



## **The Effectiveness of the Occupational Health and Safety Management System at PT. PLN (Persero)**

**Muh Darwis<sup>1</sup>, Dhiya Muchlisa<sup>2</sup>, Risma Niswaty<sup>3</sup>, Ade Onny Siagian<sup>4</sup>**

<sup>1,2,3</sup> Universitas Negeri Makassar, South Sulawesi, Indonesia.

<sup>4</sup>Universitas Nasional, Jakarta, Indonesia

*Email:* [muh.darwis@unm.ac.id](mailto:muh.darwis@unm.ac.id)<sup>1</sup>

(Received: Sept-2020; Accepted: December-2020; Available Online: December-2020)



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### **ABSTRACT**

This research is a quantitative descriptive study that aims to determine the level of effectiveness of the Occupational Health and Safety Management System at PT. PLN (Persero) Main Unit for South, Southeast, West Sulawesi (Sulselrabar). The population of this study is 45 respondents and was gathered using saturated sampling. The data collection techniques used were observation, questionnaires, interviews, and documentation. The data analysis technique used is the percentage analysis and descriptive distribution. The results showed that the occupational safety and health management system is classified as 'very effective', using indicators such as OSH policy determination, OHS planning, implementation of OHS plans, monitoring and evaluation of Occupational Health and Safety performance. To achieve the effectiveness of the Occupational Health and Safety Management System, efforts are made to achieve company goals, namely running an electricity business, oriented to customer satisfaction, making electricity a medium to improve the quality of people's lives, and striving for electricity to be a driving force for activities.

**Keywords:** Occupational; health; safety, management.

### **INTRODUCTION**

In this era of globalization, society and the world apply reference standards for various things (Arhas & Suprianto, 2020; Nasrullah et al., 2020) one of which is occupational safety and health. This is due to the increasingly complex work that causes a higher risk of work accidents (Carayon et al., 2006; Channing, 2013; Health and Safety Executive, 2012; Rae & Provan, 2019). Occupational Health and Safety (keselamatan dan kesehatan kerja) is a thought and effort to ensure the integrity and perfection of both the physical and spiritual aspects of the workforce in particular, and humans in general, the results of work and culture towards a just and meaningful society ("Fundamental Principles of

Occupational Health and Safety,” 2002; National Council for Occupational Safety and Health, 2018; Safety, 2006; Stc, 1974). (Djatkiko, 2016, hal.2). Some of the factors that support worker safety, namely the regulation of working hours by taking into account the health conditions of workers, setting appropriate rest hours, regulating the use of PPE that guarantees the safety and health of workers, regulating body posture and limbs that are effective and do not cause disturbances when working, provision of facilities for protecting worker safety, worker discipline to comply with the Standard Operating Procedure (SOP). (Endang, 2019, hal.78). Occupational safety and health programs are very important to ensure the safety and health of company employees, of course, the company will have a bad impact if the company does not provide occupational Health and Safety services to its employees. (Kim et al., 2016; Mohammadfam et al., 2017; Occupational Safety and Health Administration & Labor, 2015).

The implementation of occupational safety and health is translated into the Occupational Health and Safety Management System. Refer to the definition of the Occupational Safety and Health Management System according to Peraturan Menteri Tenaga Kerja Nomor 5 Tahun 1996 tentang Sistem Manajemen Keselamatan dan Kesehatan Kerja is part of the overall system which includes organizational structure, planning, responsibilities, implementation, procedures, processes, and resources required for the maintenance of occupational safety and health policies in the context of controlling risks related to working activities to create a safe, efficient and productive workplace.

The purpose of implementing the Occupational Safety and Health Management System is to increase the effectiveness of planned, measured, structured, and integrated occupational health and safety protection, prevent and reduce occupational accidents and occupational diseases by involving elements of management, workers/laborers, and trade/labor unions, creating a safe, comfortable and efficient workplace to encourage productivity, the implementation of the Occupational Safety and Health Management System is carried out based on the national policy on the Occupational Safety and Health Management System, the national policy on smk3 as company guidelines in implementing the Occupational Safety and Health Management System, sector supervisory agencies businesses can develop guidelines for the implementation of the Occupational Safety and Health Management System according to the needs based on the provisions of laws and regulations (Niswaty & Nasrullah, 2019, hal.148). The purpose of an occupational safety and health management system is very important because with this purpose it will provide a warning for the company to reduce accidents that result in injury or loss.

