PREJOB SAFETY BRIEFINGS

Why They Should Be Included in an OHSMS

By William J. Connor and John M. Mulroy

EFFECTIVE OCCUPATIONAL HEALTH AND SAFETY management systems (OHSMSs) should employ prejob safety briefings to communicate residual operational risk before work is initiated. To help achieve desired safety outcomes, certain critical attributes of the prejob safety briefing process must be in place during planning, execution and follow-up including clear communication, current work procedures, situational and hazard-specific precautions or safety and health interventions, energy source controls, and PPE requirements. Like columns supporting a building, these aspects of the prejob briefing can be considered pillars of support bolstering the prejob safety process, the OHSMS and the achievement of safety outcomes.

Because risk is an inescapable reality, organizations must have a fundamental grasp of methods to achieve a tolerable level of operational risk. Safety professionals must consider best practices beyond compliance to effectively communicate to employees about hazard control methods. An effective prejob safety briefing process can provide one vehicle for worker participation as required in OHSMS consensus standards, while promoting continual improvement by challenging conventional, organizationally accepted wisdom of accepted hazard control techniques.

What Is a Prejob Safety Briefing?

A briefing is a conversational assessment of safety and health conditions related to a specific job or task (Schnyer, 2013). A good job briefing is a crew participatory process—a critical element of an effective and sustainable OHSMS that proactively identifies hazards and applies the hierarchy of controls to reduce risk before starting a task, ultimately creating a safer and healthier work environment (Figure 1, p. 32; Schnyer, 2013). OSHA 29 CFR 1910.269 and 1926 Subpart V, which are vertical standards covering only electric power generation, transmission and distribution, require this regulated community to conduct prejob safety briefings daily and, depending on the hazardousness of the work, more than once per shift to ensure that tolerable operational risk levels are achieved.

The preamble for 29 CFR 1910.269 states that after carefully weighing the various potential advantages and disadvantages of using a regulatory remedy to reduce risk to frontline power generation, transmission and distribution workers, OSHA concluded that mandatory standards requiring an effective prejob safety briefing represent the best choice for reducing risks to employees in this specific industry (U.S. DOL, 2014).

Goal of the Prejob Briefing Process

OSHA 29 CFR 1910.269 and 1926 Subpart V require employers to ensure that the "employee in charge" conducts a job briefing with workers before they start each job. The agency's preamble for 1910.269 and 1926 Subpart V states:

> The job briefing requirement makes it the personal responsibility of every crew member to understand all aspects of the job. The time it takes to do a t-horough job briefing is usually 5 to 15 minutes. This is time well-spent to eliminate the possibility of an accident due to workers not knowing or controlling hazards in the work area. (U.S. DOL, 2014, p. 58)

OSH professionals should recognize the agency's stance as an endorsement of the value of the prejob safety briefing process. When all process elements are in place, an effective prejob safety briefing can help the organization mitigate operational risk to reduce worker injuries, illnesses, property, facility or product damage, or releases that impact the environment (Figure 2, p. 33). Effective prejob safety briefings can measurably enhance an OHSMS, and organizations that have not adopted this best safety practice should not perceive prejob briefings as limited to only this single vertically regulated industry (i.e., electric power generation, transmission and distribution).

