

Case Study: Pool California Employees Take Charge of Safety With a Behavior-Based Safety Approach¹

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Abstract

This article provides information regarding the successful implementation of Behavior-Based Safety (BBS) at Pool California Energy Services. Quantitative and qualitative data are presented demonstrating organizational culture and safety improvements resulting from BBS.

Background

Despite OSHA recordable rates better than the industry average, safety committee members and employees from both the Northern and Southern Districts of Pool California Energy Services investigated a variety of approaches to improve their safety performance. Safety committee members and other employees from both the Northern and Southern Districts of Pool California investigated a variety of approaches and concluded they wanted to create a new safety culture, one in which individuals feel as strong a sense of responsibility for the safety of their coworkers as they do for themselves. Pool California employees refer to this as a Total Safety Culture (TSC). A primary tool they're using to create this change in culture is a behavioral observation and feedback process.

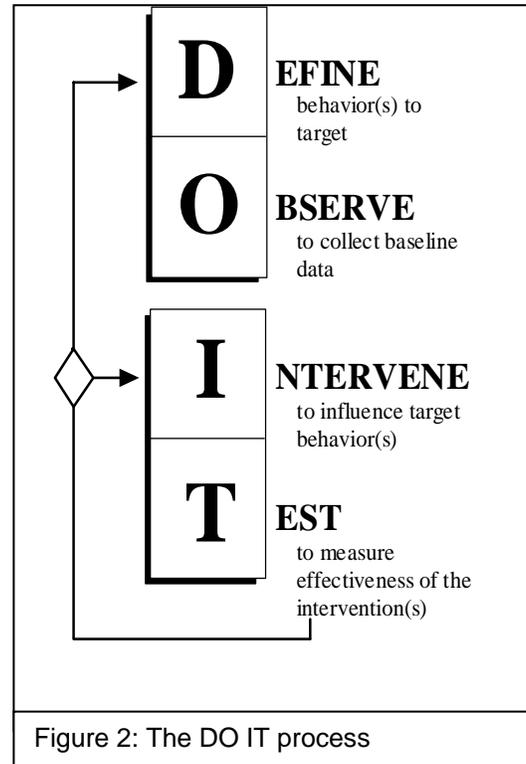
			Date: _____
Observer: _____			Time: _____
Operating Procedures	Safe	At-Risk	Comments
Body Positioning/Protecting <i>Positioning/protecting body parts (e.g., avoiding line of fire, using PPE, equipment guards, barricades).</i>			
Visual Focusing <i>Eyes and attention devoted to ongoing task(s).</i>			
Communicating <i>Verbal or nonverbal interaction that affects safety.</i>			
Pacing of Work <i>Rate of ongoing work (e.g., spacing breaks appropriately, rushing).</i>			
Moving Objects <i>Body mechanics while lifting, pushing, pulling.</i>			
Complying with Lockout/ Tagout <i>Following procedures for lockout/tag out.</i>			
Complying with permits <i>Obtaining, then complying w/permit(s). (e.g., confined space entry, hot work, excavation, openline, hot tap).</i>			

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Behavior Observation and Feedback: A Key to Achieving a Total Safety Culture

The desired shift towards an improved culture requires improvements in the frequency and openness of safety communication at all organizational levels, which is encouraged by an observation and feedback process. In such a process, employees first define critical safety-related behaviors and then develop a checklist containing those behaviors. An example of a typical observation checklist is shown in Figure 1.

Using the checklist, employees periodically observe each other using simple but effective observation techniques. Following each observation, the observer gives appropriate one-on-one coaching feedback regarding the safe and at-risk behaviors observed. This one-on-one dialogue occurring between peers is instrumental in changing at-risk work practices. In some cases, the feedback provides information to the individual about risky behaviors they may have been performing unintentionally, thereby allowing the worker to change his or her behavior in the future. In other cases, the feedback provides social support to encourage peers to take the time to perform behaviors in the safest manner when an alternative at-risk behavior is easier, faster, and/or more convenient. And finally, the feedback allows the observer and observee to analyze the situation together to identify and remove any barriers to safe work performance such as uncomfortable or inconvenient PPE or ergonomically incorrect equipment layout.



