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The Firebird Forum

ETHICS IN HIGH HAZARD INDUSTRIES

PUBLIC TRUST IS A BUSINESS ISSUE

Recent news media coverage has included many outrageous instances of high-hazard industries diminishing the reservoir of public trust. One need not spell out the current details. We all know who was involved and what was reported.

The high hazard industries are those in which adverse occurrences have resulted in great harm. These include government, health care, and financial services.

Ethics is more than just avoiding intentional misconduct. Ethics includes building competency, integrity, and transparency into all processes affecting public trust. Processes affecting quality and safety inherently affect public trust.

Some of these recent instances involved great hardship on victims, including clients, customers, the public, and other stakeholders. Many instances involved revelation of an apparent culture of corner-cutting and procedural flexibility. Some involved selective reliance on evidence that was not firmly linked to reality.

These instances make it more difficult for a wide portion of the spectrum of high-hazard industries, not only the organizations involved and not only the industry segment involved. To some extent each high hazard industry organization is hostage to each of its fellows, as a book on the Institute of Nuclear Power Operations (INPO) explained[1].

The efforts of support organizations, professional societies, and trade organizations to instill public confidence in particular segments of the high hazard industries are nullified by the organizations that get the headlines. One egregious consequential event or near miss can set confidence building efforts back years.

This is especially true when the efforts of support organizations, professional societies, and trade organizations appear to be directed toward minimizing and obscuring the ethical issues rather than supporting their correction.

Whenever an event occurs that the public has been led to believe was being prevented by regulation or oversight, not only is the public trust eroded, but other ill effects occur as well. One of these is that the regulators and/or overseers are embarrassed.

When the regulators and/or overseers are embarrassed they often react by reinterpreting their existing regulations and guidelines more strictly. They often compound the impact by writing new regulations and guidelines that are redundant to existing expectations. It is clearly good business to avoid this.

The points of this article are that there seems to be a "tarred with the same brush" phenomenon that creates”guilt by association" and that there were multiple opportunities for multiple individuals to have the problems corrected well before they got to the level of public attention.

Event investigation organizational learning activities often are (or should

[1] Joseph V. Rees, **Hostages of Each Other : The Transformation of Nuclear Safety since Three Mile Island,** Univ. of Chicago Press (1994)
[2] Diane Vaughn, **The Challenger**

be) part of the organizational "immune system" that identifies the behavioral pathogens and triggers the release of corrective action antibodies to defeat or contain the incipient degeneration.

In an earlier issue this publication explained how "Null consequences are equivalent to reinforcement for dysfunctional behavior." In other words, if nothing happens when behavior steps over-the-line future over-the-line behavior is made more likely.

Event investigation organizational learning activities often identify instances of over-the-line behavior. An issue facing us in this article is," What types of insights will result in the release of the antibodies rather than letting the organizational pathogens multiply unchecked?"

Part of the service that event investigators can provide is to heighten the awareness of management and staff to the organizational pathogens that can erode the integrity of high hazard industry decision-making. This is probably more valuable than identifying hardware and procedure fixes.

Often the limiting weakness or fatal flaw is not that these organizational pathogens exist, but rather that no one is asked to look for them. Thus they continue their nasty work in a seemingly latent existence.

Four important classes of organizational pathogens

A local affiliate of a society to which the author belongs invited an FBI official to address it on certain aspects of white-collar crime. In the Question and Answer part of meeting a member asked, "What does it take to create a white-collar criminal?"

The FBI official replied, "Opportunity and the ability to rationalize."

In other words, the situations for organizational pathogens are not rare. The agent's answer could have been the answer to the question, "What does it take to have a serious near miss?"

Four of the classes of organizational pathogens encountered by event investigators are the following. These are not the only classes of organizational pathogens, but they are important ones.

Overkill in this Case

The first organizational pathogen is a type of thinking that justifies the compromise of an announced understood good practice, management expectation, or government requirement on the basis that it is overkill in the specific case at hand. This encourages ad hoc decisions to override requirements and essentially empowers non-compliance.

A gross example of this is the failure to shut the plant down when procedures clearly prescribe a shutdown, but people do not believe that the procedure writers envisioned the exact case at hand.

Another gross example is the premature termination of a required inspection to resume production. Incompetence in planning for the inspection is often a deeper underlying cause.

This organizational pathogen is the upstream mother of the more general issue of "normalizing deviance[2]." If the system puts people in no-win situations they are incentivized to make unethical and unsafe choices. Professional incompetence is often a precursor to corruption of professional ethics.

The right thing to do is to handle the situation in accordance with the existing processes for changing management expectations or for getting regulatory relief without regard to the current business awkwardness. Of course, the proper system changes need to be pursued.