As the purpose of implementing the Occupational Safety and Health Management System, the government makes regulations, namely Peraturan Pemerintah Republik Indonesia Nomor 50 Tahun 2012 tentang Penerapan Sistem Manajemen Keselamatan dan Kesehatan Kerja Article 6, paragraph 1, namely the establishment of OHS policies, occupational safety, and health planning, implementation of occupational safety and health plans, monitoring and evaluation of occupational safety and health performance, reviewing and improving the performance of the Occupational Safety and Health Management System.

Limited Liability Company State Electricity Company (PT. PLN) South Makassar Area which is under the auspices of PT. PLN (Persero) Main Unit for South, North, West Sulawesi (Sulselrabar) is a company that is tasked with serving electricity installation

submissions, requests for increased voltage or added power, checking PLN electricity bills, paying electricity to complaints. Therefore, the success of PT. PLN in serving public electricity cannot be separated from technician employees who work in the field, therefore the Occupational Safety and Health Management System that is implemented must be effective to protect the employees who work in the company.

Seeing the fact that currently PT. PLN (Persero) Regional Main Unit South North West Sulawesi (Sulselrabar), that it appears that in the process of working at the company, the development and maintenance of work safety and security standards based on the Occupational Safety and Health Management System is still a concern, besides that there are still many workers who pay less attention to safety for yourself. This shows that the low awareness of leaders and workers about the importance of occupational safety and health at work.

## **METHOD**

The variable in this study is a single variable, which is the effectiveness of the safety and health management system at PT. PLN (Persero) of the Sulselrabar region. This research is a descriptive study that seeks to describe it carefully, clearly and objectively. To measure this variable using a questionnaire instrument (questionnaire) using a Likert scale which is based on variable indicators. (Darwis et al., 2019; Suprianto et al., 2018) suggests that the population is the entire research subject, the population in this study was 45 respondents. The sample is a part or representative of the population under study or a part of the subject representing the entire population (universum). This sampling is done so that collecting data or samples will be relatively much shorter, lighter and cheaper than collecting the entire population. The data collection techniques used in this study were observation, questionnaires, interviews, and documentation.

An activity that is quite important in the entire research process is data processing. With data processing, it can be seen about the meaning of the data that has been collected so that the research results will be immediately known. The data analysis technique used in this study was descriptive statistical analysis design, for that data analysis technique used was percentage analysis by presenting each question to determine the effectiveness of the occupational safety and health management system at PT. PLN (Persero) the main unit for the Sulselrabar region.

## **RESULT AND DISCUSSION**

The data presented in this study are data obtained from the percentage of questionnaires that have been given to 45 employees who are the research samples which are intended to determine the description of the occupational safety and health management system at PT. PLN (Persero) the main unit of the Sulselrabar region is described as follows:

### **Establishment of Occupational Safety and Health Policies**

Based on the data analysis of each item above, regarding the establishment of occupational health and policies at PT. PLN (Persero) the main unit of the Sulselrabar region where the overall results for the indicators can be seen come right on time, using the proportion formula, that is, each answer option is a percentage according to its frequency, then the results of each table are added up and then averaged. This can be seen in table 1:

**Table. 1**  
**Respondents' Answers for Indicators for Establishing Occupational Health and Safety Policy**

No.	Option					Value Obtained					Amount
	A	b	c	d	e	a	b	c	d	e	
1	4	37	0	1	0	20	148	0	2	0	170
2	4	37	0	1	0	20	148	0	2	0	170
3	19	22	1	0	0	95	88	3	0	0	186
4	23	19	0	0	0	115	76	0	0	0	191
5	20	22	0	0	0	100	88	0	0	0	188
Total											905

