

Implementation Of An Occupational Safety And Health Management System At A Public Fuel Filling Station

Cahyana¹, Suroso^{2*}, Flora Patricia Anggela³

^{*2}Email: suroso@ubpkarawang.ac.id, mn20.cahyana@mhs.ubpkarawang.ac.id,

³FloraAnggela@ubpkarawang.ac.id

^{1,2,3}Management Study Program, Faculty of Economics and Business, Universitas Buana Perjuangan, Karawang

ABSTRACT

Submitted: 03-15, 2024 **Purpose of the study** — This study aims to describe the Occupational Safety and Health Management System at the Public Fuel Filling Station in Tamansari–Pangkalan Village and assess its compliance with Government Regulation Number 50 of 2012.

Accepted: 08-21, 2024 **Research method**— A qualitative and descriptive approach was employed to understand and explain the implementation of the Occupational Safety and Health Management System in the specified work environment.

Published: 09-30, 2024 **Result**— The research findings indicate that the Occupational Safety and Health Management System has been effectively implemented, successfully maintaining work safety and security. Key practices include the use of protective equipment, monitoring of working conditions, establishment of a safe environment, and safety training for workers.

Conclusion— The Occupational Safety and Health Management System at the Public Fuel Filling Station in Tamansari–Pangkalan Village aligns with Government Regulation Number 50 of 2012. Future research is recommended to investigate factors contributing to vehicle fires at Fuel Filling Stations in the area.

Keywords: *Safety, Health, Work*



This work is licensed under a [Attribution 4.0 International \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

INTRODUCTION

According to the policy stated in Law No. 22 of 2001 concerning Oil and Natural Gas, Public Fuel Filling Stations are facilities provided by certain entrepreneurs or business entities to fill fuel in motor vehicles and can be accessed by the general public. This law aims to regulate the procurement, management, and operation of Public Fuel Filling Stations, including regulating the standards of safety and environmental sustainability that must be adhered to.

A Public Fuel Filling Station (SPBU) is a business institution operated by various individuals or organizations, but has a similar main purpose, namely to provide fuel filling facilities for public vehicles (Geography et al., 2023).

The occurrence of a car fire at a gas station is a phenomenon that has the potential for great risk and is of public concern. This incident resulted in material losses that cannot be underestimated, even with the threat to the lives of drivers and gas station officers themselves. The exact cause of the car fire at the gas station has not been clearly found. However, several factors are believed to have an influence on the occurrence of this incident. Such as the quality of the fuel used by the vehicle. Violations of company regulations can increase the risk of fire. In addition, the technical condition and maintenance of the vehicle are also factors that play an important role in this phenomenon. Vehicles that are not well maintained or have damaged electrical systems can trigger fires at gas stations.

On April 19, 2023, a gas station in Tamansari Village-Pangkalan experienced an alarming incident when a Kijang type car caught fire in the area. This incident caused fear among visitors and gas station employees around the scene. Firefighting measures were immediately taken to stop the fire from spreading and endangering other visitors (Infokrw, 2023).

No	Condition of Fire Extinguishers	1		2		3		4		5	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1	Is the Fire Extinguisher still sealed properly?	Yes									
2	Is the pressure of the Fire Extinguisher according to the provisions?			Yes							
3	Is the Fire Extinguisher Hose in good condition?					Yes					
4	Is the Fire Extinguisher clean							No			
5	Is the Fire Extinguisher still expired?									Yes	

Source: SPBU, 2023

When the fire occurred, many employees did not have adequate skills in using a light fire extinguisher (APAR) so that the fire quickly spread and burned the car, producing thick black smoke and significant material losses, fortunately there were no fatalities in this incident.

Previous studies have revealed that the implementation of the Occupational Safety and Health Management System is related to several variables, including the level of commitment

and occupational safety and health policies, occupational safety and health planning, application of occupational safety and health concepts, measurement and assessment of capabilities, and review and improvement by management (Srisantyorini & Safitriana, 2020).

The Occupational Safety and Health Management System (SMK3) is to prevent disasters and protect occupational safety and health in the work environment with integrated worker management, situations, and job placement with efforts to prevent and reduce disasters and diseases caused by work. Not only that, another goal is to produce a comfortable, safe, and productive work area (Sinambela, 2021).

This study aims to describe the SMK3 implemented at gas stations in Tmansari Village-Pangkalan, and to determine the SMK3 that is in accordance with Government Regulation Number 50 of 2012.