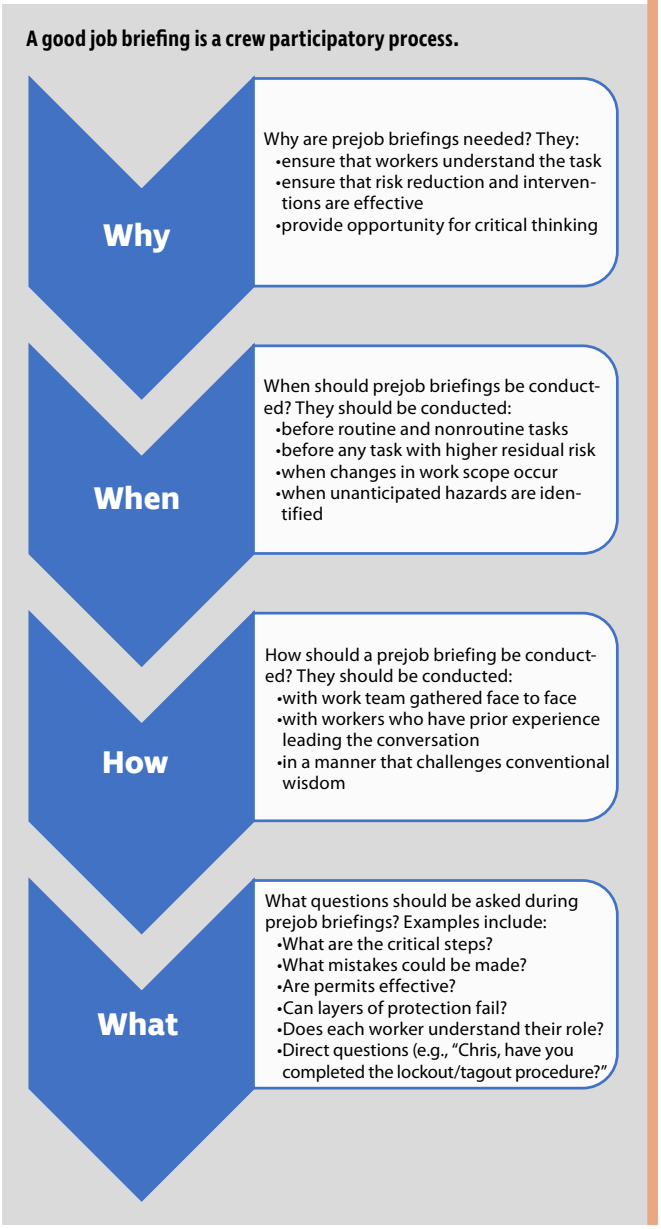
How Often Should a Prejob Briefing Be Conducted?

OSHA leads the way for safety professionals aspiring to adopt this best practice in their organization's OHSMS. According to

KEY TAKEAWAYS

- **Prejob safety briefings provide employers a vehicle for effectively communicating risk and promoting internal stakeholder participation, which improves an organization's occupational health and safety management system (OHSMS).**
- **Prejob and postjob briefings provide organizations an opportunity to challenge conventional wisdom, identify OHSMS gaps, and institutionalize best work practices and lessons learned.**
- **This article reviews key aspects of prejob safety briefings and details OSHA requirements under 29 CFR 1910.269 and 1926 Subpart V as a road map for adopting this process as a best management practice for any industry. The authors offer insights on the inclusion of leading and lagging OSH indicators to maximize impact.**

FIGURE 1
PREJOB SAFETY BRIEFING PROCESS



29 CFR 1910.269(c)(4)(i), a single "brief discussion" is satisfactory if the work involved is routine and if the employees, by virtue of training or experience, can reasonably be expected to recognize and avoid the hazards associated with the job. The standard states that more extensive discussion shall be conducted if the work is complicated or particularly hazardous, or if the employee cannot be expected to recognize and avoid the hazards associated with the job. If an employee is working alone, it is the employer's responsibility to ensure that the tasks to be performed are planned as if a briefing were required [1910.269(c)(5)]. According to 1910.269(c)(2), the briefing shall cover at least the following subjects, which can easily be adapted to fit other industries:

- hazards associated with the job
- work procedures involved
- special precautions
- energy source controls
- PPE requirements

Incorporating these subjects into the OHSMS's prejob safety briefing process creates a strong and sustainable general framework to build an in-house prejob safety briefing process as a best safety practice.

What Can Be Covered During a Prejob Safety Briefing?

According to the Bureau of Labor Statistics (BLS, 2020), 2.8 million nonfatal workplace injuries were reported by private industry employers in 2019, essentially unchanged from 2018 and 2017. The top three nonfatal injuries or exposures for 2019 include overexertion/bodily reaction (about 33 incidents per 100,000 workers); falls, slips and trips (about 27 incidents per 100,000 workers); and contact with objects/equipment (about 24 incidents per 100,000 workers). These top three injuries account for more than 84% of all nonfatal injuries involving days away from work (NSC, n.d.). Work-related injuries are generally attributed to the following primary hazard sources: struck by or against; caught between; contacted by or with; falls to the same or lower level; overexertion; and exposure (Swartz, 2002). These hazard sources must be recognized and controlled so the potential for serious injuries and fatalities can be reduced or eliminated. For each hazard recognized, the organization's most effective risk reduction methods based on the hierarchy of controls and best safety practices must be employed and communicated during the prejob briefing.

Safe Work Procedures Involved

Routine and nonroutine tasks will have unique and specific work instructions that must be discussed during a prejob safety briefing. These work procedures can include:

- rules, regulations, plans and standard operating procedures,
- training personnel to do their job, and
- establishing procedures and accountability to 1. perform preventive and corrective maintenance on equipment; 2. ensure that the correct equipment is used and provide employees with sufficient supplies to complete the job safely and correctly; 3. employ general housekeeping practices; 4. supervise task to ensure a high level of safety performance; and 5. ensure recurring inspection of the workplace and equipment (Ferry, 2006).

