

**EFCOG/DOE Safety
Culture Task Team
Workshop Handout**

**Draft Processes and
Practices to Improve Safety
Culture and ISMS**

Introduction

Some of the practices discussed in this document may not be practicable or appropriate for every contractor or DOE organization, depending on the existing work environment and/or the size, complexity, and hazards. For example, some of the practices may not be applicable for organizations that have only a few employees or a very simple management structure. In such organizations, more informal practices to establish and maintain a strong safety culture may be appropriate. In addition, other practices not included in this document may be effective in establishing and maintaining a strong safety culture. Contractors and DOE management are responsible for establishing and maintaining an effective ISMS. A safety culture will not improve without additional efforts by management. Therefore, management has responsibility and discretion in the way they manage a safety culture at a particular facility. As with processes for problem identification and resolution, the choice of tools and their usefulness will depend on several factors, including the size of the contractor and the complexity and hazards of work activities.

1. Management Policy Which Supports Raising Concerns

A management policy statement may help establish a strong safety culture and communicate senior management's expectations for maintaining it. The policy statement should:

- Identify applicability to employees and management
- Assert that it is everyone's responsibility to promptly raise concerns
- Make clear that retaliation for doing so will not be tolerated
- Include a statement that, to the extent appropriate, employees are allowed and encouraged to use work hours to report concerns for retaliation by supervisors, managers, or peers
- Expectations for management behavior that fosters employee confidence in raising concerns
- Various avenues available for raising concerns
- The right of employees to raise concerns externally
- A commitment to provide training

2. Safety Culture Training

Initial safety culture training for recently hired employees or recently promoted managers should be conducted as soon as practicable. Decisions regarding the timing and content of such training need to consider the complexity of the organization, the status of the safety culture at the facility, and the nature of the activities involved.

Safety culture training for managers, supervisors, and employees helps reinforce the principles in the policy and expectations. Some primary topics to consider including in this training are applicable laws, regulations, and policies underlying safety culture related expectations. To effectively communicate these concepts to the workforce, organizations should consider including the following topics in the training:

- Protected activity
- Adverse action
- Retaliation
- Consequences for deviations from applicable laws, regulations, and policies underlying these expectations
- Appropriate gateways for employees and contractors to identify concerns (manager, quality assurance programs, corrective action programs, appeal processes, alternative processes for raising concerns such as an employee concerns program or an ombudsman program, DOE, and DOL)
- A description of the programs and processes, and the role of the manager in each program or process
- Effective management behaviors to establish and maintain a strong safety culture at contractor facilities:
- An “open-door” policy in the office and make themselves available in the field
- Aware of employees’ potential reluctance to raise concerns
- Understand the importance of identity protection
- Good basic listening skills, seek input and express appreciation of employees who raise concerns
- Use various media instruments to communicate these principles
- Timeliness goals for responding to concerns, commensurate with their safety significance, and should consider providing periodic updates to the individuals who identified the concerns.
- Evaluate the effectiveness of responses to individuals’ concerns to determine whether the response adequately addressed the concerns

Managers should be trained to:

- Identify situations that may make them less receptive to concerns, such as operational or maintenance goal pressures
- Identify signs of a chilled environment, that is, an environment in which employees are afraid to raise concerns for fear of retaliation

- Identify traits of availability, receptiveness, sensitivity, timeliness, and responsiveness to promote employee confidence in identifying and resolving concerns. (Managers who have succeeded in this area may consider training or mentoring other managers in an effort to duplicate their success.)
- Employees should be trained on expectations for employees' behavior.

Refresher training for existing staff should be conducted periodically. Refresher training for employees and managers should review key points from the initial training and include lessons learned, as appropriate, from successes and/or problem areas.

Subcontractor training can be done either by the subcontractor or the prime contractor. Subcontractor training should consider the same elements as with the training given to prime contractor employees. Conducting training during business hours is one way the management can emphasize the importance of ISMS and safety culture.