LITERATURE REVIEW AND HIPOTESYS DEVELOPMENT

A. LITERATURE REVIEW

a. Definition of Human Resource Management

Human resource management involves the utilization, improvement, assessment, reward, and regulation of individuals within an organization or group of workers. It also involves job design, employee planning, selection and placement, employee development, career management, compensation, performance evaluation, teamwork development, and preparation for retirement (Sinambela, 2021).

b. Definition of Management System

The Big Indonesian Dictionary explains that a system is a whole formed by a combination of organized elements. Management acts as a regulator of inputs including tools, materials, or machines, as well as humans, in order to create outputs that enable the achievement of set goals (Astari & Suidirman, 2022).

c. Definition of Occupational Health and Safety Management System

SMK3 intends to unify the management system for occupational health and safety aspects in the work environment. This system includes management, workers, conditions, and a coordinated work environment with the aim of avoiding and reducing disasters and diseases caused by the profession. SMK3 creates a comfortable, safe, and productive work area (Statistician & Applications, 2022).

For legal strengthening as enacted in government regulation no. 50 of 2012, SMK3 is an inseparable component of the industrial management system in a comprehensive manner. Its purpose is to regulate disasters related to the production capacity of activities so that they can produce a comfortable, safe, and productive place of activity.

SMK3 refers to the interests of the overall management system. This system involves elements such as: (1) organizational structure (2) planning methods (3) responsibilities (4) implementation (5) methods (6) working methods (7) effectiveness required to improve,

practice, achieve, assess safety and health policies of activities in managing risks related to professional activities. The goal is to create a comfortable, safe, and productive work area (Meturan et al., 2023). It can be concluded that SMK3 is a field of knowledge that focuses on preventing accidents and diseases that can occur while carrying out tasks in the workplace.

Here are some important areas that can be part of the relevant SMK3 Implementation research at gas stations: (1) Work Environment (2) Lighting (3) Personal Protective Equipment (4) Physical Conditions and Mental Health of Employees (Sinambela, 2021). SMK3 acts as a guide in evaluating and measuring the implementation of SMK3 within an organization. By comparing existing requirements with the achievement of SMK3, gas stations can be used as an indicator to see how far the company has progressed in achieving SMK3 goals (Sinambela, 2021).

B. HYPOTESIS DEVELOPMENT

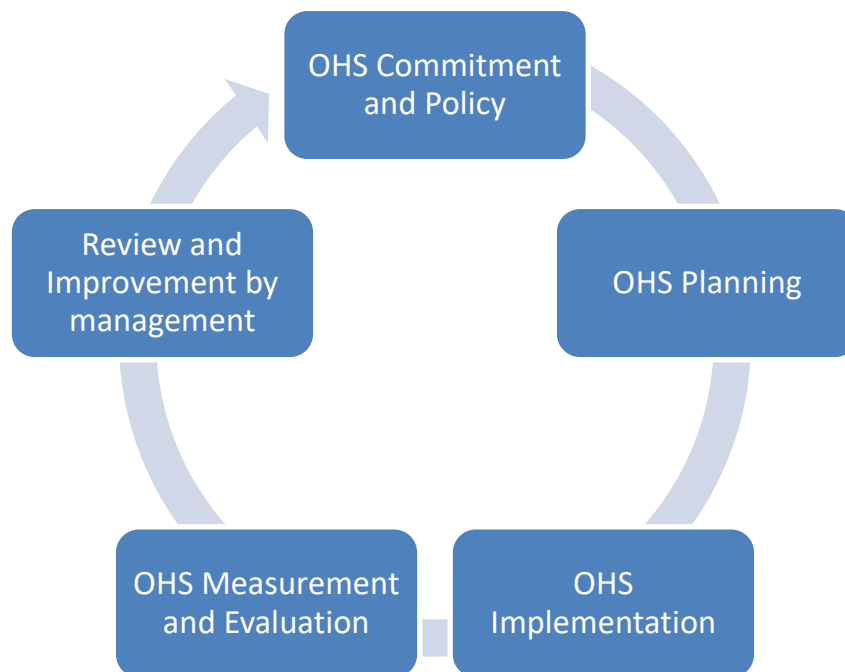


Figure 1. Occupational Health and Safety Management System

Source: (Sinambela, 2021).