In addition, the observation data from individual checklists are periodically collected, compiled, and then shared with the employees as group feedback. This information is analyzed to identify behavioral categories needing special attention. Work teams then develop relevant intervention strategies to reduce the likelihood of the targeted at-risk behaviors using a continuous improvement process known as **DO IT**.

Simply, **DO IT** involves four sequential steps (see Figure 2): a) **D**efine critical behaviors to increase or decrease, b) **O**bserve target behaviors during a baseline phase to set specific goals for achievement and to understand outside conditions influencing the target behavior, c) **I**ntervene to change the target behaviors in the desired direction, and d) **T**est the impact of the intervention by continuing to observe the target behaviors. If the desired results are not achieved, target behaviors are re-defined or other interventions are implemented. When improvement goals are met, other target behaviors can then be selected.

Pool California’s Behavioral Observation Process

Pool California’s observation process is led by two former rig hands, Juan Landron and Troy Staib, each of whom oversees and coordinates the activities of the 7-10 employee committees

within their district. Roustabouts, crew workers, crew chiefs, and other employees use several different site-wide checklists to observe and then provide feedback to one another. One example is shown in Figure 3.

With Juan and Troy's support, each employee committee then analyzes their area's data, communicates the results to the remaining workforce, and works together to introduce changes to improve safety. In order to foster employee ownership of the process, participation is encouraged but not mandated. And yet, more than a third of Pool California employees currently and regularly make behavioral observations and an average of 90% of the 150 rigs have multiple observations performed by their members each month.

As Gary Kaufman, Personnel Director for the Southern District points out, "The behavior-based observation and feedback process (BBS) allows the people most affected by a safe working environment to participate in safety together as a unit and gives them ownership in safe production."

Observer: Date:	Safe	At-Risk	Barriers
1. Handling Pipe-Definitions fingers around pipe, RIH			
finger pinch pts while latching pipe			
fingers in end of tubing			
fingers top of slips			
hands on top of Backup			
2. Moving Equipment-Definitions			
fingers between bails and tongs			
fingers in eyes of links			
fingers between tubing & tongs			
3. Equip. Handling fingers between tool & hard area			
fingers on polish rod w/ equip. above			
Comments:			

Figure 3: Hand, Finger, & Wrist Checklist

BBS Success at Pool California

While there are still obstacles to overcome in using BBS to maximize Pool California’s safety performance, initial results after the first year are encouraging. Because 39% of all Pool California's injuries in the Southern District involved 'hand, finger, and wrist' incidents, one of the initial DO IT processes targeted hand, finger, and wrist placement. The implementation of this DO IT process resulted in a 52% reduction in the number of injuries to hands, wrists, and fingers over a 12 month period. Similar results have been demonstrated with fewer strains and sprains following a DO IT process targeting safe

lifting behaviors. This success is reflected in the overall OSHA recordable rate which dropped from 5.47 to 4.41 in just six months following initial BBS implementation. The next six months yielded a further decrease to a rate of 2.86. Further improvements are expected as the BBS process is continually refined and improved.

Safety attitudes and beliefs are improving following BBS implementation as well. As Jim Kulis, Southern District Safety Representative, points out, "With BBS, I can already see the culture changing." Based on pre- and post-test results using a safety culture survey, 95% of respondents at the Offshore Southern facility reported frequently praising others for working safely following BBS implementation, compared to 76% prior to BBS training. For both Districts, employees responded that peer pressure led to safety shortcuts *less often* following BBS implementation. Pool California employees also reported that BBS implementation has led to increased safety awareness, improved housekeeping, more frequent safety communication between co-workers, and an increased respect for safe workers.

Clearly, crew chiefs, crew workers, roustabouts, and other Pool California employees are experiencing immediate and important benefits as a result of their behavior-based safety efforts. But the benefits extend beyond Pool California employees. As James Johnson, Island Field Supervisor, notes, "The BBS process has allowed us to provide our employees with a better work environment, as well as provide our customer with a quality service. These results are due to the level of employee involvement in the BBS process."