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## Pool Employees In California Have Fewer Injuries and Improved Safety Culture Following Six Years of Behavior-Based Safety Implementation

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### **Abstract**

This article provides information about Pool Well Services Co (“Pool”) successful implementation and maintenance of their behavior-based safety (BBS) process over the last six years. Quantitative and qualitative data are presented demonstrating organizational culture and safety improvements resulting from BBS.

**Key Words:** Behavior-Based Safety, Total Safety Culture, Behavior Observation and Feedback

### Background

Pool operates one of the largest and most diversified mobile rig fleets in the United States (Rig Services). Complementing a strong rig fleet, Pool also offers a number of ancillary services including a large fleet of fluid transportation trucks (Fluid Handling Services). Pool’s mission is to be the best-in-class provider of well site services and strives to provide the highest quality of service with an uncompromising commitment to safety.

In addition to the standard services provided, Pool offers a variety of specialized services on a limited basis. These services include foam drilling and workover, coiled tubing, wire line, pressure cleaning of slotted liners as well as other capabilities.

### History of Pool California’s Behavior-Based Safety Process

In 1997, the Northern and Southern Districts of Pool (1,200 employees) began implementing a behavior-based safety process to improve their safety performance. Pool recognized the need to reduce OSHA recordable rates (although these rates were already better than the industry average) and minimize their overly-independent safety culture in which rig employees were reluctant to openly discuss safety issues and provide helpful safety feedback to one another. Pool determined that implementing a behavior-based safety process would help them create a Total Safety Culture (TSC) where employees feel as strong a sense of responsibility for the safety of their coworkers as they do for themselves. A key tool that Pool used to create sustained culture change and improved safety performance is their behavioral observation and feedback process.

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

Improving the frequency and openness of safety communication at all organizational levels is required to achieve a Total Safety Culture. This is encouraged through an observation and feedback process. In such a process, employees define key safety-related behaviors and then develop a checklist containing those behaviors.

Using the checklist, employees observe each other on the job and then provide positive and respectful one-on-one coaching feedback for both safe and at-risk behaviors observed. This peer-to-peer conversation is instrumental in changing at-risk work practices as well as providing formal opportunities for employees to compliment one another for completing tasks safely. Also, the feedback allows the observer and observee to analyze tasks together to identify and remove any barriers to safe work performance such as uncomfortable or inconvenient personal, protective, equipment (PPE) or ergonomically incorrect equipment layout.

Finally, observation data from individual checklists are regularly collected, compiled, and shared with the employees as group feedback. This information is analyzed to identify behavioral categories needing special attention. Work teams then develop intervention strategies to improve areas of weakness.

#### Pool Well Services' Behavioral Observation Process

Initially, a safety culture survey and corresponding structured interviews were used to gauge Pool's existing safety culture and plan and customize the implementation of the behavioral observation and feedback process. Next, a committee made up primarily of hourly employees designed Pool's behavior observation and feedback process. This team received several days of extensive behavioral safety training that included planning and preparation of the process (e.g., creating a behavioral checklist, developing rules for using the checklist, determining the roles and responsibilities of key groups to support the process). Then before the process was put in place, senior managers, supervisors, and rig team members actively participated in group-specific eight-hour behavioral safety training sessions.

Pool Well Service's observation process is led by two former rig employees, Juan Landron and John Rocissono, each of whom oversees and coordinates the activities of the seven to ten employee committees within their two districts. 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 1**.

Generally, two or three employees (hourly and supervisors) observe three or four rig employees at a time. Feedback is provided to employees on the rig one-on-one (during observations) and as a group (via rig safety meetings). With Juan and John's support, each employee committee analyzes their area's data, communicates the results to the remaining workforce at rig safety meetings, and then works together to introduce changes to improve safety. For instance, data from the observation process in 1997 showed that wheel chocks were rarely being used. To change this a "Wheel Chock" intervention was developed and 'reminder stickers' were created and posted in tool trucks for employees to view. Because of this simple intervention, employees began using the wheel chocks more frequently and the number of incidents associated with this risky behavior (i.e., no wheel chocks) decreased over the next five years. To test the effectiveness of interventions in general, Pool uses the following safety metrics: percent safe scores, percent participation scores, near-hit reductions, and incident reductions.

