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Analysis of the Role of Permit to Work in Controlling Potential Hazards for Workers at PT X

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Abstract: This study analyzes the effectiveness of the Permit to Work (PTW) system in controlling potential hazards for workers at PT X. This pest control company handles various field operations with occupational safety risks. Using a comprehensive methodology combining literature review, interviews, and direct observations, the research examines three critical phases of the PTW implementation: planning, execution, and completion. The findings reveal that while PT X has established a basic PTW system with weekly permit issuance and risk identification procedures, several significant shortcomings exist in its implementation. Notably, the company's PTW documentation is merged with Job Safety Analysis (JSA), creating confusion among workers and potentially leading to miscommunication during hazardous operations. Additionally, the system lacks essential components such as equipment checklists, personal protective equipment verification, permit validity periods, and supporting work permits specific to different operations. Although the Health, Safety, and Environment (HSE) team conducts regular monitoring to ensure compliance with safety protocols in the field, the study found that the consolidated documentation format compromises the optimal control of potential hazards. Despite these limitations, the permit closure process follows established procedures, including proper housekeeping, reporting to permit issuers and formal documentation signoff. This research contributes to occupational safety literature by highlighting the practical challenges in implementing PTW systems in specialized service industries. It emphasizes the importance of clear documentation separation and comprehensive checklist implementation to enhance workplace safety and prevent occupational accidents and injuries.

Keywords: Work Permits; Hazards; Industry; Occupational Safety and Health

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INTRODUCTION

Specific jobs have higher risks and require strict controls. In such conditions, we need to implement a work permit system. A work permit system is a formal written authorization system used to control certain types of work with high potential hazards. Safety and health are essential in every work activity, especially jobs with high potential hazards. Various kinds of work, such as confined space, hot, electrical, height, and work with hazardous materials, have a greater risk of work accidents and material losses (Dwi Cahya & Herlina, 2021). A work permit is a mechanism to identify, communicate, reduce, and control work-related hazards that can potentially harm health, the environment, and safety. The work permit aims to reduce work accidents that may occur on the condition that workers must comply with the procedures set by the company (Novarisandy et al., 2022).

The ILO reports that 395 million workers worldwide suffer non-fatal work injuries each year. In addition, nearly 3 million people die from work-related accidents and diseases. Of these, the majority of deaths, around 2.6 million cases, are caused by work-related diseases such as exposure to hazardous chemicals, respiratory diseases, and other health problems that develop over time. Meanwhile, work accidents directly cause around 330,000 deaths. Common types of accidents include falls from heights, being trapped in machinery, and traffic accidents while working (International Labour Organization, 2022). In 2023, Indonesia recorded 370,747 cases of work accidents. Of this number, the majority, or around 93.83%, involved wage-earning participants, 5.37% came from non-wage-earning participants, and 0.80% involved participants from the construction services sector (Ministry of Manpower of the Republic of Indonesia, 2023). According to BPJS Ketenagakerjaan, work accidents have become increasingly common

over the past few years. This can be seen from the soaring number of claims for Work Accident Insurance (JKK) and Death Insurance (JKM) to BPJS Ketenagakerjaan from 2019 to November 2023 (Ministry of Manpower, 2023). Based on Government Regulation Number 50 of 2012 concerning the Occupational Safety and Health Management System (SMK3), every company must implement SMK3 in its work environment. Appendix II, section 6 of the regulation states that companies need to implement a work permit system (Permit to Work) for jobs with a high level of risk. In addition, companies are also required to provide procedures or work instructions to ensure that all identified risks can be managed safely and adequately documented. Certain types of work have greater potential for danger, requiring stricter control (GOVERNMENT REGULATION OF THE REPUBLIC OF INDONESIA, n.d.).

PT X is a company engaged in pest control, which handles various types of fieldwork with potential occupational safety risks, such as environmental pest control and vector pest control—based on initial observations conducted at PT X, the HSE Coordinator said that the company had implemented a work permit. Still, in the field of implementation, not all jobs had a work permit that was by the stages in SMK3 (Occupational Safety and Health Management System). On the other hand, based on a brief interview with workers, workers also mentioned that there had been workers who had experienced injuries and irritation due to chemicals but were not reported and recorded because they did not hinder the progress of the work. The injuries experienced included being hit, slipped, scratched, sprained, and fell to skin irritation. These injuries and infections are classified as first aid cases (minor injuries) and lost work days (loss of workdays). Although they are not fatal, if they are not taken seriously, they can have a greater impact where on carrying out a risky job; the specified work procedures should be implemented and followed, and work permits should be implemented as well as possible to control work-related risks that have the potential to be bad for the environment, safety, and health so that each stage of work can be carried out safely. Despite having risky work activities, the lack of implementation of work permits can increase the likelihood of work accidents. This is in line with research conducted by (Jusoh et al., 2020) regarding an in-depth study of Work Permits on chemicals that have been planned and implemented sequentially, step by step, to prevent work accidents and occupational diseases. Based on the above problems, it is necessary to assess the effectiveness of work permits in controlling potential hazards at PT X, which can be an essential step in identifying, evaluating, and managing potential hazards before work begins.

