

The New ANSI Z10 Standard vs. the OSHA Proposed I2P2 Standard

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Introduction

As the field of Safety and Health enters the 21st Century, the professionalism of the SH&E practitioners continues to dramatically increase with each passing year. The new wave of SH&E professionals will demand the use of more meaningful business models and metrics to serve as benchmarks in managing their EHS efforts. To address these changing business models, the ANSI Z10 standard was issued five years ago and is increasing being used by organizations as a model to manage their EHS efforts. The Z10 standard was a radical departure from the traditional ways of managing EHS programs. The standard promoted a more systems-oriented approach that was risk driven instead of totally hazard driven. This new approach has begun to change what safety professionals look at when managing the safety, health and environmental issues to which their organizations are exposed and how they look at these exposures as well.

The outcome has been a shift from emphasis on managing regulations and hazards to the management of the risk to which organizations are exposed. This shift in thinking is permeating the entire thinking process of what an EHS professional believes is important. Terms such as “zero accidents” and “safety first” will be replaced with the concept of “Acceptable Risk.” Sacred cows and “drivers” such as obsession with regulatory compliance will be replaced with assessing an organization’s risk exposures. A prime example of this was the BP explosion. As one of the investigation reports cited, while BP did an excellent job of addressing the personnel safety of the site, other risks were ignored that led to the explosion. This new, holistic approach to addressing workplace risk will change the look of EHS programs in the future.

The Shifting Metrics of the New Professional

Safety First! Safety is Job One! Zero accidents at any cost! These phrases have been the mantra for safety professionals to live by since it seems...well, forever. While fine marketing platitudes, they are not the reality of the typical organization’s operating goals, especially when in the start up or survival mode. The simple truth of the matter is that safety is a “critical mass” element in most businesses. What does this mean? Think of yourself starting up a “widget” company. You are going to need some very basic positions to start the company. You will need someone to handle the production. You will need a “bean counter” to track your finances. You will probably need someone to man your shipping and receiving of raw materials and finished products. You will need a sales department to sell your product. You will also require the “worker bees” to actually manufacture your widgets. These are the basic necessities you require to get your new company up and running. These are the people I call the Phase I needs to get the business operable. As you grow you will need Phase II services for your business. You will need an HR department to hire and set employee policies for your growing workforce. You will undoubtedly need an R&D department to develop new widgets that will keep you competitive. You will also

find yourself needing a marketing department to grow your business. Please note that “luxuries” such as safety, risk management, and quality are not yet necessary. They only become vital when your business has grown to a critical mass of having assets to protect. In other words, the truth is that many safety professionals forget that the business is not there to run a safety program. The safety program is there to enhance the operation of the business. Somewhere along the line this vital message has been lost on your average safety professional. We actually started to believe our own “Safety First” marketing. It is time to recalibrate our thinking and realize how our movement got started and what we bring to the table.

What safety people bring to the table is the prevention and reduction of unnecessary loss to the organization. Not just “people loss,” but property, business interruption, and general liability. At some point in our development history, safety professionals split from insurance thinking in the quest of the perfect safety program. Along the way we lost a vital view of our purpose. Reduce loss in all areas, not just bodily injury. There is not any question that there is a “moral” component in today’s business climate that requires large companies to have safety programs and recognize the safety of their people. I am not arguing this is a bad thing. We have had enough tragedies in the past to justify this attitude. Our sin in this area has been that we focus so much on the employee injury prevention; we forget there are other risks that deserve our attention. The Baker Report of the BP Texas City explosion pointed out that the BP plant had an exceptional employee safety record. But sadly the management was so driven to meet this zero-accident goal that they missed the forest for the trees. We can point the finger at many different people. I believe the first in line should be our profession. We did it. We brainwashed the executives into this zero-accident fairy tale and created the false metrics to lure management into a sense of security. Allow me to elaborate.

The safety profession got started as a result of several tragic disasters such as the Triangle Shirt Factory and Coconut Grove fires. These were sad tragedies that created new safety building codes and served as an impetus to start a sophisticated safety movement within the business community. This movement started us down the path of “there is no price you can put on a human life” approach to safety. This is certainly a rational approach for risks that are life threatening, but not so much so as you move down the scale of risks.

The gold standard metric of our profession has been the Lost Time Accident (LTA) and the supporting metric to this number is the Incident Rate, often known as the OSHA Recordable Rate. Both numbers are what we call lagging indicators and serve their purpose in the macro sense. However we have become obsessed with these numbers and attempted to apply them in the micro statistical analysis as well. Moving to the environmental and industrial hygiene sectors of the field, matters are even worse. Since most health issues are chronic in nature, your average industrial hygienist has become obsessed with TLV’s, PEL’s and other allowable limits that are practically a foreign language to management. The environmental field packs the most muscle of the EHS trio since the costs of the fines for non compliance are so dramatic. Added to this is that most governments are now tying the generation of building permits for new construction and expansion of existing operations of businesses into environmental compliance. However considering this greater visibility, the rationale behind the environmental numbers remains bureaucratic and arbitrary to many members of management. They are not tied into a business case as much as a regulatory case.

