ENHANCING TEAM MANAGEMENT OF QUALITY, ENVIRONMENTAL, HEALTH, AND SAFETY PERFORMANCE

By Dr. John Robert Dew

Regulatory requirements related to environmental management and protection of worker health and safety have become more demanding in most organizations over the past decade.

While quality, environmental, health, and safety (QEHS) are each areas with specific professional bodies of knowledge, they all meet and intermesh in the daily operations of any manufacturing, processing, power generation, or healthcare setting. Teams are proving to be an effective organizational design for assuring both high performance in terms of productivity, and compliance in meeting demanding QEHS standards.

In the early days of research on the development of teams at the Tavistock Institute in Great Britain, researchers speculated that teams would be highly effective in exercising control over quality and compliance issues in the workplace. The growth of teams in the 1990s has provided abundant evidence that teams are indeed an effective structure for ensuring compliance to rigorous performance requirements, when appropriate conditions are established. For example, the Saturn plant in Spring Hill, Tennessee is structured around teams that have been successful in managing their own QEHS compliance activities. Empowered teams at Miller Brewing Company have taken on responsibility for monitoring their own safety, quality, waste management, and housekeeping. Teams at Hoechst Celanese have developed documentation for evaluating their safety performance. Wheelabrator Technologies has proven the utility of using a team based approach to implementing an ISO 14001 standard. A team based implementation strategy likewise helped the Navy implement more rigorous OSHA requirements in a hospital setting.

There is a growing recognition in business and healthcare that the use of

teams can significantly enhance the control that an organization exerts over achieving regulatory requirements. In a Harvard Business Review article, Professor Robert Simmons has noted that the age of empowerment has created teams that exercise greater control over work processes. Team members exercise control over their work processes which is the essence of Dr. Deming's concept of building quality into a product or service.

Organizations can enhance the performance of their teams in addressing QEHS issues by using the following proven methods.

1. The What-Why-How method to clarify the requirements a team must meet and to engage the team in meeting and exceeding expectations.
2. The use of performance indicators for tracking and trending QEHS data specific to each team.
3. Self-assessments to provide internal feedback in highly regulated work settings.
4. The star model, used to rotate team responsibilities in the QEHS arena.
5. Safeguard Analysis, a valuable tool in healthcare settings and used in a variety of manufacturing settings under different names.

WHAT-WHY-HOW

Three things that must occur to achieve high performance in QEHS management within any work setting. First, management must define what the QEHS requirements and standards are for the workforce. QEHS requirements can include minimizing product defects, obtaining certain levels of customer satisfaction, meeting specific environmental requirements, conformance to specific laws, or control of chemicals and processes that pose a risk to employee health and safety. Managers must be as specific as possible with the team and are well advised to call on staff specialists in QEHS to help define what requirements each team must meet. In effect, management is defining the boundaries in which the team must work and is highlighting key issues that will

become performance indicators for the team.

Second, management must explain why the requirements are in place. What are the risks to the public, to the customers, or to the team members? What are the legal consequences of failure to comply, both for the organization and for the team? What will happen to market share and the customer base if these requirements are not met? Most people will resist a mandated requirement unless they understand the rationale for the requirement. Time invested in explaining why a requirement exists pays off with buy-in from people to participate in meeting the requirement. If management communicates that a requirement or regulation is important, then people will respond appropriately. If, on the other hand, management implies that a requirement is really unnecessary, then employees will not be committed to meeting the requirement.

The third step is to define how requirements will be met. Here is where the team process gives managers and the organization a competitive advantage over organizations that are locked into traditional hierarchical structures. The whole team is engaged in defining how to meet and beat the requirements. This provides new ideas and strategies by harnessing the creativity of the whole team. Everyone on the team will invest time and energy in meeting the requirements.

In using the What-Why-How method, team leaders and managers must be careful not to dash through the what and why information in their eagerness to get to how. When leaders provide the what and why information, they should give the team the opportunity to create the best how.

PERFORMANCE INDICATORS

Effective teams post their regulatory and quality requirements as performance indicators. With performance indicators, teams actively track and discuss their QEHS status as part of regular team meetings. The team remains on watch for trends in their indicators that suggest when problems may be developing.

Teams use both quantitative and qualitative performance indicators. Quantitative indicators often include run charts and control charts that give the team feedback on their QEHS performance. Qualitative indicators help teams assess their progress in more subjective areas, such as housekeeping. Some organizations use a green -yellow -red set of color indicators to evaluate the status of housekeeping, labeling, shift turnovers, and other subjective criteria. Teams often post check-sheets to track attendance at regulatory training and verification of performance of key QEHS tasks, such as housekeeping inspections and safety meetings.

Performance indicators are frequently compared to the dashboard on a car. They give feedback to the people who have their hands on the wheel when it comes to QEHS performance. Effective control depends on having immediate measurement processes located in the team's work area.