METHOD

The research method used in this study is a qualitative and descriptive approach. This approach aims to understand and explain how the Implementation of SMK3 is carried out by

gas stations in Tamansari-Pangkalan Village or related work environments. This method focuses on an in-depth understanding of various aspects related to Occupational Safety and Health in the context of field practice (Srisantyorini & Safitriana, 2020). This research was conducted from October 10 to October 23, 2023. The location of the research is on Jl. Pangkalan-Loji, Tamansari Village, Pangkalan District, Karawang Regency, West Java (41362). The informants of this study involved collecting information from natural observations, without any influence or manipulation. Those conducting this research will be directly involved in the environment or situation being studied and also 1 Director, 1 Supervisor, 3 Employees, and 9 Consumers of gas stations in Tamansari-Pangkalan Village which are the focus of the research. Therefore, this researcher must be directly involved in the field to obtain results from interactions and conversations that can be documented through writing or through voice recording or in the form of video. In this data analysis, a comparison is made between the results of interviews and field surveys. This approach is intended to find a deeper understanding of a problem or phenomenon being studied. Through interviews, researchers can obtain detailed and in-depth data from the respondents involved. Meanwhile, field surveys provide a broader picture of the conditions being observed. By combining the two methods, clearer and more reliable analysis results can be obtained.

RESULTS AND DISCUSSION

A. RESULTS

Interview and Field Survey Results

1. Occupational Safety and Health Policy and Commitment.

The gas station provides adequate training to all employees on Occupational Safety and Health (OHS) procedures. This includes training on fuel handling, use of personal protective equipment, and emergency measures. The gas station routinely checks and maintains their equipment, including fuel pumps, storage tanks, and other equipment, to ensure that all are functioning properly and safely. Gas station employees receive specific training on safe fuel handling. They must avoid actions that can cause fuel leaks or accidents. The gas station has clear emergency action procedures and employees are trained in terms of handling fires, fuel spills, and other emergency situations. The gas station is committed to the Safety and Health of employees, customers and the surrounding community. They ensure that the fueling area is safe, including functioning filling facilities and equipment. The gas station complies with all appropriate regulations and guidelines regarding government regulations and industry guidelines. The gas station has access to and uses Personal Protective Equipment (PPE) appropriate for their work. This may include protective clothing such as hats, shoes, masks, long pants and long-sleeved shirts.

2. SMK3 planning at gas stations. The following are the steps in SMK3 planning:

- 1) Risk Identification.**
- 2) Risk Assessment.**

- 3) K3 Development.
- 4) Preparation of K3 Procedures.
- 5) K3 Related Training.
- 6) Use of PPE.
- 7) Inspection and Maintenance.
- 8) Fuel Management.
- 9) Evacuation and Emergency Action.
- 10) Employee Involvement.
- 11) Accident Monitoring and Reporting.

3. Implementation of SMK3 at gas stations. The following are the steps in implementing SMK3:

- 1) Preparation of K3.
- 2) Risk Identification.
- 3) Risk Assessment.
- 4) K3 Procedures.
- 5) K3 Training.
- 6) Use of PPE.
- 7) Inspection and Maintenance.
- 8) Fuel Management.
- 9) Emergency Action.
- 10) Monitoring and Reporting.
- 11) Employee Involvement.

4. Measurement and Evaluation of SMK3 at Gas Stations. Here are some measurements and evaluations of SMK3:

- 1) Routine Inspection.
- 2) Accident Report.
- 3) Employee Survey.
- 4) K3 Monitoring.
- 5) K3 Data Analysis.
- 6) Employee Performance Monitoring.
- 7) Improvement Recommendations.
- 8) Continuous Improvement.
- 9) Reporting Results.

5. Review and Improvement by Management.

The management periodically reviews the SMK3 that has been implemented. This review aims to evaluate the effectiveness of the current system and identify potential risks that still exist. In addition, the management also makes improvements and

refinements to the existing system to ensure that all aspects of K3 are met properly. By conducting periodic reviews and improvements, gas stations are able to obtain a better and more resilient SMK3 in facing various challenges in the field.

The results of the SMK3 field survey at gas stations:

1. Gas Station Work Environment.

Gas station employees must be prepared to deal with various types of vehicles that come to refuel. This includes private cars and motorbikes. In addition, they are also responsible for maintaining the smooth running of the refueling process so that there are no long queues and congestion around the gas station. The main focus in this work environment is safety, so employees must always be aware of potential fuel leaks and take other precautions. Cleanliness is also very important at gas stations. The amount of waste produced can be quite large, such as used plastic bottles and payment papers. Therefore, employees must routinely clean the work area, check fire extinguishers every 6 (six) months, provide sand for fire extinguishers, clean fuel containers, and ensure that facilities remain clean and tidy. The work environment at gas stations also involves interaction with customers. Employees must be able to provide friendly and responsive service to customer needs and ensure customers feel safe and comfortable while on site.