3. Expectations Identified, Communicated, and Reinforced

Expectations may help employees and management establish a build a strong safety culture. Examples of employee and management expectations are:

- Employees and managers demonstrate an open and questioning attitude by asking “why” and “what if” questions help to ensure that concerns are promptly identified.
- An accessible and approachable management team to encourage employees to report concerns and help ensure an understanding of the concerns before their evaluation and resolution.
- Encouraging employees to spend work hours reporting and documenting their concerns (without neglecting assigned work activities). This practice can reinforce the importance in management’s eyes of identifying and reporting concerns and can reduce employees’ reluctance to raise concerns.
- Timely evaluation and resolution of issues. The timeliness of the corrective actions should be commensurate with the safety significance of the issue.
- Individual responsibility for reporting concerns.
- Clearly communicating the concern and confirming that the person who receives the concern understands it.
- Being willing to suggest resolutions to concerns and participate in their resolution.
- Following up to ensure the concern is adequately addressed.
- Showing respect for other employees who identify concerns.

Expectations about creating and maintaining an effective safety culture should be communicated to subcontractors providing components, equipment, materials, or other goods and services related to DOE regulated activities.

A prime contractor may communicate to its subcontractors that the prime contractor expects them to either maintain an effective program that prohibits discrimination against contractor employees for engaging in protected activity and fosters an effective safety culture or else adopt and comply with the prime contractor’s program for its employees.

4. Employee Recognition

There is a direct cause-and-effect relationship between a manager's actions and an employee's behavior precisely because *behavior is motivated by its consequences*. Consequences, far more than training, directives, or threats, reinforce behavior. People tend to seek and do things they like and avoid things they do not like. This is a fundamental principle of human behavior. If people are to make a habit of applying human performance tools, then positive consequences must be associated with their behaviors.

Managers and leaders need to positively reinforce individuals who obtain value-added results through safe behaviors. Individual behaviors which cut corners to get jobs done on schedule and under budget at the expense of quality and safety should be addressed. Consequences either keep the behavior going or stop it in the long term. Leaders should take time to understand and learn how to use reinforcement to promote targeted behaviors.

All behavior that is occurring in the facility now is the result of consequences that are also occurring now. Similarly, the organization is perfectly attuned to get the performance it is getting, right now. All behavior is reinforced. If at-risk behavior is common, it is because management has not made a difference with appropriate negative consequences. Behavior has four basic consequences. These consequences can be used to get the desired performance by targeting specific behaviors:

- Positive Reinforcement – "Get something you want" enhances the probability the preferred behavior will recur and maximizes performance. This optimizes use of discretionary effort by the individual.
- Negative Reinforcement – "Avoid something you don't want" enhances the probability the preferred behavior will recur, but only to meet the minimum standard.
Note: Consequences that cause behavior to either increase or continue at a high standard are known as "reinforcers."
- Punishment – "Get something you don't want" reduces the probability undesired behavior will recur if unwanted consequences are consistently coupled with the behavior. Punishment may also involve "losing something you don't want to lose," a penalty. Sometimes this is necessary to get the new expectation started for an individual. However, it should not be used for the long term.
- Extinction – "Don't get something you want" reduces the probability undesired behavior recurs, since nothing happens when that behavior occurs. Usually, the behavior eventually disappears after several repeated attempts.

Employee errors can have a detrimental effect on safety and efforts should be made to reduce the frequency and significance of errors. An environment that is conducive to the self-reporting of errors will allow such errors to be identified more quickly and can reduce the potential significance of some errors. One element of HPI to improve reporting of issues is to establish a “just” culture in an organization. The ultimate purpose of a just culture is to establish an environment where people raise low level issues to management where the organization can learn and improve from these issues minimizing the chance for events or greater consequence. Individual behaviors can influence just culture. Positive recognition for self reporting errors can improve the likelihood of reporting, and ultimately the frequency and significance of errors.

Recognition considerations include:

- Recognizing employees for identifying and helping resolve concerns can be an effective practice to encourage individuals to raise issues.
- Care should be taken to ensure that recognizing employees for raising concerns does not inadvertently discourage reporting concerns (some employees may not want recognition).
- While it is important to hold employees accountable for their errors, actions against personnel who self-report errors can, in some circumstances, discourage employees from raising concerns, near-misses, etc.
- Management should consider treating self-identification and prompt, effective corrective actions as mitigating circumstances when addressing personnel matters involving self-identified errors.