Topping all of this off is the insurance industry looking at entirely different numbers than any of the above to determine their premiums. Premiums come in a form that any executive can understand. The international language of business is dollars and cents. Where this leaves us as a profession is in a position where we must begin to rethink our metrics and what we are “selling”

to upper management. The new safety professional is looking at risk. Total risk. This is the new metric. Safety professionals are moving closer to their insurance brethren and using many of the measurements they have used for years; financial measurements. No one has to be trained on what a dollar represents. There are no special formulas of man-hours and multipliers. Everyone gets it. Furthermore as the new safety professionals act more like other members of management team, they will find themselves fitting in more and being accepted as equals, not specialists who speak in a strange language of acronyms. They will form business plans, operating budgets and cost justifications for capital improvements and adding of staff. The old mantra of “give it to me in the name of safety” will die a fast death. As such these new professionals will be more readily accepted by the rest of the business team as “one of us.”

Managing Risk, not Safety

Any executive who tells you that zero accidents are his only acceptable goal is a liar. No organization can afford to run on zero risk. You would be paralyzed if you did so, or throw so much money at engineering controls that you would bankrupt the organization. To put a point on it, you can not exist in your day to day life in a zero risk environment. Think of that most dangerous of activities, driving a car. I can not think of a more dangerous task fraught with high risk. If we dwelled on the risks involved, most of us would not pull out of the garage in the morning. You are in a metal box with a highly flammable substance directly behind you driving at high rates of speed around other metal boxes that are equally dangerous. Making matters worse, each of these metal boxes is controlled by an operator of questionable ability, distracted at times by hand-held communication devices and in most instances traveling at speeds greater than they can handle. Have we all gone crazy? No. We have accepted the principle of “Acceptable Risk.” We have decided that considering the safety features on the car, the licensing of drivers, and the safety features on the roadways, that such an enormous risk is acceptable. Is it zero risk? Hardly. One has only to look at the fatality and crash data annually to question whether driving even falls into the Acceptable Risk parameters.

As the new professional becomes more involved in the organizational management structure it will become necessary to view the risks to the business in a similar manner. These risks must be viewed in terms of the damage they can do to the organization and the likelihood of the occurrence. This is a substantial departure from the historic approach of safety to attempt to eliminate, control or address all hazards present. A look at the simple chart below will give the reader an idea of what a risk assessment matrix looks like. There are several such models available, but the basic premise is the same. Risk is something that can be measured on various scales and the reaction to this risk can be prioritized accordingly. This is as opposed to the historical approach of eliminating all hazards present with equal zeal.



Risk Assessment Matrix

SEVERITY OF CONSEQUENCES

OCCURRENCE PROBABILITY	CATASTROPIC	CRITICAL	MEDIUM	MINIMAL
FREQUENT	High	High	Serious	Moderate
LIKELY	High	High	Serious	Moderate
OCCASIONAL	Serious	Serious	Moderate	Low
REMOTE	Moderate	Moderate	Moderate	Low
IMPROBABLE	Low	Low	Low	Low

High: Operation Not Permissible
 Serious: High Priority Remedial Action
 Moderate: Take Remedial Action at Appropriate Time
 Low: Risk Acceptable Remedial Action Discretionary

The theory of “Acceptable Risk” will be the mantra of the new safety professional. The acceptability of risk will encompass everything from regulatory compliance to determining where an organization’s resources will be devoted and money spent. Risk assessments, hazard studies, and maximum foreseeable loss calculations will all play into the safety professional’s thinking. Business plans will be driven by this type of thinking, and organization insurance packages will be designed around it.

Government Standards vs. Standard of Care

The days of organizations waiting for the government to develop and issue standards are fast dwindling. It is becoming increasingly obvious that voluntary standards will become the new “driver” in the future. This should come as no shock to us, considering that most of the original OSHA standards were simply ANSI and NFPA standards incorporated into the 1910 and 1926 standards. What has happened is that OSHA cannot keep up with the updating and development of new standards that are being demanded in our society. The Office of Management and Budget has recognized this fact and has instructed government agencies to quit trying to develop a new standard when a “voluntary” standard exists that is doing the job. Simply adopt it. These standards are more cutting edge and have a requirement to be modernized every five years. Furthermore, in today’s highly litigious world no organization is going to ignore the more recent standard and be satisfied complying with an older version of the standard. This would be setting oneself up for a potential lawsuit by not meeting a “Standard of Care.” This term, *Standard of Care*, is becoming more common in the safety lexicon. It represents a concept that if there is a voluntary standard that addresses risks in your organization, you are to a large degree compelled to use such a standard as your benchmark. Not to do so would leave your organization and yourself open to the charge of not giving proper due diligence to risk mediation measures. Such thinking even reaches Non Consensus Standards (guidelines). The classic examples are the ACGIH Threshold Limit Values. These are not the result of a consensus standards organization; however, any company that is monitoring its employees will use the latest TLV’s as opposed to OSHA PEL’s. Clearly the OSHA PEL’s have the force government standard behind them, but

who wants to stand in a courtroom and defend the use of a standard that is 30 years out of date and possibly higher than the recent standards?