2. Gas Station Lighting.

Adequate lighting is important to ensure that drivers and officers can easily see and carry out refueling activities safely. These lights are usually installed around the filling pumps and parking areas at gas stations. In addition, lighting is also placed on the front and sides of the gas station building to ensure that services continue to run even at night. With adequate lighting, gas stations can provide a sense of comfort and safety for all customers who need to refuel.

3. Personal Protective Equipment.

Personal protection used at gas stations includes helmets, masks, gloves, and protective shoes. The function of the helmet is to protect the officer's head from falling objects or other falling threats. Masks are used to protect against inhalation of fuel and hazardous vapors. Gloves provide protection against chemicals and prevent burns when replacing equipment components. Protective shoes are used to protect the feet from fuel splashes and other injuries. Coveralls are used to protect the body from contamination by hazardous chemicals, fire, and others. By using appropriate personal protective equipment, gas station officers can work more safely and reduce the risk of accidents or adverse health effects due to fuel exposure.

4. Physical Condition and Mental Health of Gas Station Employees.

Given the tasks they need to perform, such as lifting and moving heavy objects, operating machinery, and interacting with customers, employees are often at risk of physical injury. Therefore, gas stations are required to equip themselves with appropriate personal protective equipment and undergo adequate health and safety training. In addition, mental health also plays an important role in the well-being of employees at gas stations. Harsh working environments, high stress levels, and responsibility for flammable fuel tanks can put significant psychological stress on employees. Therefore, companies need to provide psychological support, such as mental health programs and activities that can help reduce stress and increase employee happiness. By paying attention to the physical and mental health of gas station employees, companies can ensure that employees remain healthy and enthusiastic in carrying out their duties. This will not only provide benefits to employees individually, but will also have a positive impact on productivity and customer satisfaction.

B. DISCUSSION

1. Occupational Safety and Health Commitment and Policy.

The organization must have a formal policy that establishes a commitment to OHS. This policy must include a commitment to provide a safe and healthy work environment, as well as setting clear OHS standards (Sinambela, 2021).

2. Occupational Safety and Health Planning.

Occupational safety and health planning also includes organizing and assigning tasks to relevant personnel to carry out risk prevention and control measures. In OHSMS planning, the needs and supporting facilities required are also considered, such as training and fulfillment of safe work requirements. OHSMS planning also includes periodic monitoring and review of the implementation of the planning that has been carried out, as well as evaluation of the results achieved and improvements that need to be made. This will ensure that the planning made is in accordance with existing conditions. This plan is adjusted to the activities of the organization. Therefore, the organization must have procedures that regulate planning, introduction, and descriptions to laws and regulations. The objectives and targets in mandatory programming can be measured. This means that there are clear units or indicators of achievement, as well as achievement targets that are determined within a certain period of time. It is also important to involve employee representatives and other parties in setting these goals and objectives, and to regularly review their achievement (Sinambela, 2021).

3. Implementation of Occupational Safety and Health.

To implement SMK3, the first step that must be taken is to determine how to measure the impact of the implementation of safety, health and welfare for employees. The plan that has been prepared will not be useful if it is not implemented properly. In addition, the objectives of the organization's K3 can only be achieved if the leadership fulfills its duties

properly and gets support from employees who have the appropriate qualifications (Sinambela, 2021).

4. Measurement and Evaluation of Occupational Safety and Health.

In measuring and assessing K3, there are three important steps that must be taken. First, the company needs to determine the inspection, testing, and control methods that match the objectives and targets of SMK3. This method links the factors that must be inspected and tested. Second, the industry is required to carry out audits in an orderly manner to SMK3 to assess the level of its implementation capability. Third, all SMK3 monitoring must be documented. This monitoring can be used to correct and get what is needed (Sinambela, 2021).

5. Review and Improvement by Management.

In the final stage in SMK3, management needs to carry out review and improvement to SMK3. The designated direction must regularly review SMK3 to assess the suitability and success in achieving the goals and policies of SMK3 in the long run (Sinambela, 2021).