5. Problem Identification Process

Processes may help employees promptly identify and notify management of concerns such as:

- Processes that are accessible and user-friendly may make it easier for employees to raise concerns. A corrective action program which uses paper forms and/or terminals conveniently placed throughout the facility may further ensure prompt notification of concerns.
- Effective communication between affected departments which ensures the sharing of information so that the potential impact of the identified concerns can be appropriately assessed.
- Safety should be a primary factor in prioritizing concerns and in determining the breadth and depth of the evaluation. A screening process which includes a review for operability and reportability, depending on the types of issues raised at a particular facility.
- Processes should be in place to ensure that appropriate actions are taken in response to all concerns raised.
- For safety-significant issues, the cause evaluation process should identify the root and contributing causes of the issue as well as the extent of the condition.
- Timely feedback should be provided during the concern resolution process.
- The individual responsible for resolving the concern may need to discuss the concern with the employee raising the concern in order to understand the issue and its safety significance.
- Additional feedback may be necessary during the evaluation when it is apparent that resolution may take longer than anticipated.
- When the evaluation is complete, it may be beneficial in some organizations to follow up with the concerned employee to share proposed actions to address the issue; however, privacy considerations or other organizational factors may make it inappropriate to share some or all of the information with the concerned employee.
- The most effective feedback process is one that is flexible enough to permit a concerned employee who wants anonymity to obtain feedback.

6. Appeal Process for Concerns

In most cases, differing professional opinions (DPO) are resolved as an integral part of peer and management review. The resolution process may include review, documentation, and resolution of comments on procedures, manuals, reports, designs, studies, and other activities that identify a decision or path of action. However, whenever an agreement cannot be reached on the appropriate resolution of an issue, the parties involved may elevate the issue to higher levels of management or one of the available alternative avenues for resolution.

An appeal process to ensure that issues have been thoroughly addressed (e.g., DPO or alternative dispute resolution processes) can provide added assurance that concerns are appropriately resolved.

The appeal process applies to the operation or management of projects, programs, or activities and applies to issues raised by any employee. This process is intended for application in technical or other areas where there is more than one professional opinion, solution, or direction with:

- A potentially significant programmatic or mission impact
- A potential health, safety, or environmental impact
- A lingering technical dispute where the normal resolution process has been unsuccessful.
- A technical issue with more than one technical solution or direction.

This process should provide steps to ensure full consideration and timely disposition of different opinions through an objective review by qualified independent personnel and the participation of the employee in the process to its end.

7. Self-Assessments

It may be useful to periodically evaluate information from pertinent organizations and processes to identify enhancements or adjustments that could improve the safety culture.

Organizations and processes to review may include the primary process for raising concerns (e.g., the corrective action program), an alternative process for raising concerns (e.g., employee concerns program, ombudsman), human resources (for work environment concerns, etc.), legal counsel (for Department of Labor cases, etc.), and/or regulatory affairs (regarding DOE findings or observations).

Discussions about specific documentation or events should consider privacy and attorney-client restrictions.

Lessons learned from external organizations can be useful. The DOE makes some statistical information on allegations publicly available as an example.

It is a good practice to periodically evaluate the adequacy and timeliness of responses, as well as the satisfaction of the concerned individual with the response and process.

Assessments can address whether employees feel free to raise issues using the various processes available to them, whether these processes are viewed as effective, and why or why not.

Assessments can also include an appraisal of the effectiveness of the root cause analyses for significant issues and the effectiveness of associated corrective actions.

The most effective self-assessments include a management plan to promptly review the findings of such self-assessments and implement appropriate corrective actions.

8. Alternative Process to Line Management

For employees who wish to raise a concern to someone other than their managers or through the corrective action program, an alternative process, such as an employee concerns program, can be useful for organizations that are large enough to support such a process.

Given the nature of many of the issues an employee may wish to raise outside of line management, such a process should ensure identity protection and/or anonymity to the extent appropriate.

Depending on the size of the organization, the accessibility of such an alternative process (the ability to accommodate walk-ins, hot lines, drop boxes, etc.) can influence the effectiveness of the program. In considering the physical location of the office that administers the alternative process, both accessibility to the workforce and visibility are important factors. An overly visible location may not allow discreet visits.

Personnel training programs, advertising posters, and facility news articles help publicize the process.

Like concerns brought to the corrective action program, concerns brought to the alternative program should receive appropriate operability and reportability reviews and be properly prioritized using safety as a primary factor for determining the breadth, depth, and timeliness of the valuation.

Processes that provide timely feedback on the status and resolution of concerns to senior management with analyses of program data and pertinent observations can ensure appropriate management support and review of the alternative process.