Source: Research results

To determine the level of effectiveness of the occupational safety and health management system at PT. PLN (Persero) the main unit of the Sulselrabar region, seen from the indicators for determining occupational safety and health policies, a formula is used:

$$\% = \frac{n}{N} \times 100 \%$$

$$\% = \frac{905}{1050} \times 100 \%$$

$$\begin{aligned} \% &= \frac{905}{1050} \times 100 \% \\ &= 86,19 \% \end{aligned}$$

From the results of the data analysis above, it shows that the indicators of policymaking and occupational health are in the good category with the results obtained by 86.19 percent who are in the 81% -100% category. It is reviewed that the company has established policies according to work standards. It can be clearly stated that occupational safety and health decisions are very effective because the company has carried out an initial review of occupational safety and health conditions, improved occupational health and performance, and received advice. This means that the company has implemented policies that comply with the standards.

### **Occupational Safety and Health Planning**

Based on the results of the data processing above regarding the items in the occupational safety and health planning indicators, overall to find out the results of the work safety and health planning indicators, it can be seen in table 2:

**Table. 2**  
**Respondents' Answers for Occupational Health and Safety Planning Indicators**

No.	Option					Value Obtained					Amount
	A	b	c	d	e	a	b	c	d	e	

1	13	29	0	0	0	65	116	0	0	0	181
2	6	33	3	0	0	30	132	9	0	0	171
3	19	23	0	0	0	95	92	0	0	0	187
4	9	33	0	0	0	45	132	0	0	0	177
5	13	29	0	0	0	65	116	0	0	0	181
Total											897

Source: Research results

To determine the level of effectiveness of the occupational safety and health management system at PT. PLN (Persero) the main unit of the Sulselrabar region, seen from the indicators of occupational safety and health planning, a formula can be used:

$$.\% = \frac{n}{N} \times 100 \%$$

$$\% = \frac{897}{10 \times 42} \times 100 \%$$

$$\% = \frac{897}{1050} \times 100 \%$$

$$= 85,42 \%$$

From the results of the data analysis above, it shows that the indicators of occupational safety and health planning are in the very effective category with the results obtained by 85.42 percent who are in the 81% -100% category. Given this, the company always considers input from employees, the company always considers the results of the initial review and considers the initial planning and planning of ongoing activities, and the company also socializes safety procedures.

### Implementation of the Occupational Safety and Health Plan

Based on the results of data processing on each item on the indicators for implementing the work safety and health plan, it can be seen from the overall results of the indicators for implementing the work safety and health plan, which can be seen in table 3:

**Table 3.**  
**Respondents' Answers for Indicators of Implementation of Occupational Health and Safety Plans**

No.	Option					Value Obtained					Amount
	a	b	c	d	e	a	b	c	d	e	
1	17	25	0	0	0	85	100	0	0	0	185
2	19	23	0	0	0	96	92	0	0	0	188
3	25	17	0	0	0	125	68	0	0	0	193
4	22	20	0	0	0	110	80	0	0	0	190
5	15	27	0	0	0	75	108	0	0	0	183
Total											939

Source: Research results

To determine the level of effectiveness of the occupational safety and health management system at PT. PLN (Persero) the main unit of the Sulselrabar region, seen from the indicators of the implementation of the occupational safety and health plan, using a formula:

$$\% = \frac{n}{N} \times 100 \%$$

$$\% = \frac{939}{10 \times 42} \times 100 \%$$

$$\begin{aligned} \% &= \frac{939}{1050} \times 100 \% \\ &= 89,42 \% \end{aligned}$$

From the results of the data analysis above, it shows that the indicators for implementing the occupational safety and health plan are in the very effective category with the results obtained by 89.42 percent, which are in the range of values 81% - 100%. In terms of this, the company always pays attention to employees both in terms of work permit systems, facilities, and infrastructure. This shows that in general at PT. PLN (Persero) the main unit of the Sulselrabar region where the company always implements an occupational safety and health plan in accordance with both the initial planning and ongoing planning, such as a briefing to carry out the activities that have been planned.