The outcrop of this is that many of the “voluntary” consensus standards have become anything but voluntary. No organization wants to find itself in a position of not complying with the latest Standard of Care in terms of safety and health regulations. Trying to defend yourself on a 25 year old standard with a defense based on “because OSHA says so” just won’t go far in a court of law. The end result is that voluntary standards have become voluntary in name only.

OSHA I2P2 vs. Z10

In the mid 90’s much of this thinking was being incorporated into a series of “management” standards to give safety professionals a benchmark and guidance plan by which to organize their programs and efforts. What have emerged are two predominant standards in this area. The ANSI Z10 Occupational Health and Safety Management Systems Standard and the OHSAS 18001 Occupational Health and Safety Management Systems Standard. ANSI is designed more for domestic use in the US, while the OHSAS standard is based on the old BSI 8800 standard for international use. Both standards essentially cover the same points in the same organizational manner. Both standards have also become an immediate success with organizations looking for a method to “systemize” the management of their EHS efforts.

The central theme of both standards is effective planning through risk assessment of an organization, implementation of business plans developed from this planning stage, and auditing of the effectiveness of these plans. Through the success of these plans, OSHA has come to realize that a “programs” standard is desperately needed as the basis to improving safety in the workplace. Over the years OSHA has attempted to enact such a standard but has met stiff resistance from various groups. Their compromise has been the Voluntary Protection Program (VPP). VPP has been very successful with some employers but has not gained the nationwide acceptance that OSHA had hoped for when the program was initiated. Furthermore the VPP approach is quickly becoming dated and obsolete when compared to the Z10 and 18001 systems approach.

Realizing the need for a more modern approach OSHA is proposing an Injury Illness and Prevention Program standard (I2P2). Currently the standard is meeting mixed acceptance. The dominating question is why the standard is needed since ANSI Z10 covers the same issues on a domestic basis and OSHAS 18001 addresses the identical topics on an international basis. The Office of Management and Budget circular reinforces this very question. Considering this circular, the ASSE will be meeting with OSHA in the near future to encourage them to simply adopt ANSI Z10 as their I2P2 standard.

Content of ANSI Z10 and OHSAS 18001

The content of the leading standards in the safety and environmental management field are extremely consistent. This consistency to a large part is intentional on the behalf of those developing the standards. For obvious reasons, the developers did not want radically different standards for those who must manage domestic and international operations dealing with not just safety and health, but also environmental issues. The table below illustrates this point. The four standards outlined are the ANSI Z10 and OHSAS 18001 standards already discussed along with the International Labor Organizations MEOSH 2001 safety and health standard and the ISO 14001 Environmental Management Systems Standard.

ANSI Z10	ILO MEOSH 2001	OSHAS 18001	ISO 14001
Mgt Lead & Employ Part	Policy	General Requirements	General Requirements
Planning	Organizing	Policy	Policy
Implement & Operations	Planning & Implement	Planning	Planning
Eval/Correct Actions	Evaluation	Implement & Operation	Implement & Operation
	Action for Improvement	Check & Correct Act.	Check & Correct Act.
Management Review		Management Review	Management Review

One only has to glance at the chart to see the consistency of approach by all four standards. Comparing these to the proposed OSHA I2P2 intentions are premature.

As already mentioned, OSHA realizes that its VPP approach is rapidly becoming dated and could soon become irrelevant. Much of this involves the theory of approach and the streamlining of the new systems standards. A glance at the chart below shows a comparison between the ANSI Z10 Standard and the latest approach to the Voluntary Protection Program.

ANSI Z10	VPP
Management & Employee Participation	Written Policy
Planning	Written Program
Implementation & Operation	Hazard Prevention and Control
Evaluation & Corrective Action	Line Accountability
Management Review	Emergency Response
	Safety & Health Training
	Employee Involvement
	Worksite Analysis
	Process Safety Management
	Self Inspections
	Hazards Control Tracking
	Accident Investigation/Pattern Analysis
	Safety & Health Program Evaluation

The color coding of the various elements demonstrates where the VPP element fits within the ANSI Z10 management system approach, where applicable. The radical difference in VPP vs. Z10 is the emphasis placed on planning. Planning is viewed by Z10 to be a weakness of the EHS profession. Accordingly great lengths are taken in the VPP standard to explain the concepts of risk assessment, analysis and subsequent building of business plans.

Summary

Changes are occurring rapidly in the SH&E profession, shifting the strategic thinking of measuring loss and addressing workplace risk. The result of this shift will be that the new SH&E professional will be viewed as a manager of risk and more in line with the financial thinking of the rest of the organization. The natural upshot of this will be SH&E professionals viewed more as vital members of the business team and even able to move into other positions in the business that a decade before would have been unthinkable.