In order to foster employee ownership of the observation process, participation is encouraged but not mandated. And yet, 97% to 99% of Pool Well Service employees currently and regularly make behavioral observations and 100% of the 150 rigs have multiple observations performed by their members each month. Such strong support is largely due to the rewards and recognition process supported by senior management. Employees receive rewards for their participation in the process in a variety of ways. For example, observers can receive free gloves each month by completing ten or more observations. Also, safety captains receive six certificates upon reviewing their daily checklist and giving a presentation at the safety meeting. The behavioral safety team members receive a personalized jacket, watch or shirt (\$75 value), six safety certificates, and a letter from the district manager for being on the team for a year and being present at a minimum of 75% of the meetings. Behavioral safety trainers receive four safety certificates and a letter from the operations manager and safety meeting presenters receive two safety certificates and a letter from the operations manager. Also, all crew members receive one safety certificate when 100% of the crew is observed for three months. Further, employees receive six safety certificates when OSHA rate targets are met at the end of the year. Finally, certificates are given to employees that submit ideas for safety that are reviewed by the teams and approved by management to be implemented. The safety certificates are used to purchase jackets, boots, gloves, and other desirable items.

#### Sustaining the Behavioral Safety Process

Overall, Pool has successfully sustained the behavior-based safety process because of consistent attention to improving the process as well as strong supervisor and management support. To help gain the needed level of support, Mr. Landron led a number of successful training sessions with supervisors to better define their role in the observation process. In addition, safety performance solutions conducted special training sessions with all Pool supervisors. This eight-hour training course focused on using better coaching techniques (feedback) to bring out the best in people. Further, Pool periodically solicits employee input through short surveys. This allows Pool to assess strengths and weaknesses of the process and make modifications accordingly.

#### BBS Success at Pool

The overall OSHA rate dropped from 5.47 to 4.41 in just six months following initial BBS implementation in April of 1997. The next six years yielded a further decrease to a rate of 1.70 in 2003 (**Figure 2**). The continual reduction in injury and illness rates is directly related to a consistent increase in employee participation. Since 1997, the total number of observers jumped from 11% to 96% per year (**Figure 2**). Also, Pool saved more money in Worker's Compensation costs *in one year* than they spent implementing the entire BBS process.

The improved injury statistics are a reflection of a change in the organization's safety culture. Such changes are reflected in survey results. Before BBS, 76% of Pool employees said they regularly "praised others for working safely." Following BBS, 95% of Pool employees report they regularly praise others for working safely. Survey results also demonstrate that following BBS implementation, Pool employees report: higher safety awareness, better housekeeping, fewer shortcuts being taken, more respect for co-workers, and more frequent peer-to-peer feedback. Further improvements for Pool are expected in the *next* six years of BBS activity as the observation and feedback process is continually refined and improved.

As Richard Windes, area manager in Ventura, points out, “The improvements in our safety culture since we have initiated BBS have been phenomenal. The momentum BBS has created seems to keep growing. In my 29 years in this business nothing has been so successful as far as safety is concerned. One of my long term supervisors made the statement ‘with the safety process we now have in place he would encourage his son to come to work for Pool.’ He didn't feel that way before BBS.” Similarly, Darrell Baker, crew chief in Island Operations, comments, “Since the implementation of BBS into the work force...we have learned how to observe and give positive feedback to our peers, whereas in previous years we lacked that skill set. With more training and actively caring I believe we will achieve our goal of a Total Safety Culture.”