9. Prime Contractor Oversight of Subcontractor ISMS Safety Culture Activities

Prime contractors may oversee contractor safety culture related activities when necessary. Such oversight could take the form of:

- Reviewing subcontractor programs and processes to prohibit discrimination and foster a strong safety culture
- Assessing the subcontractor management's commitment to safety culture principles through document review or behavioral observations
- Reviewing subcontractor training for content and for effectiveness
- Monitoring the subcontractor's actions to address concerns (e.g., reviewing sub-contractor investigations to determine the need to conduct independent investigations)
- Evaluating the subcontractor's actions to mitigate the potential impact of employment decisions and organizational changes on safety culture

Since safety culture is most challenged when changes are made to the employment conditions of the workforce, it can be very beneficial in some cases for prime contractors to monitor such changes when proposed or executed by the subcontractor.

Oversight in this area might include evaluating processes for making changes to employment conditions (e.g., disciplinary policies, reduction-in-force plans) to ensure the processes are well-defined, defensible, and communicated to the workforce in advance of their implementation.

In some cases, such as when there is a history of claims of discrimination or problems, management may find it beneficial to evaluate proposed changes to employment conditions to ensure that the proposed changes follow defined processes and are non-retaliatory.

The prime contractor can assess whether the subcontractor has considered the potential effect that its actions might have on the safety culture and, if appropriate, whether the subcontractor has taken actions to mitigate any impact.

In some cases, employment condition changes that are alleged to be or are likely to be perceived as retaliatory may need to be reviewed to ensure the changes are not retaliatory and do not otherwise adversely affect the safety culture.

10. Involvement of Senior Management in Employment Actions

An effective way for management to prevent actual or perceived retaliatory actions by their staff is to review proposed employment actions on an as-needed basis before the actions are taken to determine whether any of the factors of retaliation are known to be present. In addition, facility senior management may positively impact the safety culture by ensuring that programs and processes involving changes to employment conditions (e.g., disciplinary policies, reductions-in-force plans) are well-defined, defensible, and communicated to the workforce before implementation.

Review for the presence of retaliation should consider the following factors:

- Has the individual against whom the action is being taken engaged in a *protected activity*?
- Is an adverse employment action being proposed?
- Does the contractor know about the protected activity? Such knowledge can be attributed to someone other than the individual's director supervisor.
- Is there evidence that the adverse action is being proposed because of the protected activity? That is, is there a relationship between the adverse action and the protected activity?

If such reviews of employment actions are implemented, management can use them to determine whether actions are well-founded and non-retaliatory. Other factors to consider in such a review include:

- Whether the proposed action comports with normal practice within the limits allowed by the defined process and is consistent with previous actions.
- Whether the supervisor requesting the action exhibits any sign of unnecessary urgency; and
- Whether the employee's prior performance assessments and the proposed action are consistent and, if not, whether any inconsistencies are justified and documented.

If such reviews are implemented, an assessment should be done to determine what effect the employment action may have on the work environment. If management determines that the action, despite its legitimacy, could be perceived as retaliatory by the workforce, mitigating actions should be considered to minimize potential chilling effects on raising safety issues. Such mitigating actions may include:

- Using holding periods during which the proposed employment action is held in abeyance while further evaluations are completed
- Communicating with the workforce about the action being taken, with appropriate consideration of privacy rights
- Reiterating the management policy
- Explaining the action to the affected employee or employees and clearly articulating the non-retaliatory basis for the action.

After an employment action is taken, management can initiate a review of the facts and, if warranted, reconsider the action that was taken. If retaliation is alleged, management should assure that the appropriate level of management is involved in efforts to minimize a potential chilling effect on the workforce's willingness to raise issues.

11. Benchmarking

Valuable insights can be obtained from participation in applicable industry forums or peer group assessments of other safety culture programs where ideas and practices are exchanged and various elements are compared.

12. Performance Indicators

It may be useful to identify and monitor parameters that help indicate the effectiveness of various aspects of safety culture such as training and the problem identification and resolution process effectiveness.

No single indicator is sufficient in itself to identify weaknesses in the safety culture, nor are there absolute measurements that indicate an unhealthy environment.