METHODS

The methods used in this study are literature study, interviews, and observations. A literature study is collecting materials related to research from books, scientific journals, literature, and other publications that are worthy of being used as sources for research that the author will study by describing and explaining the data through several expert opinions. (Meling et al., 2019). Interviews are a data collection method carried out face-to-face and direct questions and answers between data collectors and sources/data sources. (Trivaika et al., 2022). Observation is a systematic process of observing human activities and physical arrangements where these activities are carried out continuously from the locus of natural activities to produce facts. (Putri Adinda Pratiwi et al., 2023).

RESULT AND DISCUSSION

Permit to Work Planning

Based on the results of data collection through literature studies, interviews, and observations that have been carried out, work permit planning before issuing work permit documents has been carried out by the company as an initial stage in work permit planning, namely, determining the work activities to be issued, identifying risks in the field, calculating the possibility of risks occurring, and determining controls that are by the risk. This is evidenced by the existence of a Permit to Work that is made once a week before workers do their work, but it turns out that after being analyzed, the Permit to Work that was made was still one with the company's Job Safety Analysis (JSA). Based on the observations made, the researcher believes that the Permit to Work has been running with PT X procedures, starting from those who give work authority to the work planning process that will be carried out. Unfortunately, there are several shortcomings in the Permit to Work, such as the absence of a work equipment checklist containing work equipment, personal protective equipment, work permit validity period, and supporting work permits by the type of work. The researcher assumes that these shortcomings could have arisen due to human error or human error; in this case, the workers may have less knowledge of making a Permit to Work or Job Safety Analysis (JSA). This certainly requires more action and attention to be considered so that errors and obstacles in the field can be minimized and eliminated, considering that one of the objectives of the work permit system itself is an instrument to prevent work accidents that can cause losses (Novarisandy et al., 2022).

Implementation of Permit to Work

Based on the data collection results through literature studies, interviews, and observations, it was obtained that PT X implemented a Permit to Work with the supervision and monitoring of work activities carried out by workers in the field. After planning and preparing work permit documents, the company continued to the implementation stage by ensuring that all work activities requiring permits have been supervised and monitored directly in the field. The HSE (Health, Safety, Environment) supervisory team routinely checks the conformity of the Permit to Work document with conditions in the workplace, including ensuring that all work permit requirements such as PPE (personal protective equipment), signs, and risk control have been implemented correctly and adequately by workers. From the research results, the implementation of Permit to Work has been carried out according to the procedure, namely, to control potential hazards in the workplace by using the PPE needed by workers. However, it should be remembered that the Permit to Work document is still combined with the Job Safety Analysis (JSA), which has an impact on workers' confusion and has the potential for miscommunication in its implementation so that the aim of controlling potential hazards cannot be carried out optimally (Irawati et al., 2021).

Permit to Work Completion

Based on the results of data collection through literature studies, interviews, and observations, it was obtained that PT X completed the Permit to Work by conducting housekeeping in the area where the work was taking place, reporting to the issuer that the work had been completed, and signing as a form of closing the work permit. Based on the observations, the researcher believes that the work permit completion stage at PT X has been carried out using the procedures set by the company. Starting with housekeeping or checking and cleaning the work area before leaving it, coordinating with the permit approver that the work has been completed, and filling in the signature column on the work permit sheet as proof that the work permit has been completely closed (Hukum et al., 2024).

CONCLUSION

The study results indicate that the Permit to Work system at PT X has been implemented through three main stages: planning, implementation, and completion. At the planning stage, the company has implemented the initial procedures well, from determining work activities, identifying risks in the field, calculating the likelihood of risks occurring, and selecting appropriate controls (Keselamatan et al., 2024). The Permit to Work document is made once a week before the work is carried out, but there is a deficiency where the Permit to Work is still combined with the Job Safety Analysis (JSA). Another deficiency found is the absence of a work equipment checklist containing work equipment, personal protective equipment, work permit validity period, and supporting work permits by the type of work. The researcher assumes this deficiency may be caused by human error or a lack of worker knowledge about making a Permit to Work or JSA (Balamurugan et al., 2019). In the implementation phase, PT X has supervised and monitored work activities in the field. The HSE (Health, Safety, Environment) team conducts routine checks to ensure compliance between the Permit to Work document and actual conditions in the workplace, including verifying the implementation of requirements such as using PPE (personal protective equipment), signs, and risk control by workers. Although this implementation is based on procedures and aims to control potential hazards, combining the Permit to Work document with the JSA has confused workers. It has the potential to cause miscommunication in its implementation, so the objective of controlling potential hazards cannot be achieved optimally (Saragih et al., 2024) . In the final stage, namely completing the Permit to Work, PT X has carried out the established procedures properly. This stage includes the implementation of housekeeping in the area where the work is taking place, reporting to the issuer that the work has been completed, and signing documents to close the work permit. This process begins with checking and cleaning the work area before leaving it, coordinating with the permit approver regarding the completion of the work, and filling in the signature column on the work permit sheet as formal evidence that the work permit has been completely closed and the work has been completed safely (Abbasi et al., 2022).

DECLARATION OF GENERATIVE AI

The authors declare that no generative AI or AI-assisted technologies were used in the writing process of this manuscript.

DECLARATION OF COMPETING INTEREST

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