, behavior, and external aspects (Setianingrum and Susilowati, 2020).

However, the result of this study is in Icontrast to research of Arif, Camelia, and Purba (2016) conducted at PT Pupuk Sriwijaya. In their study, it was found that the risk assessment stage carried out was still lacking as the risk assessment involving the HSE department was still limited to a high-risk category of work. Low and medium risk categories were not involved because the goods and services procurement department already had a list of risk level categories.

Prequalification

The prequalification stage at PT Pupuk Kujang has not yet been in accordance with the Work Procedure for Contractor Occupational Health and Safety (OHS) Management at PT Pupuk Kujang. At this prequalification stage prospective contractors fill out a questionnaire of HSE documents along with other supporting documents.

PT Petrokimia Gresik also has a minimum value that the prospective contractors should achieve to pass the prequalification stage. Contractors with high risk work must at least get a score of 70 in order to qualify, those with a moderate risk work must at least get a score of 50, and those with a low risk work must at least get a score of 40 (Sari, 2017).

According to the study conducted by Hashim (2016), the construction project in West Halmahera had a great relationship on contractor qualifications where 72.6% of job quality was influenced by the prospective contractors' qualifications.

In the prequalification stage of this study, there are still deficiencies found at PT Pupuk Kujang. Before the contractor was declared to have passed the pre-qualification stage, it has been determined that the local contractor was the winner of the tender so no selection stage was carried out.

This condition is not in accordance with the Contractor's OHS Management Procedure at PT Pupuk Kujang and Oil and Gas Producers (OGP) 2010 in point 3.1, which states that the purpose of the prequalification stage is to select the appropriate tenders by assessing whether the contractors have met the clients' Occupational Health and Safety (OHS) requirements and the tender evaluation criteria. Moreover, if required at the calibration stage, there should also be an assessment whether the contractors have agreed on every aspect of OHS that is relevant to the contractual arrangement.

The violations are caused by several considerations such as price quotations, technicalities, priorities on local contractors, and past experience of local contractors as former workers in the company. This kind of contractor selection indeed will lead to a greater risk or danger, especially if the work is categorized as high risk. In this case, management commitment plays an important role and surely can affect the work to be carried out, especially in terms of OHS.

In research conducted by Suyono and Nawawinetu, (2010), it is stated that the factors forming a safety culture are commitment, rules and procedures, communication, and the social environment of workers. Management commitment is not only in the form of a written policy but also support and real efforts from management or leadership to prove that the company is truly committed to work safety.

Meanwhile, the CSMS prequalification stage which is carried out at PT Pupuk Sriwijaya has shortcomings, namely in terms of limited communication between the goods and services procurement department and the HSE department. In this company, the task of the HSE department is limited to issuing a pre-qualification certificate without specifying the HSE requirements and assessing the HSE program carried out by the contractors (Arif, Camelia and Purba, 2016).

Selection

In the selection stage, PT Pupuk Kujang selects and determines prospective contractors who have met the requirements from the Occupational Health and Safety (OHS) aspect. This is in accordance with the Contractor OHS Management Procedure at PT Pupuk Kujang and Oil and Gas Producers (OGP) which states that conducting an assessment before the tender stage is the most important phase in the contract process because it determines the list of contractors invited to bid. The tender process which is carried out manually starting from inspecting, duplicating documents, and distributing documents can be time-consuming and costly (Handayani, Putri., dan Modjo, 2016).

Meanwhile, the selection process at PT X conducted by the Service Procurement Department does not prioritize OHS aspects, as evidenced by the existence of tender winners who do not have a CSMS certificate. Many factors can be the underlying reasons why this can happen, including the price offered, the resources owned, the experience of the contractor, and the equipment used (Pratiwi, 2018).

In the selection stage at PT Pupuk Kujang, apart from referring to the results of the questionnaire, it also refers to the aanwijzing stage in the technical administration, which then will be evaluated according to the criteria used by the company. In Pratiwi's (2018) research conducted at PT X Bontang, East Kalimantan, on the implementation of aanwijzing, there were duties, authorities, and responsibilities of the goods/services procurement committee to compile a schedule and method of implementation. The implementation of aanwijzing includes time implementation, work location, required materials, and other requirements that must be met by the contractors.