#### **Monitoring and Evaluation of Occupational Health and Safety Performance**

To see the results of the achievements of the occupational safety and health management system for monitoring and evaluation indicators of occupational safety and health performance, it can be seen in its entirety in the table below:

**Table. 4**  
**Respondents' Answers to Indicators of Monitoring and Evaluation of Occupational Health and Safety Performance**

No.	Option					Value Obtained					Amount
	a	b	c	d	e	a	b	c	d	e	
1	25	17	0	0	0	125	68	0	0	0	193
2	20	22	0	0	0	100	88	0	0	0	188
3	13	29	0	0	0	65	116	0	0	0	181
4	14	28	0	0	0	70	112	0	0	0	174
5	15	27	0	0	0	75	108	0	0	0	183
Total											919

Source: Research results

To determine the level of effectiveness of the occupational safety and health management system at PT. PLN (Persero) the main unit of the Sulselrabar region, seen from the indicators of monitoring and evaluation of occupational safety and health performance, using the formula:

$$\% = \frac{n}{N} \times 100 \%$$

$$\% = \frac{919}{10 \times 42} \times 100 \%$$

$$\% = \frac{919}{1050} \times 100 \%$$

$$= 87,52 \%$$

From the results of the data analysis above, it shows that the indicators for monitoring and evaluating the performance of occupational safety and health are in the very effective category with the results obtained at 87.52 percent, in the range of values 81% - 100%. This is viewed from the fact that the company has implemented laws and regulations, standards, and relevant technical guidelines, the company also carries out periodic audits of the Occupational Health and Safety Management System and risk control efforts. This shows that in general at PT. PLN (Persero), the holding unit of the Sulsebrabar region where the company always makes good efforts, this can be seen from the satisfactory audit results with the achievement of zero accidents.

### **Reviewing and Improving the Performance of the Occupational Safety and Health Management System**

To find out the overall result of the indicators regarding reviewing and improving the performance of the Occupational Safety and Health Management System, it can be seen in table 5:

**Table. 5**

### **Reviewing and Improving the Performance of the Occupational Health and Safety Management System**

No.	Option					Value Obtained					Amount
	a	b	c	d	e	a	b	c	d	e	
1	4	38	0	0	0	20	152	0	0	0	172
2	6	36	0	0	0	30	144	0	0	0	174
3	18	18	6	0	0	90	72	18	0	0	180
4	16	26	0	0	0	80	104	0	0	0	184
5	9	33	0	0	0	45	132	0	0	0	177
Total											887

Source: Research results

To determine the level of effectiveness of the occupational safety and health management system and to improve the performance of the Occupational Safety and Health Management System using a formula:

$$\% = \frac{n}{N} \times 100 \%$$

$$\% = \frac{887}{1050} \times 100 \%$$

$$\% = \frac{887}{1050} \times 100 \%$$

$$= 84,47 \%$$

From the results of the data analysis above, it shows that the indicators for reviewing and improving the performance of the Occupational Safety and Health Management System are in the very effective category with the results obtained for 84.47 percent, in the range of values 81% - 100%. This is viewed from the company referring to work guidelines to pay attention to improving the performance of occupational safety and health management and making a review report. This shows that in general at PT. PLN (Persero) the main unit of the Sulsebrabar region where the company always carries out

reviews and improves the performance of the Occupational Safety and Health Management System according to the rules that have been set.

## **DISCUSSION**

### **Establishment of Occupational Safety and Health Policies**

Occupational safety and health policies are made through a consultation process between management and labor representatives which must then be explained and disseminated to all workers. Occupational safety and health policies at PT. PLN (Persero) The Regional Main Unit of Sulselrabar is dynamic and is always reviewed in order to improve occupational safety and health performance. Occupational safety and health policies are measured by means of an initial review of occupational safety and health conditions, improving occupational safety and health performance, and receiving advice. Occupational safety and health policies are related to how well the establishment of occupational safety and health policies or regulations is produced based on the standard operating procedures established at PT. PLN (Persero) the main unit for the Sulselrabar region.