# Figure 1. Pool's Observation Checklist



## POOL WELL SERVICES Co.: A Nabors Industries Co.



**Date:** \_\_\_\_\_ **AM** **PM** **Area:** \_\_\_\_\_ **Equip#:** \_\_\_\_\_ **Weather:** \_\_\_\_\_  
 (circle one)  
**Observers:** 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_ 4) \_\_\_\_\_

<b>CREW ACTIVITY</b>	<input type="checkbox"/> RIG UP	<input type="checkbox"/> TRIPPING TUBING	<input type="checkbox"/> SANDLINE OPERATIONS	<input type="checkbox"/> TOOL TRUCK OPERATIONS
	<input type="checkbox"/> RIG DOWN	<input type="checkbox"/> TRIPPING RODS	<input type="checkbox"/> CHANGE-OVER N/U N/D	<input type="checkbox"/> RIG OPERATIONS

Other Activity : \_\_\_\_\_

**THE 6 POINT OBSERVATION PROCEDURE**

1. Introduce yourself and explain your beginning an observation
2. Remember to Focus on Behaviors
3. Begin your Systematic Observation Process
4. Stand back out of the way while observing
5. Focus on the work taking place as you observe
6. Conduct feedback session with observed employee or crew

1.0 PERSONAL PROTECTIVE EQUIPMENT	SAFE	AT RISK	N/A
1.1 Eye / Face / Hearing Protection <i>( Safety glasses, goggles, face shield where required? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Hard Hat, Footwear, Proper Clothing <i>( Plastic Hard Hat properly worn, inspected? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Hazardous Gas Detection / Confined Space Monitoring <i>( H2S monitors, rig, personal, placement of )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Breathing Apparatus <i>( Proper Placement, Inspection ? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Safety Harness/Anti Fall Equip <i>( Using Anti-Fall protection correctly? Cleanliness? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.0 BODY POSITION / USE			
2.1 Pinch Points / Hands, Fingers <i>( Hands &amp; Fingers away from moving parts? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Line of Fire <i>( Between Moving Equip., over or beside high pressure lines? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Lifting <i>( Knees Bent, lifting with legs? Back straight? Head up? Overexertion? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4 Push / Pull <i>( Pushing at Shoulder level? Pushing together? Good wrench bite? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.0 ENVIRONMENT			
3.1 Housekeeping <i>( Work Area Clear of Trash? Debris? Spills? And Obstructions? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 Walking / Working Surfaces <i>( Floors, Steps, Ladders, Handrails, etc. )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.0 TOOLS / EQUIPMENT			
4.1 Selection / Condition <i>( Tools Right for the Job, Good Working Condition, Clean )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2 Use <i>( Snipes used Properly, Wrenches not used as Hammers, Push/Pull )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Vehicles <i>( Seat belts being used, Tires Chocked, Out of Fall Line )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.0 PROCEDURES			
5.1 Known / Understood <i>( Are procedures being followed? )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2 Job Planning / Permits <i>( Pre-Job planning, JSP, JSA, Confined Space Permit )</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>( Safe X 100 ) + Total = %</b> _____ <b>Safe</b>		<b>Sub Totals for Safe &amp; At-Risk:</b> _____	

**BARRIERS TO SAFE BEHAVIOR:** 1) Consciousness 2) Management 3) Equipment 4) Culture 5) Personal Factors 6) Personal Choice  
 7) Disagreement on Safe Work Practices 8) Reward & Recognition 9) Weather Conditions

**POSITIVE BEHAVIOR OBSERVED:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

ITEM #	COMMENTS <i>(Use detailed comments to explain At-Risk Behavior/s)</i>	RESOLVED	BARRIER
_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____

**COMMENTS FROM OBSERVED EMPLOYEE:** \_\_\_\_\_  
 \_\_\_\_\_

**Action Item(s)** \_\_\_\_\_

**Action Item(s)** \_\_\_\_\_

*White Copy to District Office    Yellow Copy to Area Office    Pink Copy to Observed*

**Figure 2. The inverse relationship between the participation of observers and OSHA rate incidence for Pool.**

{ SHAPE \\* MERGEFORMAT }

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