Ignoring Basic Critical Thinking

The second organizational pathogen is the failure to apply basic critical thinking skills to a problem at hand. This includes such errors as irrational assignment of causation and failure to test alternative causations of the phenomenon at hand.

This is especially serious when a symptom can have multiple causes, one of which is a vital safety compromise and others are livable. This type of error has resulted in repeat damage to important equipment, to the sustained undetected inoperability of safety equipment, as well as to the inadvertent violation of government safety requirements.

The pressurized water reactor case of mistaking nozzle leakage for flange leakage is one example. The boiling water reactor case of mistaking safety relief valve pilot leakage for main valve leakage was another.

In order to avoid this pathogen, management needs to create a culture

[2] Diane Vaughn, **The Challenger Launch Decision…,** Univ. of Chicago Press (1997)

of critical thinking. This is not easy, especially in an era of competitive pressures in which anything that does not obvious benefit the bottom line is considered disloyal.

Ignoring the Wisdom in Regulations

The third type of organizational pathogen is the failure to ask what regulatory requirements apply to this situation. In many high hazard industries some of the key regulatory requirements are written in blood and other consequence fluids.

Thus it is not unusual for the causation of consequential events to involve multiple infractions of regulatory expectations. This is not to say that all serious events would have been averted by the applications of key regulatory requirements, but many would have. To convince yourself of this you need only to familiarize yourself with the Integrated Safety Management System[3] and then read a random sampling of DOE event reports.

One way to start avoiding this organizational pathogen is to begin incorporating a regulatory analysis in every root cause analysis of consequentials, near misses, and compromises. Unfortunately this is out-of-the-box thinking.

Not even regulatory agencies suggest this and few do it, except when the regulator has already decided that an infraction will be found. How much additional effort would it take once the dysfunctional behaviors and conditions of the causation are identified to associate a regulatory requirement to the causal factor when one is involved? Not very much.

[3] DOE G 450.4-1C, Integrated Safety Management System Guide

Tolerating Missed Opportunities

The fourth type of organizational pathogen is the failure to ask about all of the missed opportunities to have averted the event or to have acted in such a way as to limit the consequences. In most, if not all, significant events there were multiple opportunities for multiple ordinary people to prevent the event entirely or to avert the nature or magnitude of the serious consequences. Unfortunately, these opportunities are seldom identified systematically.

To identify the missed opportunities one must start with confidence that the opportunities were there, not only for the affected organization, but also for its regulators and/or overseers. Then one asks, "What is it about the way business was done that created the harmful factors and left them in place long enough to be involved in the consequences?"

An accompanying question is, "What were all of the earlier, safer, cheaper ways of finding the harmful factors?" Again, this is not just for the victim-perpetrator organization, but also for the regulators and overseers as well.

The Pillars of Ethics and Safety Culture

Are the four organizational pathogens compromises of ethics and safety culture? Whether they are or not they are they erode the pillars of competency, integrity, and transparency.

Competency includes adequate knowledge of the technologies involved. Integrity includes taking the pains not to delude oneself or others regardless of the incentives to do otherwise. Transparency is doing business in such a way that flaws, errors, and limitations are easy to see.

Without competency, integrity, and transparency behavior consistent with ethics and safety culture is probably not achievable. If you want safety, peace, or justice, work for competency, integrity, and transparency.

What you can do

- Forward this to contacts who would be or should be interested in the message.
- Initiate and sustain conversations about the ethics of high hazard industries.
- Encourage high hazard industry organizations that you belong to to adopt commitments to competency, integrity, and transparency.
- Enhance your own performance in competency, integrity, and transparency.
- Send comments to firebird.one@alum.MIT.edu

Suggestions for root cause instructors

Explain examples of the four types of organizational pathogens described in the preceding article. Ask trainees to share examples from their own experience.

Begin examining root cause analysis reports to identify the regulatory/ oversight requirements/guidelines whose infractions were involved in the causation of consequences.

Ask trainees to examine your best root cause analysis reports and

identify the earlier, cheaper, safer ways that the causal factors could have been found.

Offer to train assessment personnel in how regulatory / oversight infractions were involved in your facility's worst safety consequentials, near misses, and compromises.

Quotations of the Month

"Never argue with a man whose job depends on not being convinced."
H. L. Mencken, journalist and satirist
Quoted in IBD 9/28/99

Bill Corcoran's version:

It is difficult to convince a person who believes that their job depends upon not understanding what you are reporting.

If you don't want it printed don't let it happen. -Aspen Daily News

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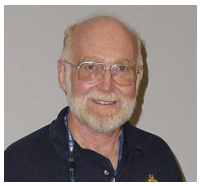
Why do we call it "The Firebird Forum"

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".

A word in closing



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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.