Safety Management During the COVID-19 Pandemic: Implementing A Digital JHA Tool

The Job Hazard Analysis process focuses on job tasks to identify hazards before they occur.

By Chris Miller | Jan 20, 2021

The COVID-19 pandemic reinforced the need for streamlined, accessible safety analysis tools across the construction industry. This especially includes safety risk management tools that site supervisors and line employees can easily and consistently use to ensure tasks are conducted according to approved procedures and plans. Too often, conditions on site can result in silos between functions, team members and even systems and components. Sadly, COVID-19 has once again demonstrated the need for a holistic, integrated approach to consistently maintaining safe site conditions for everyone involved in construction, as well as those impacted beyond the work site in the case of the virus.

William Mueller, an HSE manager at a PM/CM/PgM firm, described the firm's success in developing and implementing a tool to consistently support site safety even under pandemic conditions. Mueller says that the key to the company's detection and prevention efforts was the development of a user-friendly digital Job Hazard Analysis (JHA) process. The JHA focuses on job tasks to identify hazards before they occur, stressing the relationship between the worker, the task, the tools and the work eliminate or reduce hazards to an acceptable risk level.

A Team Effort

Mueller notes that creating the digital JHA process required close collaboration with the company's IT Department. In an industry sometimes slow to adapt to new technologies, Mueller notes that working with IT was critical to developing a seamless and easy-to-implement JHA process and creating a central repository for JHA data available across the company for future reference.

"This was a truly collaborative effort between the safety department and our IT experts," says Mueller. "It definitely was not a top-down process where our construction professionals simply laid out some requirements and expected IT to deliver. IT's contributions, beyond designing and building the inputs, outputs and structures needed for the process, included help on achieving a user experience that field employees could embrace with a minimal learning curve. A tool no one uses is not a useful tool, no matter how well intentioned or designed."

A Simplified Process

Too often, applying a formal JHA tool "on the ground" results in resistance to change and non-compliance. Supervisors and line employees may claim a lack of time to learn and implement the process, putting themselves and their employer in non-compliance with approved processes and procedures. In addition, failure to use the JHA as intended and when intended would miss invaluable opportunities to identify, discuss and mitigate risks and hazards, setting the efficacy of the plan back further and further.

"It is critical that teams capture the reality of conditions and incorporate these into their JHAs during the hazard assessment process," says Mueller. "One way to achieve this with minimal effort is to integrate a digital solution for registering and archiving inputs."

The JHA tool developed by Mueller's team enables employees assigned to field operations to digitally access, complete and submit the form for acceptance. An employee request facilitates the name of their supervisor, the project name and the project number. Once this information is submitted, it automatically creates a repository and opens access to the organization's hazard assessment tool template along with a job aid on how to complete the process.

Once the online/offline hazard assessment is completed, it is uploaded by the employee back into the repository. By completing this step, the employee submits the hazard assessment for review and acceptance with the supervisor and the organization's safety professional.

Early on during the implementation, the safety professional was responsible for reviewing and accepting the submitted hazard assessment. Once all changes were made, the document was available in the repository and coded as accepted. In time, supervisors would ultimately become responsible for the review and acceptance process, using the safety professional for guidance on an as-needed basis.

Once accepted, the employee or supervisor can review the document with all relevant employees participating in the project. The document provides a location where all attending participants can sign the form as proof of acknowledgement. Also, the supervisor will upload a copy of the signed document into the designated repository and maintain the original signed copy on project, making it available for review upon request. Then, going forward, any new hazards arising on the initial hazard assessment form constitutes a mechanism of change that activates the identical risk assessment process.

Choosing to Use the JHA

The winter season is upon us and COVID-19 cases are rising globally, presenting new and unprecedented risks to construction projects. Mueller is confident the new JHA tool will help to consistently mitigate safety risks associated with the virus until vaccines are widely available.

About the Author

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