

## **ABSTRACT**

*PT. PLN (Persero) substation, ULTG South Bandung is the largest electricity supplier in Bandung Regency. Based on data on hazard events that occurred at PT. PLN (Persero) ULTG South Bandung in the period January 2020-June 2021, there were 28 findings of hazard events non-HIRARC. From the 28 findings, there are 19 findings include types of safety findings (findings of hazards related to personnel safety) and 9 other findings including types of electrical installations (findings of hazards related to electrical installations). The process of handling 28 cases hazard has different processing times and it takes a long times. The decision time for handling hazard and control handling should be handled quickly because from the 28 findings, 5 of them are in the near-miss category (almost causing injury to personnel) and 23 others are in the unsafe condition category (unsafe conditions that cause work accidents). Findings that are included in the nearmiss category are the type of safety, namely bordes were split/collapsed/crushed and there were small gravel stones causing personnel to fall, and there were safety helmet that did not use a chin strap which caused the helmet to fall during the operation process. By looking at the types of findings in these categories, it is necessary to create a quick response work mechanism in the process of handling non-HIRARC hazards at ULTG Bandung Selatan so that these hazard problems can be handled quickly. The design method used in this final project is process design because the result of this final project is a proposed business process that delete and only replace part of the existing business processes and there are existing activities that are maintained.*

*The results of the work mechanism design are quick response divided into two designs, which is, the design of the handling mechanism non-HIRARC hazard and the new hazard. In the design of mechanism quick response in the process of handling non-HIRARC hazards, there are decision-making automation for hazard non-HIRARC treatments and a material management system in ULTG South Bandung. The design of this decision-making automation will use an Inspection System with a hazard classification grouped based on the length of*

*time the hazard is handled, the existing controls provided and the place where the hazard occurs. The material management system contains additional job descriptions related to Material Warehouse Staff, additional material calculation activities, and warehouse layout design. Furthermore, in the design of the new hazard handling mechanism, a new hazard decision-making process was added using a risk matrix. The addition of a new hazard assessment activity using the risk matrix is an addition to the duties and responsibilities of the job description from the Head of K3L. After designing a handling mechanism non-HIRARC hazard and a new hazard, then the two designs are combined into a proposed business process. Then, the results of the design are validated which contains the compatibility between the results of the proposed design and the problem owner/stakeholder, Head of K3L.*

*Validation is done by filling out a validation form by the Head of K3L. From the results of the form, it can be seen that the design results are in accordance with company requirements, speeding up response times and facilitating non-HIRARC hazard handling. To find out whether the design results are feasible to be implemented in the company or not, a feasibility analysis is carried out using three indicators that are, processing time, technical, operational and financial. Feasibility analysis is carried out by referring to the results of the validation as well as discussions with the Head of K3L. The feasibility results on the design results in this final project are feasible to be implemented in the company.*

***Keywords – Work Mechanism Quick Response, Process Design, Decision Automation, Material Management, Risk Matrix***