Any critical step presenting a potential risk to workers in the standard operating procedure should be discussed during a prejob safety briefing so that employees fully understand their roles and responsibilities to achieve desired risk reduction. It is also critical at this point in the process that employees' questions and concerns are thoroughly addressed through open, two-way conversations where worker participation in hazard recognition, evaluation, and control is strongly encouraged and supported by management and their peer groups.

Research shows that a significantly large share of incidents resulting in serious injuries or fatalities occurs when unusual and nonroutine work is being performed, in nonproduction activities, during shutdowns for repair or maintenance, where sources of high energy are present, and where upsets occur (Manuele, 2014). To avoid a serious injury or fatality associated with these high-risk tasks including emerging work scopes, effective safe work procedures must first be developed and communicated through a vehicle such as the prejob safety briefing (Figure 3).

Special Precautions

Prejob safety briefings further ensure that employees are provided with the proper safety equipment and are fully trained on the operational procedures of the equipment or machines they will be working with, and those workers must know all relevant facts about a machine or system to complete an assigned task injury-free.

Energy Source Controls

Energy source controls are developed as an integral part of an organization's diagnostic and preventive maintenance system, which reduces the number of unplanned jobs that workers must perform

FIGURE 2

PROCESS ELEMENTS OF A PREJOB BRIEFING

Establish work scope	Determine if informal or formal prejob safety briefing	Assemble work crew; assign roles and responsibilities	Compile documentation; ensure worker understanding	Assess (qualify if informal, quantify if formal) operational risk
Task steps	Review job hazard analysis and related documentation; generate permits	Visit work site; identify critical step(s)	Determine what could go wrong	Identify and control adjacent hazards
OSH controls	Stakeholder conversation: Review JHA, energy sources, lockout/tagout, special precautions	Verify emergency procedures, communication methods	Clarify stop work authority	Set expectations for emerging or unplanned work
Worker readiness	Verify worker training qualifications	Discuss error precursors and at-risk behaviors	Specify individual capabilities or limitations	Gather needed PPE per current revision of job hazard analysis
Two-way conversation	Brainstorm: Review task-critical step(s)	Identify error traps	Determine worst possible outcome	Ensure that layers of protection are effective and in place
Execute	Monitor layers of protection for effectiveness	Utilize PPE as last layer of protection	Ensure that new workers receive needed prejob briefing information	If formal prejob safety briefing, generate documentation for audits
Debrief: Two-way conversation	Brainstorm: Identify corrective and preventive action(s) for future work	Institutionalize lessons learned (e.g., maintenance work order system)	If formal, file prejob safety briefing documentation; revise JHA if needed	Audit prejob safety briefing process for continual improvement opportunities

on equipment (Burlet-Vienney et al., 2017). The lockout/tagout procedure for a specific task must be discussed in detail and include machine-specific instructions, ensuring that all hazardous energy sources are properly controlled and affected personnel are protected.

PPE Requirements

In a study on PPE and human behavior, 83% of participants felt that PPE positively affected their safety behavior (Dean, 2014). The researcher further asserted that workers became more safety conscious and avoided risky behaviors when they used PPE (Dean, 2014). Although PPE is the least effective layer of protection on the hierarchy of controls, an OHSMS promotes all available additional layers of protection against hazards and promotes desired safety behavior.

Value of Applying Lagging Indicators

Lagging indicators are trailing indicators, measuring events or consequences that have already happened; sustainable organizational responses most often occur in reaction to these measurements (Minnick & Wachter, 2019). Lagging indicators shared during the prejob safety briefing (e.g., injury/illness experience, near-hit experience, facility or product losses, negative environmental impacts) can help an organization improve its safety culture. Sharing this information establishes an additional support pillar, further reinforcing and strengthening the prejob safety briefing process of open conversation between frontline workers and management about real-world experience.

Engaging workers in lagging indicators before a task is initiated enhances worker knowledge and understanding of safe work procedures or gaps in those procedures, including resolution of individual interpretation of correct work procedures. Lagging indicators are used to establish the history of what has happened prior while also testing the effectiveness of prescribed controls for those recognized hazards. Tracking the trend of these lagging indi-

FIGURE 3

AVOIDING INJURY IN HIGH-RISK TASKS

Each step of the prejob briefing is critical, and outcomes can influence the other steps. For example, if the work crew is installing pipe inside a trench, heavy equipment arriving at the jobsite and idling nearby may impact air quality inside the trench. Suddenly, planned OSH layers of protection may be inadequate for the new operational risk of carbon monoxide.