In the selection process at PT Pupuk Sriwijaya, the weighting of the HSE component was usually 10-30% of the total number of all aspects of the assessment in the form of document checking, field inspection and audits on contractors. This stage not only involves management but also involves the engineering department, the HSE section, and the finance department, all of which will determine which contractors will pass (Arif *et al.*, 2016).

Initial Work Activities

The initial stage of work activities at PT Pupuk Kujang is in accordance with BP MIGAS procedures regarding the Occupational Health and Safety Management System for Cooperation Contract Contractors (KKS) and Work Procedures for Contractors' Occupational Health and Safety Management at PT Pupuk Kujang.

One of the stages in CSMS is the pre-implementation stage of work or the work preparation stage. The purpose of the work preparation stage is to ensure that all aspects related to the contract and every other OHS aspects of the contract have been communicated and understood by all parties prior to carrying out work (Suery, Kurniawan and Ekawati, 2016).

The stages of work implementation activities are carried out based on the agreement between the contractors and the goods/services operators, especially in terms of Occupational Health and Safety. In this case, the contractors must make risk prevention efforts to prevent risks based on y the nature and types of hazards involved in the implementation of their work (Restuputri, Prima and Sari, 2015).

Based on research by Falenshina (2012) at PT Pertamina RU III Palembang, the implementation of the work was carried out after discussing the project that would be used as a contractor guideline during work. The discussion aims to ensure that the contractors meet the CCAI's administrative requirements. In this discussion, there is a discussion regarding the fulfillment of administrative requirements. This is done by both parties, the employing company and the contractors, prior to the signing of the work contract.

This procedure was also done at PT Solusi Bangun Indonesia, where prior to the work execution, at this stage a pre-commencement meeting or a meeting between the person in charge of the contract was conducted with the contractor management and supervisors who relied on users, purchasing and the HSE Department. At this meeting, a discussion was held regarding the expected reporting frequency from PT Solusi Bangun Indonesia (Efendi, 2019).

At this stage, the goods/services procurement unit at PT Pupuk Kujang communicate with the contractors in the form of a kick off meeting to allow the contractors to identify the work location, facilities, people, and other HSE provisions and information.

The purpose of communication is to convey information within the organization so that communicators and recipients of information can clearly understand what the communicators want, especially what actions the organization expects. In communication using induction activities, every worker has known and understood the regulations, hazards and emergency response that exist at PT Pupuk Kujang, so it can be said that there are no obstacles at this stage. In research conducted by Suery, Kurniawan and Ekawati (2016) at PT Coca Cola Semarang, at this stage, an initial bidding activity was also carried out which functioned to communicate the process in the work preparation stage. Besides, there were also kick-off meetings, induction activities, and provision of consultation and assistance facilities in drafting requirements for contractors.

If the information is not clear, then the implementers will be confused about what they should do and as a consequence they will make discretion to interpret their views on program implementation (Special Work Unit of Upstream Oil and Gas Business, 2015). Effective internal communication is, therefore, essential for CSMS implementation at this stage of work. Internal communication is communication within the organization either horizontally, vertically from bottom to top, or from top to bottom throughout the organization. All forms of communication are very important for safety in the workplace. OHSAS 18001 requires that communication which flows both in internal and external manner is well maintained and documented (Ramli, 2010).

In the pre-work activity at PT X Pasuruan the contractors or subcontractors made an SHE Plan with work that has been agreed upon between the two parties. The existing plans included a minimum accident target that had to be met by contractors, a safety program and the use of PPE (Olivinasari, 2017).

Assessment during Work in Progress

Activities during work at PT Pupuk Kujang are in accordance with BP MIGAS procedures regarding the Occupational Safety and Health Management System for Cooperation Contract Contractors (KKS) and Work Procedures for Contractor OHS Management at PT Pupuk Kujang. At this stage, the work unit for the procurement of goods or services and the HSE Department of PT Pupuk Kujang coordinate the implementation of the initial activities of this work by monitoring through an inspection checklist.

The result of this research is in line with research of Muliawati *et al.*, (2020) conducted at PT Daya Radar Utama which appointed an HSE officer and a project manager to carry out daily inspection activities and routine inspections. Field inspections were carried out to check all equipment used in the work, and check the availability and suitability of personal protective equipment in the workplace. After each field inspection, the results would be recorded in the form provided and be followed up by reporting any findings of non-conformity for immediate mitigation actions.