Monitoring trends in various characteristics of safety culture with performance indicators like those mentioned below may provide insights into strengths and weaknesses. The complexity and number of useful performance indicators may depend on the size and organizational structure of the contractor. Examples of performance indicators include:

- The number and trend of allegations compared to the number and trend of internally raised concerns may be an indication of employee willingness to raise concerns internally.
- The percent of anonymous concerns raised may indicate employee willingness to raise concerns without fear of retaliation.
- The number and trend of DOE retaliation allegations compared to the number and trend of internally raised retaliation concerns may indicate management effectiveness in preventing retaliation or the perception of retaliation.
- The number of risk-significant concerns that are self-revealed, self-identified, or externally identified to the total number of concerns may indicate the willingness and ability of employees to raise concerns.
- The backlog and age of concerns may indicate the effectiveness of processes for resolving concerns.

13. Survey and Interview Tools

Surveys and interviews done by organizations independent of the groups being surveyed or interviewed can be useful tools and complement other tools used to assess safety culture. The extent of such surveys will vary depending on the size and organizational structure of the contractor. The results of surveys or interviews indicate employee beliefs, attitudes, and satisfaction with key attributes and suggests ways to improve the safety culture.

Pre-survey or pre-interview communications can be a very important aspect of feature of such tools. Although the extent of such communications will vary among facilities, communications with the workforce before the survey or interview may include:

- A request for participation
- A statement of the need for input
- A statement regarding protecting participants' identity, the intended use of the gathered information
- A statement regarding the intent to share the results with the workforce.

One way in which management can demonstrate support is to let employees participate in surveys or interviews during regular business hours. The following are potential topics for surveys:

- Awareness of company policies and practices on raising concerns and avenues available for raising concerns
- Management behaviors encouraging the workforce to raise concerns
- Workers' willingness to raise concerns
- Effectiveness of the processes available (normal and alternative) for raising concerns
- Management's ability to detect and prevent retaliation for raising concerns

A space for written comments on the survey may permit individuals to make useful comments that would not otherwise be available from the survey results.

Survey or interview follow-up action plans should be developed to address findings that are specific to work groups or generic to the facility.

Telling the workforce about the results of such surveys and action plans to address findings may have a positive impact on improving safety culture and encourage participation in future surveys.

14. Direct Observations

Direct observations of workers' behavior may provide information regarding the effectiveness of training.

Management behaviors observed may indicate whether a supervisor is receptive to concerns and supports and rewards employees for raising concerns.

Direct observation of employees in the work environment can provide valuable insights into the employees' questioning attitude and willingness to challenge perceived unsafe behavior.

15. Exit Interviews and Surveys

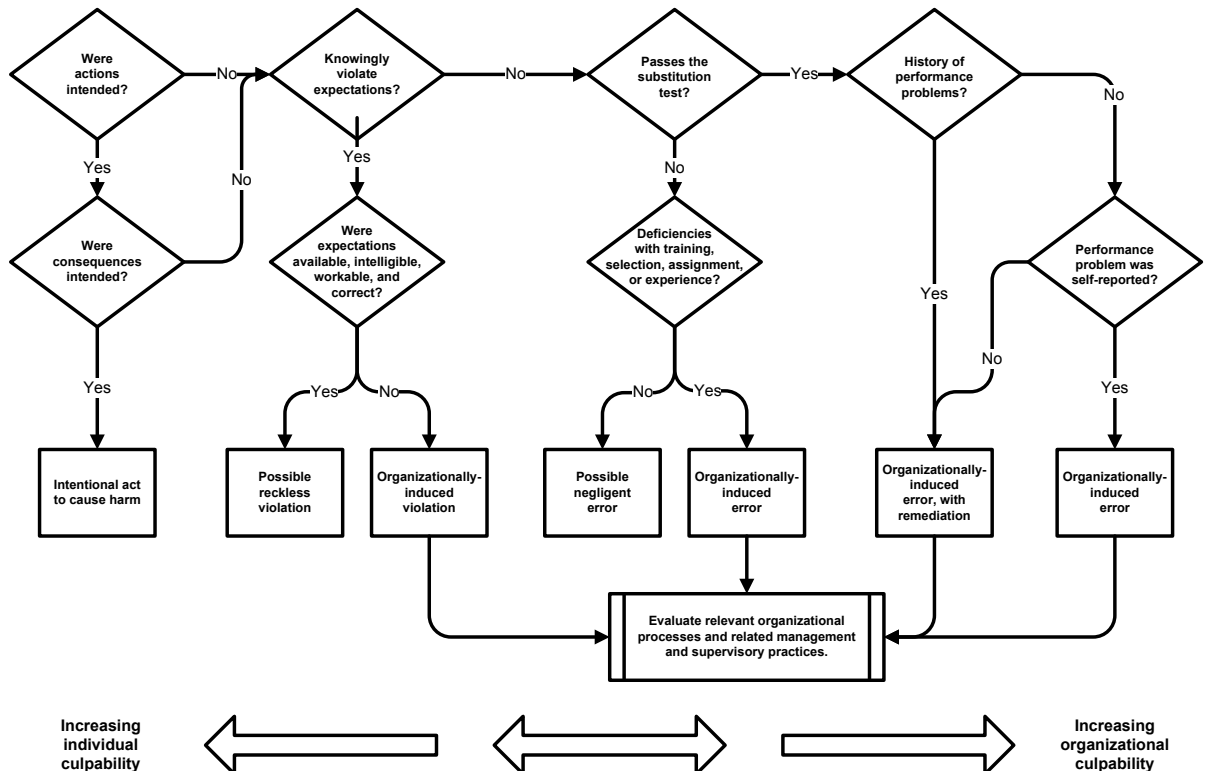
Interviews and surveys of exiting employees to identify issues can capture concerns employees may not have been comfortable raising while working at the facility. These activities may include mechanisms for following up with exiting employees who want to be informed of the resolution of their concerns.