SELF-ASSESSMENTS

It is infinitely better for an organization to discover and correct its own QEHS problems than to have a regulatory agency come in and do so, or to find out due to an accident, environmental insult, or customer complaint. Staff specialists can work with teams to develop internal self-assessment forms that enable the team members to critique their own performance. For example, a self-assessment form can be used by team members to verify that quality control activities are being conducted, that safety meetings are occurring, and to keep track of absenteeism data.

Self-assessment is the foundation for instilling rigor in the daily conduct of work. Management must set the expectations that teams will examine themselves for consistency in the use of best work practices, effective communication, and adherence to procedures. Self-assessment helps teams

emerge from relying on tribal knowledge about how the organization functions by identifying areas where processes need to be flow charted, where work instructions need to be formalized, and where training needs to be standardized and documented.

THE STAR TECHNIQUE

Many teams make effective use of what is referred to as the star technique for addressing QEHS issues. Regulatory issues, such as verification of environmental compliance, conformance to security requirements, oversight of safety equipment, responsibility for Material Safety Data Sheets and waste \ management are drawn as points on a star. Each team member assumes responsibility for each point on the star for a six or twelve month time and focuses on achieving excellence for the team in that compliance area.

In the star technique, responsibility for a regulatory issue, such as reducing a scrap rate, or minimizing exposure to safety hazards, rotates among the team members. This does not mean that the issue is dumped on a single person to work on, but rather that responsibility for leading the team's efforts is divided up among the various team members. The individual responsible for reducing safety hazards will lead the discussion within team meetings about how to accomplish this goal. With the rotation of responsibility, no individual is worn out by being the permanent leader in a specific compliance area. Rotation allows people to learn new knowledge and improves their commitment to compliance and rigorous conduct of work when they are not in the lead role.

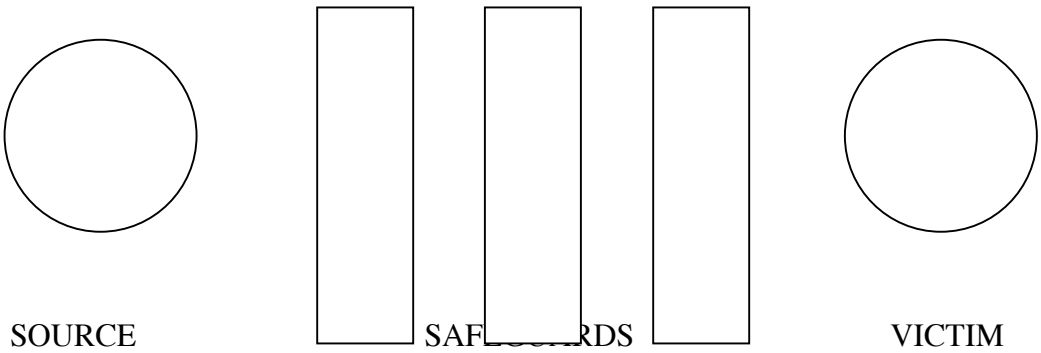
SAFEGUARDING

Teams in highly regulated settings, such as healthcare, are using more rigorous tools to safeguard work processes in order to prevent quality failures, environmental insults, and threats to employee and public health and safety. In healthcare, major problems are referred to as "sentinel events" since they signal

the need to improve regulatory and quality performance. These sentinel events include problems such as baby abductions, assault by one patient on another, and errors related to surgical procedures.

Teams safeguard work systems by systematically identifying situations that could result in sentinel events and developing safeguards that will prevent the problem from occurring. Figure One illustrates the concept of creating a defense in depth with a variety of safeguards that will protect a target or victim from the source of an event.

Figure One



Safeguards include physical barriers, natural phenomena, administrative controls, and knowledge that all keep problems from occurring. Physical safeguards include locks on equipment and doors and security barriers that separate the public from sensitive or hazardous areas. Natural safeguards include time intervals between medications and distance from radiological sources. Administrative safeguards include the use of checklists, labeling of equipment, and shift turnover procedures. Knowledge safeguards include technical information, procedures, and training to help staff keep work within proper controls.

Teams in many industries use a variety of safeguard analysis techniques to analyze accidents and to assess how to prevent problems. Failure Mode and Effect Analysis is a structured form of safeguard analysis that teams can utilize,

often with the help of an engineer. There are a variety of tools that teams can employ to help assess and identify the need for safeguards. The essential ingredient is to establish the concept of safeguard analysis within the team. This generates a culture of respect for procedures, training, data collection, and rigor in conduct of daily operations and maintenance.

THE TEAM LEADER'S PERSPECTIVE

There is a great deal of variation in the structure of teams in the contemporary workplace. Some are self-managed, while many have leader-facilitators. Some teams share facilitators. It is not at all uncommon for organizations to utilize some type of formal team leader, so here are some observations to assist those people in leading their teams to improve QEHS performance.