Establishment of occupational safety and health policies for employees at PT. PLN (Persero) the main unit of the Sulselrabar region has achieved work standards in terms of initial review of occupational safety and health conditions, improving occupational safety and health performance, and receiving advice. For now, the establishment of occupational safety and health policies at PT. PLN (Persero) the main unit of the Sulselrabar region has been effective but based on facts in the field and indirect observations the manager does not pay attention to his employees in terms of health checks.

### **Occupational Safety and Health Planning**

PT. PLN (Persero) Sulselrabar Regional Main Unit has made effective planning in order to achieve the successful implementation and activities of the Occupational Health and Safety Management System with clear and measurable targets. Planning at PT. PLN (Persero) Regional Main Unit of Sulselrabar has included objectives, targets, and performance indicators that are applied by considering hazard source identification, risk assessment, and control in accordance with applicable statutory requirements and the results of conducting an initial review of occupational safety and health.

Research results at PT. PLN (Persero), the main unit for the Sulselrabar region, shows that most employees already know the aspects of initial planning, ongoing planning, and work safety procedures by means of daily briefings. Occupational health and safety planning at PT. PLN (Persero) Regional Main Unit of Sulselrabar is increasing, managers have tightened socialization during daily briefings with employees.

### **Implementation of the occupational safety and health plan**

In achieving the goals of occupational safety and health, PT. PLN (Persero) South Sulawesi Regional Main Unit appoints personnel who have qualifications in accordance with the applied system. The implementation of occupational safety and health plan is measured through human resources, infrastructure, and action activities. Research results at PT. PLN (Persero) the main unit for the region of Sulselrabar shows that most of the employees already have the aspects of implementing occupational safety and health plan.



Implementation of occupational safety and health plans at PT. PLN (Persero) Regional Main Unit of Sulselrabar is increasing, managers and vendors have tightened screening, recruitment of certified employees, installation of occupational safety and health signs, and appropriate facilities.

### **Monitoring and Evaluation of Occupational Health and Safety Performance**

PT. PLN (Persero) the main unit of the Sulselrabar region has a system to measure, monitor, and evaluate the performance of the occupational safety and health management system and the results are analyzed to determine the success or to identify corrective actions. Monitoring and evaluation of occupational safety and health performance is measured based on audits and control measures described in the SOP of PT. PLN (Persero) Sulselrabar Regional Main Unit.

Research results at PT. PLN (Persero), the holding unit for the Sulselrabar region, shows that most of the employees already have aspects of monitoring and evaluating occupational safety and health performance. Monitoring and evaluation of occupational safety and health performance at PT. PLN (Persero) Regional Main Unit of Sulselrabar is increasing and auditors have conducted audits of the audit findings.

### **Review and Improvement of Occupational Safety and Health High School Performance**

The appointed leadership has carried out periodic health and safety school reviews to ensure the continuity and effectiveness of the policies and objectives of occupational safety and health. Research results at PT. PLN (Persero), the holding unit for the Sulselrabar region, shows that most of the employees already have the aspects of an accident outcome assessment, review reporting, and the effectiveness of improving the performance of the Occupational Health and Safety Management System.

Reviewing and improving the performance of occupational safety and health high schools at PT. PLN (Persero) the main unit of the Sulselrabar region is increasing, managers and vendors have paid attention to reviewing and improving the performance of the Occupational Safety and Health Management System.

### **CONCLUSION**

Based on the results of research on the effectiveness of the occupational safety and health management system at PT. PLN (Persero) the main unit of the Sulselrabar region can be categorized as effective, this can be seen from each of the results of each indicator, namely the establishment of occupational safety and health policies, occupational safety and health planning, implementation of occupational safety and health plans, monitoring and evaluation of safety performance and occupational health, review and improve the performance of safety high schools and occupational health. Of the five indicators, on average get effective results, so it can be concluded that PT. PLN (Persero) the main unit of the Sulselrabar region has an effective level of occupational safety and health management system.

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