16. 360-Degree Appraisals

So-called 360-degree appraisal programs, where employees are asked to provide feedback on manager behavior, may be an effective tool for establishing and maintaining a safety culture at some facilities because they may help managers identify perceptions or behaviors that impact the safety culture.

17. Culpability Decision Tree

The Culpability Decision Tree diagram below is a proven management tool intended to help determine the culpability level of an individual in response to events or near misses triggered by human error. When used in conjunction with the organization's accountability policy, the tool supports the fair and consistent application of disciplinary outcomes across all departments and work groups. The accountability policy or procedure could also be revised to include key aspects of the diagram.



The Culpability Decision Tree. Adapted with permission from Dr. James Reason's *Managing the Risks of Organizational Accidents*, Ashgate Publishing Limited, 1997.

When an event is initiated by an honest mistake, the entire system that supports the performance in question should be evaluated. Events triggered by human error are often symptomatic of a system failure. Instead of asking how the individual failed the organization, the question "how did the organization fail the individual?" would be more appropriate. In addition to the individual, what or who could have prevented the event? What flaws or oversights in work processes, policies, or procedures contributed, promoted, or allowed the error and event to occur? Because the majority of the causes of events originate in the system of controls, processes, and values established by the management team, management's first reaction to events should be to look within the organization.

The Foresight Test asks the question: “Did the individual knowingly engage in behavior that the average individual in the work group would recognize as being likely to increase the probability of making a safety-critical error?” If the individual’s peers respond that they would have recognized the action as promoting an error, then it is likely the individual in question should also have recognized the same thing. If the peers failed to see the connection between the action taken and increased risk, then it is reasonable to assume that the individual also did not see the connection. In any one of the following situations, however, the answer to this question is likely ‘yes’ and as such is indicative of culpability

- Performing work under the influence of a drug or substance known to impair performance
- Clowning around while driving a towing vehicle or forklift truck or while handling other potentially damaging equipment.
- Becoming excessively fatigued as a consequence of working a double shift.
- Taking unwarranted short cuts like signing off on jobs before they are completed
- Using tools, equipment or parts known to be sub-standard or inappropriate.

The Substitution Test involves substituting the individual concerned in the event with other individuals who do the same kind of work and who have comparable training and experience. Then the question is asked. “In light of how events unfolded and were perceived by those involved in real time, is it likely that this new individual would have behaved any differently?” If the answer repeatedly comes back from the selected peers ‘probably not’ then apportioning blame has no place here and would likely obscure the underlying systemic deficiencies. A useful addition of the substitution test is to ask of 3-5 of the erring individual’s peers the following: ‘Given the circumstances that prevailed at the time, could you be sure that you would not have committed the same or a similar type of unsafe act?’ Again, if the response is ‘probably not’ then blame is very likely to be inappropriate. It is a ‘blameless’ error. The substitution test is often used in conjunction with the Culpability Decision tree.