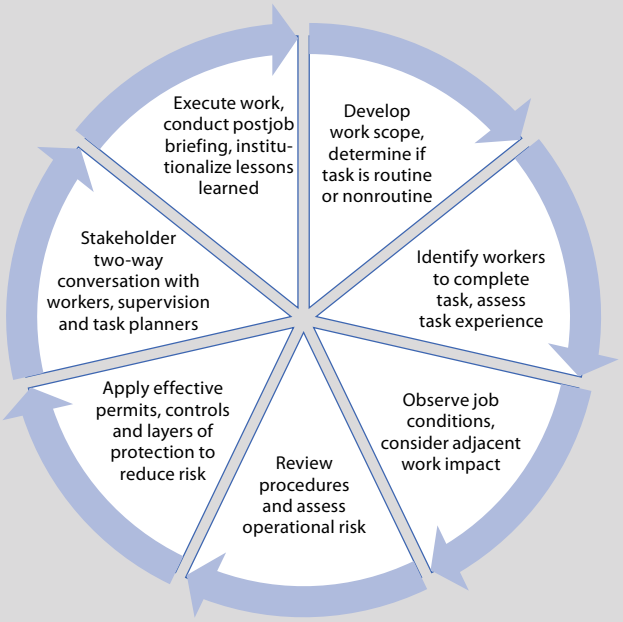
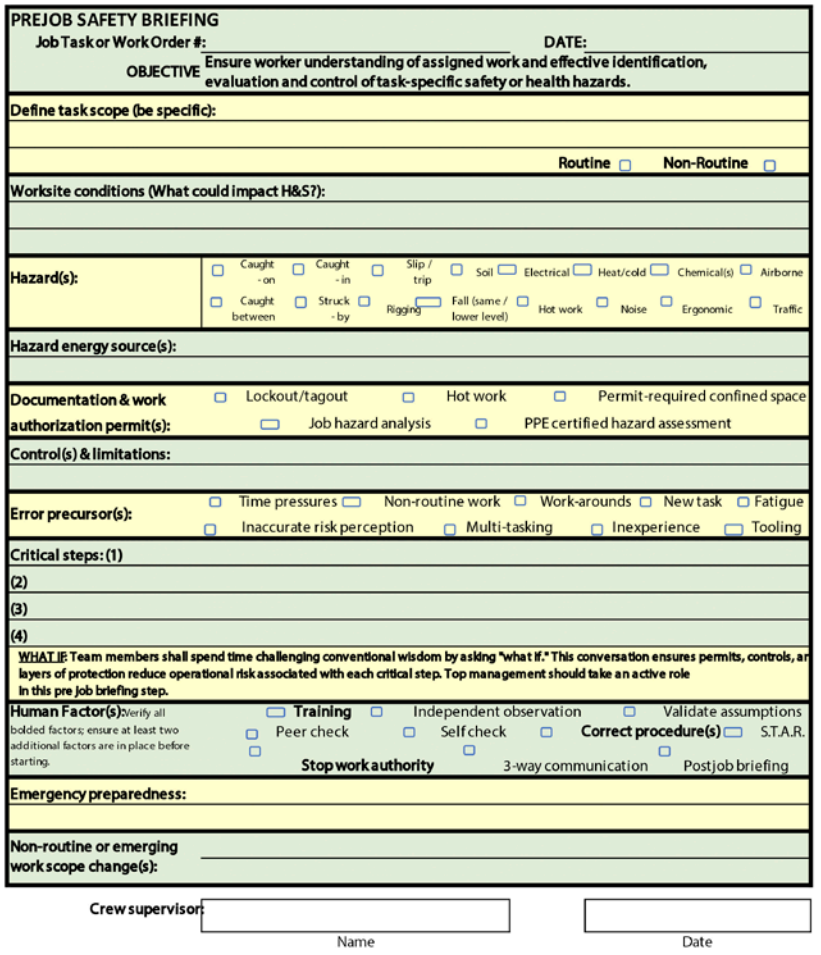


FIGURE 4

EXAMPLE PREJOB SAFETY BRIEFING FORM



PREJOB SAFETY BRIEFING

Job Task or Work Order #: DATE:

OBJECTIVE: Ensure worker understanding of assigned work and effective identification, evaluation and control of task-specific safety or health hazards.

