

Safety Incidents Analysis and Risk Assessment in a Utilities Company-Case Study

Shatha Siefan

Industrial Engineer, Engineering Systems and Management
Department of Engineering Systems and Management, Khalifa University
Abu Dhabi, United Arab Emirates
100062616@ku.ac.ae

Fatma Alshamsi

Aerospace Engineer, Engineering Systems and Management
Department of Engineering Systems and Management, Khalifa University
Abu Dhabi, United Arab Emirates
100043063@ku.ac.ae

Fatema Alhosani

Mechanical Engineer, Engineering Systems and Management
Department of Engineering Systems and Management, Khalifa University
Abu Dhabi, United Arab Emirates
100051776@ku.ac.ae

Khalood Alhammadi

Chemical Engineer, Engineering Systems and Management
Department of Engineering Systems and Management, Khalifa University
Abu Dhabi, United Arab Emirates
100042547@ku.ac.ae

Abdulrahman Alhashmi

Industrial Engineer, Engineering Systems and Management
Department of Engineering Systems and Management, Khalifa University
Abu Dhabi, United Arab Emirates
100056793@ku.ac.ae

Abstract

The utilities industry, encompassing essential services like electricity, water, and telecommunications, is integral to modern society. However, ensuring safety within this sector is paramount, as evidenced by concerning statistics revealing high rates of severe incidents. This study addresses the pressing need for enhanced safety measures within the utilities industry by focusing on identifying safety incidents, analyzing trends, conducting risk assessments, and proposing solutions. Utilizing established methodologies such as the fishbone diagram and the bow tie method, this project systematically collects and analyzes safety incidents observed during site visits within a utilities company. Descriptive analysis uncovers patterns and trends, followed by a comprehensive risk assessment focusing on the most severe incidents. The fishbone diagram aids in identifying root causes, while the bow tie method visualizes relationships between hazards, causes, and preventive measures. The study underscores the importance of addressing systemic issues across various domains, including management commitment, policy enforcement, and training effectiveness. By implementing targeted interventions, organizations can foster a culture of safety and prevent future incidents. Overall, this study offers valuable insights into workplace safety dynamics within the utilities industry. By employing a combination of tools and methodologies, organizations can develop effective strategies to mitigate risks and enhance safety standards comprehensively.

Keywords

Safety, Analysis, Risk, assessment, company.