The Power of Safety and Health Management Systems

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Introduction

The concept of safety and health management systems is not new. Despite that, for most US companies, the approach to safety consists of a variety of safety programs that are intended to meet the prescriptive OSHA standards and hopefully reduce or eliminate work-related injuries and illnesses. The reality is that most companies with disjointed programs and safety professionals "doing safety" never achieve their goals on a consistent basis. Using management systems as a best practice approach can be a powerful tool to achieve success over the long haul. The idea is to eliminate hazards/risks and create a core value of a safe workplace instead of only fixing the physical environment. This paper will briefly discuss some common safety and health management systems and show how one company successfully reduced both injuries and illnesses along with significantly improving employee engagement and the overall culture.

The concept

A safety management system has been defined as: *"a formal framework for integrating safety into day-to-day [   ] operations and includes safety goals and performance targets, risk assessments, responsibilities and authorities, rules and procedures, and monitoring and evaluation processes"*. (CRSA, 4 (1)). The principals of management systems are the same no matter what business function is applied. The key is the methodical and systematic control of business processes in order to achieve pre-determined objectives. This is the basis of the Deming circle or cycle from the Total Quality Management movement. Deming applied his concepts to quality but they are just as relevant to safety and health. (Petersen 226, 255)

Below are the Deming elements and the Deming circle:

– **Plan** - make plans
– **Do** - carry out these plans
– **Check** - check the actual results: do they fulfill the aims?
– **Act** - correct where something has gone wrong and, where necessary or desirable, adjust the plans so that things go better from now on.
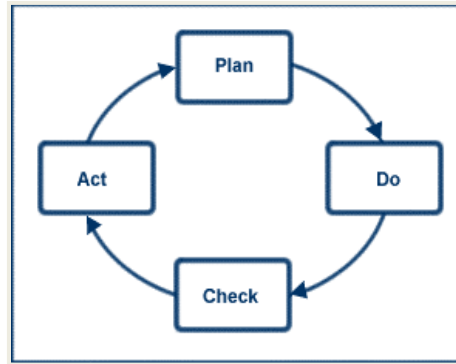
Three Options

There are currently three major voluntary safety and health management systems for use by general industry. They are the: OSHA Voluntary Protection Program, British Standards Institute (BSI) Occupational Health and Safety Assessment Specification (OHSAS) 18,001 and the American National Standards Institute (ANSI) Occupational Health and Safety Management Systems Z-10. Note that some countries have government requirements for safety and health management systems such as Australia, New Zealand, and the European Union. Other voluntary management systems include the American Chemistry Council Responsible Care™ program, and others that are specific to a certain industry. The International Labor Organization also provides Guidelines on Occupational Safety and Health Management Systems, although the document is not considered a standard.

First let us start with OSHA's Voluntary Protection Program. VPP started at federal OSHA in 1982 and evolved into a management systems approach in the 1990s. The stated purpose of VPP is to emphasize the importance of *systematic* management of OH+S, encourage improvement of safety and health programs, and to provide recognition of existing excellence in safety and health programs (Richardson 1, 7). The four major elements of VPP are: Management leadership and employee involvement, Worksite analysis, Hazard prevention and control, and Safety and health training (OSHA 2008). VPP includes an audit program by an OSHA team that includes both OSHA staff and volunteer Special Government Employees who come from existing VPP-approved sites. Approved sites are presented with a plaque and a VPP flag. These sites also are subjected to fewer inspections by OSHA, although that part of the program is under political scrutiny at this time.

Second is the Occupational Health and Safety Assessment Specification OHSAS 18,001. This management systems methodology, based on the British system, was originally published in 1999 and was updated in 2007. The stated aim of OHSAS 18001 is to assist organizations in managing and controlling their health and safety risks and improving their OH&S performance. The major elements of OHSAS 18001(2007) are: OH&S policy, Planning for Hazard Identification, Implementation & Operation, Checking and Corrective Actions, Risk Assessment & Risk Control, Legal & Other Requirements, Continual Improvement, Objectives, OH&S Management Programs and Training. The audit program for OHSAS is carried out by one of several consulting firms that are approved by BSI called a Registrar. The registration audits may then result in OHSAS certification (BSI).

Third is ANSI Z-10 published in 2005 as the first US consensus standard. The stated goal of ANSI Z-10 is to use recognized management system principles, compatible with quality and environmental management system standards such as the International Standards Organization (ISO) 9000 and ISO 14000 series, as well as with principles adopted by the ILO, to encourage

integration of safety into other business management systems (ASSE, 3). The major elements of Z-10 are: Management leadership and employee participation, Planning, Implementation of the occupational health and safety system, Evaluation and corrective action, and Management review (AIHA 3). Note that at the time of publication, there was no Z-10 certification scheme like other ISO standards or OHSAS 18001. More recently, registrars who certify organizations for other standards appear to be incorporating Z-10 audits into other existing audits when requested

Many companies have adopted management systems to improve organizational performance, including in the safety and health area. They are looking for ways to reduce injuries and illnesses in a more systematic way, or develop best practices beyond basic regulatory compliance. Companies that are ready to make changes often are looking for a "road map". The options here represent common management system "road maps" that exist today.

So why would a company choose one of these safety and health management system as their "road map"? Companies choose to use a specific management system for occupational health and safety (OH+S) based on a variety of factors. These include: Type of industry, Geographic location of the parent company, Customer requirements/expectations, Existing standards certifications (such as ISO 9000 or 14000), Existing OH+S programs and Degree of recognition desired. For example, in some industries OHSAS 18001 has become the norm so company sites, as well as, vendors are expected to be registered. For other companies who are based in the US, OSHA VPP has become the norm. Sometimes the system is chosen because one or more of the safety professionals at the site has experience with that management system. Regardless of why it is chosen initially, it is important that a company consider whether or not the implementation of a safety management system is intended to achieve certification or registration. The intended goal so can be communicated appropriately to the employees, vendors and customers.