Define task scope (be specific):

Routine ☐ Non-Routine ☐

Worksite conditions (What could impact H&S?):

Hazard(s): ☐ Caught - on ☐ Caught - in ☐ Slip / trip ☐ Soil ☐ Electrical ☐ Heat/cold ☐ Chemical(s) ☐ Airborne ☐ Caught between ☐ Struck - by ☐ Rigging ☐ Fall (same / lower level) ☐ Hot work ☐ Noise ☐ Ergonomic ☐ Traffic

Hazard energy source(s):

Documentation & work authorization permit(s): ☐ Lockout/tagout ☐ Hot work ☐ Permit-required confined space ☐ Job hazard analysis ☐ PPE certified hazard assessment

Control(s) & limitations:

Error precursor(s): ☐ Time pressures ☐ Non-routine work ☐ Work-arounds ☐ New task ☐ Fatigue ☐ Inaccurate risk perception ☐ Multi-tasking ☐ Inexperience ☐ Tooling

Critical steps: (1)

(2)

(3)

(4)

WHAT IF: Team members shall spend time challenging conventional wisdom by asking "what if." This conversation ensures permits, controls, and layers of protection reduce operational risk associated with each critical step. Top management should take an active role in this pre job briefing step.

Human Factor(s): Verify all bolded factors; ensure at least two additional factors are in place before starting. ☐ Training ☐ Independent observation ☐ Validate assumptions ☐ Peer check ☐ Self check ☐ Correct procedure(s) ☐ S.T.A.R. ☐ Stop work authority ☐ 3-way communication ☐ Postjob briefing

Emergency preparedness:

Non-routine or emerging work scope change(s):

Crew supervisor: Name Date

cators over time following the adoption of the prejob briefing can also be a measure of the briefing effectiveness within the OHSMS.

With guidance from the OSH professional, the responsible supervisor or employee in charge of the prejob safety briefing process can provide employees with best practices for controlling or eliminating risk associated with observed trends in associated lagging indicators. For example, when discussing a recent injury, the root causes and corrective or preventive actions must be incorporated before a similar event recurs. To achieve desired safety outcomes, all workers must be knowledgeable of recent loss incidents resulting from the task and of management's corrective or preventive actions. A conversation about what happened, how it happened, and how it will be prevented in the future between team members and their supervisor can promote an open forum for workers to speak freely about perceived job hazards.

Value of Applying Leading Indicators

For nonroutine tasks, the prejob safety briefing would likely benefit from a formal two- or three-dimensional risk assessment, which helps organizations anticipate and grasp the severity and likelihood of a serious injury or fatality occurring (Manuele, 2014). Completion of these risk assessments can be tracked as a leading indicator, and the results from these formal risk assessments must be interpreted by trained safety professionals and operational planners with key OSH responsibilities. Outcomes of these formal assessments must be reviewed with the responsible crews to ensure that the workers agree that hazards associated with the task are effectively mitigated. Other leading indicators provide advance warning of potential events or incidents and, when timely, allow an employer to take action to prevent an injury or illness (Rostykus & Mallon, 2017). The prejob safety briefing ensures that employees can participate in continual safety and health improvement by freely expressing questions or concerns about a particular task.

Value of Job Briefings

Schnyer (2013) asserts that prejob safety briefings:

1. Help organizations overcome language or communication barriers. For example, some crew members may need additional direction or clarification because they are unfamiliar with work procedures, particularly for nonroutine tasks.
2. Develop a consistent, organized approach during situations in which tasks are unfamiliar or infrequently performed, and may involve uniquely hazardous conditions associated with repairs, maintenance, lockout/tagout of high energy sources, or during process upsets, as reported by Manuele (2014).
3. Encourage crews to return to documented job briefings to review the work plan for additional information or clarification.

Additionally, a written job briefing can include specific hazards, procedures, precautions and PPE requirements associated with the job at hand, as well as provide a means for employees to acknowledge their individual roles, responsibilities and knowledge about job hazards and safety precautions (OSHA, n.d.).

What Defines a Good Prejob Safety Briefing & How Is Risk Best Communicated to Employees?

