

## Highlights

- Nurturing the Safety-conscious Work Environment
- Recognition and Reporting
- Turning Off the Flow of Reports
- Benefits of the Safety-conscious Work Environment
- Suggestion for root cause instructors

## Inside

- Thought of the month
- Quotation of the month
- Back Issues
- Why we call it "The Firebird Forum"
- And More

*The Newsletter of  
Event Investigation Organizational  
Learning Developments  
Volume 3 • Number 8  
September 2000*

# The FIREBIRD FORUM



## NURTURING THE SAFETY-CONSCIOUS WORK ENVIRONMENT

### What is the Safety-conscious Work Environment?

The safety-conscious work environment has a special meaning in nuclear power, but the term has a plain English meaning in all high hazard industries. As we will see, it is good business to nurture the safety-conscious work environment.

Contrary to some people's thinking, nurturing the safety-conscious work environment is not "turning the asylum over to the patients" or coddling troublemakers, but rather doing what is in the economic best interest of the facility owners.

### Recognition and Reporting

The safety-conscious work environment is a work environment in which employees at all levels are able and willing to recognize and surface conditions that could be adverse to safety. This, of course, has two aspects. The first is that the employees are willing and able to recognize such issues. The second is that they are willing and able to surface such issues.

The ability to recognize is as important as the willingness to report. For example, do we know the extent to which the workers at Tokaimura knew that they could cause a criticality by their actions? Do we know the extent to which personnel in the control room at Chernobyl knew that stopping the re-circulating pump would cause a prompt criticality? Do we know the extent to which personnel at Three Mile Island Unit 2 or at Bhopal were aware of conditions at their plant?

### Emphasis on Reporting

In this column, however, the focus is on the willingness of personnel to surface safety issues that they perceive. For personnel to be willing to surface perceived safety issues, there are four vital factors.

First, there must be some antecedent (cue) to the behavior of reporting. This can be a manager asking employees if they have safety concerns, for example, or even just the existence of a pad of safety issue reporting forms.

Second, there has to be a mechanism for reporting. This can be verbal reporting to a management representative who will convert the spoken word into a written

document, a computer terminal with user-friendly reporting software, or a report form.

Third, there must be reinforcement for the behavior of reporting concerns. This, in essence, means that the consequences of reporting concerns must be favorable. And, as a matter of practicality, the favorable consequences must apply to invalid concerns as well as valid concerns, because employees may not be fully effective in sorting them out themselves. For well-motivated employees a highly effective reinforcement is just telling them how their concerns were handled.

Finally, there must not be punishment, i.e., adverse consequences, for reporting safety concerns. This punishment could range from gross harassment and intimidation to subtle verbal and non-verbal clues from management that the safety reporting behavior is not "career-enhancing".

Verbal punishment can be applied by using such terms as "Chicken Little" and "World Hunger" to belittle a concern or its generic implications. A common punishment for reporting a problem is to assign the reporter the task of fixing the problem. But, the most insidious punishment for well-motivated employees is just to give them no feedback on the disposition of their concerns.

### **Inadvertently Turning Off the Flow of Reports**

The discussion above means that management can create a chilling effect in each of these four areas. They can remove or underemphasize the antecedents for reporting. They can make the reporting mechanism difficult to access or use. They can fail to reinforce reporting behaviors. Finally, they can provide subtle adverse consequences for reporting.

When they do this they lose. They lose the real benefits of a safety-conscious work environment.

### **Lost Benefits**

The obvious benefits to the organization from nurturing a safety-conscious work environment consist primarily of the organization's finding out about potential safety issues at an early stage and avoiding the economic consequences of accidents or regulatory intervention.

Other, not so obvious, benefits are somewhat obverse in nature, but equally important.

The obverse benefits of nurturing a safety conscious work environment consists of the non-existence of a number of phenomena that amount to "acting out" behavior by employees whose legitimate (or perceived) concerns are frustrated. These acting out behaviors can range over withholding voluntary effort, "malicious compliance", "civil disobedience", petty sabotage, tampering, lost parts, missing supplies, work slowdowns, quality errors, rework, delays, and the like. It is not inconceivable that mild forms of some or all of these behaviors could be the unintended outcome of frustration without conscious decision-making on the part of employees.

Thus, it is in the interest of management to "keep the air clear" by giving careful verbal and non-verbal reinforcements to personnel who raise issues related to safety. Paradoxically, such reinforcement is most important for employees who bring up safety concerns that, at least at first blush, appear strange, innovative, or unjustified.

At the same time management must see to it that reporting behaviors are not unintentionally punished. It goes without saying that management needs to assure that there are antecedents (cues) for the reporting behavior and that the reporting mechanisms are easily accessible and user-friendly.

### **Symptoms of a Frustrated Safety-conscious Work Environment**

By the way, if your trending program is indicating an increased trend of rework, delays, and adverse conditions not explained, one place to look is at the safety-conscious work environment. Has something changed in the four factors mentioned earlier to stem the flow of concerns? Is frustration manifesting itself in deliberate and/or inadvertent dysfunctional behaviors? Only a thorough and insightful collective significance analysis can tell.

### **Suggestions for root cause instructors**

Discuss how behaviors that can have a chilling effect on the safety-conscious work environment can also

interfere with getting to the truth on a root cause analysis and clearly articulating results.

### Thought of the Month

One of the most difficult things to do is to listen carefully to news that implies that major changes are needed.

### Quotation of the Month

Watch out for small drifts from safety. The incremental can become the excremental.  
-Firebird One

### Firebird Forum Staff

William R. Corcoran, Ph.D., P.E.  
President, Nuclear Safety Review Concepts  
21 Broadleaf Circle  
Windsor, CT 06095-1634  
Tel: 860-285-8779  
Fax: 860-285-0012  
e-mail: <firebird.one@alum.MIT.edu>

### Copyright notice.

*The Firebird Forum* is copyright in the year of publication by NSRC Corp. All rights reserved. It may be freely retransmitted electronically or in hard copy, but may not be incorporated in whole or in part in any other document without permission.

### Firebird Forum Subscriptions

If you would like to nominate someone (including yourself, if you are not a subscriber) for a free complimentary subscription, send the request by e-mail to [firebird.one@alum.MIT.edu](mailto:firebird.one@alum.MIT.edu).

If you got a copy of *The Firebird Forum* by e-mail you are already a subscriber. It is being sent to people who have an expressed or implied interest in event investigation technology and whose e-mail address is in Bill Corcoran's e-mail address book.

If you would like to unsubscribe you may request that action in the same way.

### Back copies

Back copies can be requested by e-mail. Please include the date, the volume and number, and/or the subject matter, if you have specific needs.

### Why do we call it "The Firebird Forum"

Firebird is just the English form of Phoenix, the mythical male bird that lives in the desert, periodically builds a nest, and then sets it afire. The Phoenix is consumed by the fire it sets, but arises freshly renewed from the ashes. Similarly, organizations often arise renewed from problems that they themselves have created. Thus we get the name, "The Firebird Forum".

### Reminder

Think of Bill Corcoran when you need to take the next step in event investigation, organizational learning, corrective action, self-assessment, or internal oversight-or when those processes are not giving you the results you need