Other factors may guide a company to a specific management system. For example, OSHA VPP involves an audit conducted by at least some government employees. Some companies do not want to be involved despite the separate nature of the OSHA VPP program, because it is a government program. On the other hand, at this writing, VPP applications and audits are free and that is not the case for other certifications. OHSAS 18001 is considered more of an international standard and can be used throughout the world. A multinational organization would likely prefer that standard for consistency purposes. ANSI Z-10 was written as a consensus standard and includes a wider variety of stakeholders, including organized labor. For a US company that is looking for a road map to improve health and safety management and not to achieve certification, this might be preferable, particularly if it has an organized labor workforce.

Although these management systems are similar, there are technical differences. Both Z-10 and OHSAS 18001 are based on identifying and prioritizing risk and using an acceptable risk model, where as, VPP focuses on identification and control of hazards. VPP requires sites to have injury and illness frequency and severity metrics that are below industry average to remain certified. This means an employer with a small number of work hours often cannot retain VPP status if they have more than one OSHA recordable injury in a year. The other models focus on continuous improvement. OHSAS 18001 and Z-10 include a requirement of regulatory compliance. VPP does not state this as a requirement although most of the auditors were formally trained as OSHA compliance staff and would likely address any concern.

Why OSHMS Work

So why do occupational safety and health management systems work? The approach works because it changes the focus of safety and health from a series of tasks to a system. It requires management to commit to the long term and not a flavor of the month program. It gradually changes the responsibility for safety and health from the safety and health professionals to everyone in the organization including front line employees. It changes the culture to one where safety is a value and not a priority, when it is convenient. It changes the metrics from lagging ones to leading ones. It changes the conversation from zero injuries to acceptable risk.

One Company's Experience

L.L.Bean had five sites in three different industry groups that achieved OSHA VPP status since 2007 and three sites remain VPP star status at this time. Several more sites are in the implementation stage and are planning audits in 2011 and 2012. The company has found that the benefits far exceed the significant reduction in work-related injuries and illnesses. The culture now includes an engaged workforce which has translated the management systems approach into their everyday work lives. The amazing fact is that VPP further transformed the sites despite the fact that the company is privately owned and value based to start. It has had employee wellness programs for 29 years and one of the six corporate values include "safe and healthy living." It had a variety of safety and health programs already in place for many years.

The metrics tell an interesting tale. Like most safety and health management systems, OSHA VPP states that a major benefit of its system is the reduction of work-related injuries and illnesses. That is indeed what L.L.Bean found. The VPP sites had a 71% reduction in total case incident rate (TCIR) over the last five years vs. a 39% reduction at the non-VPP sites. They also maintained that rate well below industry average and continued to improve the program elements over time. The VPP sites had a 38% reduction in severity as measured by the Days Away Restricted Transfer (DART) rate vs. a 10% increase in the non-VPP sites. Keep in mind, there is some halo effect from VPP at the other sites since some have started implementation of VPP and others have more management focus due to the company VPP initiatives.

The bigger story is the change in culture. The company does a survey each year to measure the culture of the organization. This survey does have three safety and health questions but the majority of questions are more general. The company has found that employees at VPP sites rate all 34 questions on the survey an average of 8 points higher than the employees at non-VPP sites. This is consistent among all the company VPP sites despite the fact that they are in different industry groups. The key difference is considered to be the degree of employee engagement. Note that all the OSHMS require management commitment and employee involvement, including OSHA VPP. Although all the elements are important, engagement appears to be crucial to a successful implementation and long-term effectiveness of a management system.

Involving employees in decisions and other events that impact their work life increases their acceptance of the decisions that are made and help them to understand the process and the reason why the decisions were made. The employees are then bought in to the new process and want to achieve positive results. They tend to trust leaders and managers more and the work environment becomes much more collaborative. By being more collaborative and trusting, the organization can achieve higher levels of success that might not have otherwise been achieved if the employees weren't involved in the process. It also increases the willingness of employees to

become more involved because they can see the impacts of their input. They better understand how their efforts impact the organization and as a result they feel better coming to work everyday. This is an ever evolving loop.....once the collaboration and trust begin they continue to increase, employees want to become even more involved....and on...and on....and on.....

There are a number of ways that employees at L.L.Bean have participated in the management systems process. Ironically, leaders and employees use the approach in their day-to-day operations not just for safety and health applications. In the process, productivity has also improved. Here are a few examples that could be used in any organization.

1. Production line redesigns to eliminate risk of injuries and increase thru-put and efficiency.
2. Participation on a team to address the overall safety management system and make it more effective in eliminating injuries.
3. Participation on audit teams
4. Prioritization of audit team findings
5. Evaluation of near miss reports
6. Development of safety training DVDs or online training
7. Leading stretch breaks
8. Providing first aid for employees and customers as part of a team
9. Developing safety and health messages and signage
10. Leading tours of the facility for outside parties
11. Developing or reviewing Standard Operating Procedures
12. Performing Job Hazard Analysis
13. Performing ergonomic assessments for new employees
14. Participation on teams to design new production line training
15. Participation on teams that provide suggestions on how to make life better at the facility, i.e., adding Adirondack chairs and picnic tables to the lawn outside; adding umbrellas to the picnic tables; etc.

In conclusion, safety and health management systems can be a powerful way to change the safety culture in your organization. Using a comprehensive safety and health program that identifies and eliminates risks will significantly reduce injuries, illnesses and deaths in the workplace. The amazing part is that it can also improve the level of management commitment and employee engagement in an organization. This company has found that the overall culture and morale improved, not just in safety and health.

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