CONCLUSION

From the explanation above, it can be concluded that SMK3 at gas stations has met the requirements set out in Government Regulation Number 50 of 2012. However, further research is recommended to investigate the cause of car fires at gas stations. The cause of car fires at gas stations can involve various aspects, such as driver negligence in using fuel, suboptimal technical conditions of the vehicle. Through further research, researchers can provide more concrete recommendations to related parties, including gas station managers, vehicle users, and government regulators. This research can also provide new insights in developing prevention efforts and handling similar cases in the future, so that the risk of car fires at gas stations can be reduced and greater losses can be prevented.

REFERENCES

- Astari,& Suidarma, (2022). Implementasi Sistem Manajemen Kesehatan dan Keselamatan Kerja (SMK3) pada PT ANTAM Tbk. Jurnal Manajemen Penelitian Terapan (PENATARAN),7(1),24–33.
- Fadli,(2019). Metodologi Penelitian Untuk Ekonomi dan Bisnis.
- Geografi,Geografi,& Surakarta,(2023). BERBASIS SISTEM INFORMASI GEOGRAFI DI KABUPATEN TANGERANG TAHUN 2022.
- hidayat fahrul,(2023). template artikel ubp. 31–41.
- Meturan,Leuhery,Titaley,Sipil,& Ambon,(2023). Kesehatan Kerja (Smk3) Pada Pembangunan Gedung Pasar Mardika Kota Ambon. Journal Agregate,2(1), 87–93.
- Setiawan,Sheriey Margalena. (2023). pengaruh disiplin kerja dan lingkungan kerja terhadap kinerja karyawan (p. sharly).
- Sinambela, L. P. (2021). *MANAJEMEN SUMBER DAYA MANUSIA* (R. D. Suryani (ed.); 5th ed.). Bumi Aksara,404-408.

- Srisantyorini,& Safitriana,(2020). Penerapan Sistem Manajemen Keselamatan dan Kesehatan Kerja pada Pembangunan Jalan Tol Jakarta - Cikampek 2 Elevated. *Jurnal Kedokteran Dan Kesehatan*,16(2),151.
- Statistician,& Applications,(2022). Article History Article. *Scholar.Archive.Org*, 71(3),143–148.
- Endrianto,(2023). Sistem Manajemen Keselamatan Kesehatan Kerja (Smk3) Kontraktor Di Pt Pertamina Ep Asset 3 Jatibarang Field. *Jurnal Kesehatan Tambusai*,4(2),345–350.
- Fioh,Roga,Salmun,& Telupere,(2021). Implementasi sistem manajemen keselamatan dan kesehatan kerja di Pt. Pln (Persero) Rayon Rote Ndao. *E-Jurnal Ekonomi Sumberdaya Dan Lingkungan*,10(1),37–46.
- Riarynsyah,(2021). Analisis Pengaruh Implementasi Sistem Keselamatan Kesehatan Kerja (K3) Terhadap Unsafe Action Di Pt Egs Indonesia. *PREPOTIF: Jurnal Kesehatan Masyarakat*,5(2),953–962.
- Syamsuddin,& Fachrin,(2020). Analisis Implementasi Sistem Manajemen Keselamatan dan Kesehatan Kerja Di Rumah Sakit Batara Siang Kabupaten Pangkep Tahun 2019. *Journal of Muslim Community Health (JMCH)*,1(2), 135–165.
- Widodo,(2020). Implementasi Sistem Manajemen Kesehatan dan Keselamatan Kerja (SMK3) di PT. Pelindo Marine Service. *Jurnal Aplikasi Pelayaran Dan Kepelabuhanan*,10(2),113.
- Khoerunisa Rahmawati,Suroso.(2022). Issn 2356-3966 e-issn: 2621-2331. 9(3),1457–1465.
- Patricia Flora,Lupita,& Rismayadi. (2019). PENGARUH LINGKUNGAN KERJA DAN BUDAYA KERJA TERHADAP KEPUASAN KERJA TENAGA KESEHATAN (Study Kasus pada Puskesmas di Kecamatan Kotabaru Karawang). *Jurnal Manajemen & Bisnis Kreatif*,5(1),61–73.
- Suroso,Puspa,& Savitri.(2020). Pengaruh Motivasi Kerja Dan Komitmen Organisasi Terhadap Kinerja Dosen Universitas Buana Perjuangan Karawang. *Jurnal Mahasiswa Manajemen*,97–117.