Routine inspections will reduce the risk of unsafe actions and unsafe conditions. Unsafe action is a human action that can allow accidents to happen to oneself and others, while an unsafe condition is a work environment that can allow accidents to occur.

This is in line with Helliyanti's (2009) research suggesting that there are several factors related to unsafe behavior, one of which is a relationship between Occupational Health and Safety (OHS) inspection and safe behavior. Any OHS deviation that occurs during work must be controlled as early as possible. The main factor that can affect the performance of the contractors themselves is the lack of attention and awareness from the top management about OHS, resulting in a lack of PPE, OHS meetings and OHS training.

Similarly, research of Mohd Kamar *et al.* (2014) stated that those who voted on contractors should realize that training is very important to minimize the risk of accidents and to increase contractors' awareness of compliance with legal requirements.

During work, the contractors must continue to implement a workplace safety system so that the company can find out the suitability of the contractors' performance with existing regulations to ensure the safety and health of the contractors andprotect the company's facilities and assets through systematic supervision by implementing control as soon as possible on any deviations that occur (Olivinasari, 2017).

During the work stage, the contractors/ subcontractors must submit a routine report based on the existing SHE Plan. In addition, the

management of PT. X conducted an assessment using the civil contractors' observation sheet which was carried out according to the schedule that had been made. This stage of work implementation is based on Permen 05 / MEN / 1996 concerning elements of SMK3, including maintaining policy commitments, reviewing design and design control contracts, controlling documents, monitoring activity standards, developing and maintaining policy commitments, improving documentation strategies, and obeying working security based on SMK3.

In a study conducted by Olivinasari (2017), it was found that in the implementation stage of the ongoing work at PT X Pasuruan several obstacles made the score at this implementation stage bad. This happened because the discipline in the team was not good so that action had to be taken as soon as possible, one of which was providing training for workers and contractors to control hazards and discipline in using PPE.

Final Work Assessment

Activities during work at PT Pupuk Kujang are in accordance with BP MIGAS procedures and Contractor OHS Management Work Procedures at PT Pupuk Kujang. In the final assessment, the work aims to provide feedback and serve as a material for joint evaluation of the implementation of activities between PT Pupuk Kujang and the contractors.

In a study by Olivinasari (2017) conducted at PT X Pasuruan, at this stage consideration was made to decide whether the company would cooperate with contractors or not. At the final stage at PT X Pasuruan, there were several evaluations of the management as the management was still not firm and consistent in giving sanctions to contractors who violated the rules and took actions that had risk of danger to themselves and others around the work environment.

The implementation of the final assessment of the work at PT Pupuk Kujang is the same as that carried out by PT Petrokimia Gresik because it is still within the scope of Holding Company, in such a way that they carry out a final audit of the contractor's Occupational Health and Safety (OHS) performance, and the results of the evaluation will be used to provide rewards and punishments. At PT Petrokimia Gresik, after the work was completed and a final assessment was carried out, the contractors were required to restore good housekeeping conditions before signing the Work Handover Minutes (Sari, 2017).

At PT Solusi Bangun Indonesia, on the other hand, the evaluation carried out at the final stage itself only completed the work, and there was no formal review of the contactors' performance in the OHS sector and compliance with the 10 golden rules containing accident statistical data, audit observations and corrective actions, fulfillment of contractors' equipment and metarials of Occupational Health and Safety (OHS) requirements. From the results of this assessment, PT Solusi Bangun Indonesia has the right to determine whether the contractors are still allowed to participate in the next tender or not (Efendi, 2019).

Moreover, the implementation of the final stage assessment at Pertamina, according to Lukiatsinto and Widajati (2014), went well and was in accordance with Pertamina's procedures. However, in preparing the HSE Report, the contractors were given suggestions to be able to complete the necessary supporting data, so that the contractors did not repeatedly improve the HSE Report.

CONCLUSION

From the results of research at PT Pupuk Kujang, it can be concluded that there are 6 stages of Contractor Safety Management System (CSMS) activities. The implementation of the 6 stages of CSMS at PT Pupuk Kujang is in accordance with the relevant regulations, but at the pre-qualification stage there are violations asbefore being declared to have passed the pre-qualification assessment stage, a local contractor has been appointed as the winner of the tender. The suggestion that can be given is that PT Pupuk Kujang should be more committed in selecting candidates contractors according to the results of the pre-qualification assessment.

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