To successfully communicate risk during prejob safety briefings, all employees must be actively engaged and involved. The "OH&S Policy" section of ISO 45001:2018, Occupational Health and Safety Management Systems: Requirements With Guidance for Use, states, "Top management shall establish, implement, and maintain an OH&S policy that includes . . . a commitment to consultation and participation of workers, and, where they exist, workers' representatives" (ANSI/ASSP/ISO, 2018, p. 9). Organizations that seek conformance with ISO 45001:2018 must include a goal in their OSH policy to adopt and execute a prejob briefing process and develop a written program to ensure organization-wide effectiveness and consistency in its execution.

When employees regularly communicate with peers in an open, respectful manner, they are more willing to give and receive critical feedback (U.S. NRC, 2014). Managers must create an environment that is supportive, encouraging and accepting of both positive and negative feedback, and where workers are inclined to voice their opinions (U.S. NRC, 2014). The "Communication" section of ISO 45001:2018 states, "The communication process(es) established by the organization should provide for the gathering, updating and dissemination of [OH&S] information. It should ensure that relevant information is provided, is received and is understandable to all relevant workers and interested parties" (ANSI/ASSP/ISO, 2018, p. 33). Clearly, the adoption of a

formal prejob briefing process promotes organizational conformance with ISO 45001:2018 OSH communication requirements. A prejob safety briefing process, inclusive of all internal stakeholders, ensures that questions and concerns can be addressed as a team, promoting opportunities for worker participation as an integral part of an organization's safety culture (U.S. NRC, 2014).

Utilizing What-If Questions

One method of effectively analyzing residual risk and challenging the conventional wisdom of organizationally accepted hazard control methods during the prejob safety briefing is by utilizing rigorous what-if questions during the prejob brief (Figure 4). The what-if questions pointedly challenge each step of each task, identifying risk associated with procedural upsets, miscommunications, operator errors, equipment failures and software errors, or accepted methods of conducting work. The team discusses and answers each what-if scenario as to the causes, effects, and consequences, and prescribed safeguards or controls (Lyon & Popov, 2020). By including a what-if discussion, the effectiveness of the prejob briefing process increases substantially, improving opportunities to achieve the organization's desired safety outcomes while enhancing worker knowledge of identified risks before starting the job.

Safety Attitude

Emotions influence choice. Top management wants employees to make the right choices as much as do the workers themselves. Supervision supportive of the prejob safety briefing process positively influences overall risk communication, resulting in workers actively engaged in their own safety. Conversely, supervision that does not effectively communicate with workers about risk can result in poor worker morale and increased risk-taking (Garrabrant, 2019). If the supervisor is perceived to be unsupportive of the OHSMS's safety initiatives, expectations, and requirements, workers will respond by disengaging, only bringing up safety-related matters when necessary and to avoid possible conflict (Garrabrant, 2019). With a supportive and positive supervisory attitude, workers will not be reluctant to voice questions or concerns during a prejob safety briefing.

Conducting a Postjob Review

After completing a work task, the authors strongly recommend that the organization conduct, at a minimum, an informal postjob review to identify gaps within the OHSMS and enhance the organization's layers of protection. This informal postjob review process creates a foundation to create new opportunities for worker participation in the OHSMS and seek feedback from team members, which can lead to formalizing safe work practices. As a best management practice, supervisors or team leads are encouraged to document the informal postjob review for internal OHSMS audits (Mission Support Alliance LLC, 2011).

A formal postjob review should be conducted when certain task-related criteria are triggered, such as unplanned or unexpected work conditions encountered during the work, or permits, specified controls, or layers of protection identified during the prejob briefing proved ineffective. A formal debrief should be conducted in which workers and interested parties can analyze the completed work and identify specific preventive or corrective actions to reduce future intolerable operational risk (Mission Support Alliance LLC, 2011). Documentation is extremely beneficial for the formal post brief process and should be retained for OHSMS audit purposes.

A postjob review is a best management practice for continual improvement of both routine and nonroutine work activities, resulting in enhanced institutionalizing of lessons learned, creation of effective corrective or preventive actions, and ultimately leads to the organization achieving its desired safety outcomes. If readers' OHSMS do not include postjob review, they should.

Conclusion

While prejob safety briefings are required in the power generation, transmission, and distribution industry and are foundational to achieving desired safety outcomes for companies regulated by this vertical standard, prejob safety briefings also have critical OHSMS application in other industries as a best safety management practice. The prejob safety briefing communicates specific risks to employees, ensuring that hazards are effectively recognized and controlled before the task begins. Any organization, regardless of industry, can benefit from adopting a prejob safety briefing process to measurably enhance worker OSH engagement. When employees actively participate in the prejob safety briefing process, the organization's culture will improve, and desired OHSMS safety outcomes will be achieved. **PSJ**

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