

Sharing of Best Practices in Managing Human Factors to Prevent Incidents

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ABSTRACT

Objective: Objective of this paper is to share the best practices in managing human factors to prevent incidents.

Method: Method of obtaining the data was from injurious incident investigation reports recorded in 2018-2021. Series of brainstorming and discussions were conducted to analyse and develop interventions to manage human factors to prevent incidents.

Results: Majority of injurious incidents at PETRONAS are caused by Human Factors e.g. gaps in Competency, Communication, HSE Culture, Procedures and Instructions. Human error analysis from 2021 Total Recordable Cases (Fatality, LWC, RWC, MTC) in PETRONAS showed that about 50% incident was due to Mistake where majority (85%) was due to Knowledge-Based Mistake and 31% was caused due to Human Violation. This paper is to share the best practices to prevent human error in operations and maintenance activities (human factors in equipment design are excluded in this paper). The followings are the best practices implemented/in progress of implementing: 1. Include Human Factor in Job Hazard Analysis; 2. Strengthen Job Hazard Analysis communication & implementation; 3. Implement Generative HSE Culture program; 4. Enhancement of Competency Management program (SMA based on Job Competency Profile, R.NET & HSE Assessment for Technicians, Work Leaders Assessment & Upskilling program, Human Factor Upskilling program); 5. Implement ABR (Accountability & Behaviour Reinforcement); 6. Enhance Supervision through utilization of digital tools and technology (AI CCTV, Drones, Portable video camera (attached to helmet).

Conclusion: It is still a journey towards zero injury in PETRONAS. Initial result is promising, showing injurious incidents (TRC) have reduced from by 22% in 2022 compared to 2021.

Keywords: Incidents, human factor, human error, zero injury, PETRONAS