First, the team leader must set a high standard for performance and compliance to requirements. If the team leader adopts a laissez-faire attitude about meeting requirements, then the team will follow that lead and adopt work practices that result in low quality, disregard for environmental protection, wasteful use of materials, and work-arounds that put worker and public health and safety at risk.

Second, the team leader must help the team obtain the expert resources and knowledge necessary to succeed. In some cases this means bringing in the right staff person or outside resource to work with the team on solving problems or on utilizing new methods to achieve a breakthrough in QEHS performance. In other cases it means finding a way to free up a team member's time to attend training that will enable that person to serve as the team's expert in a QEHS area.

Third, the team leader must be ready to take problems to management when they are beyond the scope of the team to solve. Some QEHS issues are beyond

the team's boundaries and must be worked by staff or management groups. Being quick to recognize and elevate these types of issues will help the organization remain successful in achieving regulatory excellence. However, the team leader must be careful to not to pass along issues that are within the team's jurisdiction to resolve.

THE MIDDLE MANAGER'S PERSPECTIVE

Many middle managers now find that they have multiple self-directed teams reporting to them, or that they have a cadre of team leaders reporting to them who are each guiding one or more teams. This can be a new experience for people in middle management. Middle managers have a special role to play in helping teams achieve excellence in QEHS.

First, middle managers must assure that all of the requirements are known by the team by using a structured approach to communication such as the What-Why-How Method. If the teams do not know what the requirements are, they cannot be expected to meet them and management is 100% responsible for defining the requirements.

Second, middle managers must budget (and sometimes fight for) resources to provide teams with training that will enable teams to become fully compliant with requirements. If the organization adopts a star technique where employees rotate the QEHS leadership roles within the team, management must assure that people can have the proper training available when they rotate into new roles.

Third, middle managers need to invest time in walking their spaces in order to see firsthand how requirements are being met. Managers need to make their own observations about how shift turnovers are conducted, how performance indictors for QEHS are being used by teams, and how log books, quality control records, and other record keeping is being conducted. Managers need to drop in on safety meetings and other team activities to express support and observe what

is going on. This communicates interest and commitment regarding QEHS and reinforces team behaviors. Middle managers need to recognize teams for excellent performance and should coach team leaders when team performance is not meeting expectations.

CONCLUSIONS

Each organization faces a unique set of challenges in meeting quality, environmental, health and safety standards that are specific to their work context. Irregardless of the setting, whether in manufacturing, power production, healthcare, or any other complex system, teams are proving to provide an effective structure for achieving QEHS excellence. Methods such as the What-Why-How model, use of performance indicators, self-assessments, the star model, and safeguard analysis give team members the ability to meet and exceed their QEHS requirements.

References

Appleman, Kaye and Large, Kris. 1995. "Navy Hospital Fights Disease with a Quality Team." Quality Progress (April): 47-49.

Bolton, Jane. 1993. "Establishing Boundaries for Employee Empowerment." In Empowerment: Unleashing the Full Potential of your TQM Effort. Schaumburg, Ill.: Quality and Productivity Management Association.

Dew, John R. and Curtis, Meri. 2001.Diagnosing and Preventing Adverse and Sentinel Events. HC Pro, Marblehead, MA.

Hemenway, Caroline G. and Hale, Gregory J. 1996. "The TQEM - ISO 14001 Connection." Quality Progress (June): 29-32.

Joint Commission for the Accreditation of Healthcare Organizations. 1997. Sentinel Events: Evaluating Cause and Planning Improvement. Oakbrook Terrace, Ill.: Joint Commission for the Accreditation of Healthcare Organizations.

Kepner, Charles and Tregoe, Benjamin. 1986. The New Rational Manager Princeton New Jersey: Princeton Research Press.

Rhenman, Eric. 1968. Industrial Democracy and Industrial Management London: Tavistock Press.

Sattizahn, John. 1993. "Measuring SDT Service Effectiveness." in Empowerment: Unleashing the Full Potential of your TQM Effort. Schaumburg, Ill.: Quality and Productivity Management Association.

Simmons, Robert. 1995. "Control in an Age of Empowerment." Harvard Business Review. (March-April): 80-88.

Wellins, Richard S. et. al. 1994. Inside Teams San Francisco: Jossey-Bass.

About the author

John Robert Dew serves as Director for Continuous Quality Improvement at the University of Alabama. He holds a Doctorate in Education from the University of Tennessee. John has worked with chemical processing, paper production, power generation, machining, and manufacturing plants, city governments, educational institutions, and healthcare facilities in implementing teams, in teaching supervisors to become team leaders, and in helping middle managers learn to manage in a team structure. He is the author of Quality Centered Strategic Planning (Quality Resources Press, 1997), Empowerment and Democracy in the Workplace (Quorum Books, 1997), Managing in a Team Environment (Quorum Books, 1998), and Diagnosing and Preventing Adverse and Sentinel Events (HCPRO, 2001). His last article in the Journal for Quality and Participation was "Creating Team Leaders" in October/November, 1995.