Generating Injury-Free Success Through World-Class Safety Fundamentals

Educated Mission Group Case Study

Background
Edison Mission Group (EMG) manages the competitive power generation business and other subsidiaries of California-based Edison International, a generator and distributor of electric power and an investor in infrastructure and energy assets, including renewable energy.

EMG company Midwest Generation (MWG) is an independent power producer that operates six electric power generating plants in Illinois and supervises operation of the EME Homer City generation plant in Homer City, Pa. It sells electricity in competitive wholesale markets and competes in a 13-state region that extends from the Atlantic coast westward to Illinois.

Situation
In 2006, MWG was facing an increase in the severity of injuries, which included fatalities, at its coal-fired plants. Senior leadership at EMG and MWG, including Len Tully, Safety Director, Guy Gorney, former Senior Vice President of Generation, and Ted Craver, then President and CEO of Edison Mission Group (now chairman of Edison International), asked DuPont to assist the organization in moving toward world-class safety performance.

During the three-year engagement that followed, DuPont:
- Evaluated MWG’s safety management system against world-class systems;
- Identified opportunities for improvement in the management of workplace safety and process safety; and
- Provided recommendations for the development and maintenance of a world-class safety system at MWG.
Initial Assessment Findings
As a first step, EMG and MWG management undertook a comprehensive assessment with DuPont that identified key areas of concern and opportunities for improvement:

- MWG’s safety culture was reactive and compliance-focused.
- There were pockets of safety system skills in the organization (such as the incident investigation process and its safety committees) but these were insufficient to achieve the highest standards of safety performance.
- Established safety goals encouraged only incremental improvement.
- MWG lacked sufficient safety management knowledge to achieve world-class safety performance.
- There was a significant gap in the organization’s ability to identify and mitigate risk.
- Inconsistent safety management practices were a barrier to rapid improvement (i.e., more difficult, more expensive, slower).
- MWG’s primary goal was improving the overall safety and welfare of employees.

Primary Goals
The DuPont assessment was designed to help MWG develop a high-level path forward for continuous safety improvement over the three-year engagement period of 2007 to 2010. MWG and DuPont agreed that the primary goals of the engagement were to:

1. Reduce employee injuries and ultimately create an injury free workplace;
2. Transform the safety culture from a reactive, compliance-focused one to an interdependent one (as defined by the DuPont Bradley Curve) that is proactively focused; and
3. Develop the skills and capabilities of the line organization to more effectively manage all aspects of the operation by establishing and maintaining high standards of performance.

Needed First – A Cultural Shift
EMG and MWG leadership also realized that the company needed to take the following actions to create a strong safety culture and reach its goals:

- Make safety at least as important as production and quality (good safety is good business);
- Gather greater input from stations and include it in the process for setting challenging goals and defining action plans;
- Expand the safety leadership organization by involving all levels of employees and management;
- Establish the corporate safety policy as the driving force behind systems and processes for managing safety;
- Ensure that all, not just some, potential workplace safety hazards are identified, analyzed and safe guarded;
- Create a comprehensive, structured auditing system that involves all levels of the organization, collect data, and use this data as a change agent;
- Eliminate the potential for hiding injuries by encouraging a culture where injury treatment and prevention take priority over financial incentives; and
- Ensure that everyone on a station site, including contractors, is required to comply with a consistent set of safety policies and regulations.
The MWG Improvement Strategy

Although leadership commitment and support were key drivers in building a safety culture, MWG and the DuPont consulting team agreed that the greatest success would be achieved through implementing an improvement strategy that included seven essential steps:

1. Establishing a strategic safety management structure;
2. Developing and introducing safety process systems in the areas of safety observation, incident investigation, rules and procedures, and communications-activities-involvement;
3. Developing performance standards and metrics to monitor safety performance;
4. Building safety leadership competencies at all levels of the organization;
5. Expanding workplace safety systems to include contractors;
6. Establishing process safety reviews to identify and mitigate risks from high hazard operations; and
7. Training employees and contractors on the new safety systems and processes.

Achieving Improvement through a Comprehensive Approach

MWG, with support from DuPont, developed and implemented a safety management system, focused around the operations environment. It provides the organizational, process, and skill infrastructure needed to broaden the perspective of safety, incorporate accountabilities and move MWG towards being an injury-free workplace. It was accomplished through a comprehensive three-year strategic process that included:

- Defining and documenting safe work standards;
- Reinforcing standards and expectations through auditing and observation;
- Fostering employee involvement through activities and communication;
- Preventing incident recurrence through incident investigation;
- Incorporating safety into contractor relationships; and
- Driving accountability through actionable information.

The improvement strategy was organized by DuPont and implemented in three phases to drive positive organizational results. First, a division safety system was designed. DuPont and MWG established a division-level safety governance structure and designed the future-state MWG safety system and processes. These processes were piloted at individual sites prior to broader roll-out. Second, a Central Safety Committee was initiated at each site and sites prepared for the roll-out of the MWG safety system and processes. Third, all levels of the organization participated in safety leadership training and development workshops and a detailed re-assessment of the new system and processes were completed at each site along with additional activities designed to drive cultural assimilation and optimization.

The work with MWG has been expanded to now include EMG facilities in other parts of the country, so that processes and practices are consistent across all of EMG and its fleet of more than 40 coal, gas and wind generating facilities in 13 states.

Importance of Process Improvement and Communication

DuPont helped MWG manage the necessary internal changes through its proprietary process improvement framework which includes assessing the current state, envisioning the future state, planning the transition, and implementing the change. It was also critical to the success of the implementation to ensure continual two-way communication among all stakeholders involved in safety management at MWG, including:

- The corporate safety committee
- The steering team
- Top leadership
- Team leads
- Process improvement teams
- Employees
**Results**
A key deliverable for the MWG steering committee was to achieve at least a 60% reduction in injuries to MWG employees against a 2006 year-end baseline. This would represent a major milestone on a path to zero injuries. By year-end 2010, MWG reduced its incidence rate by 73%, DART rate by 68% and LWDC rate by 72%.

**Benefits to EMG and MWG**
In addition to reducing injuries, the most important benefits of implementing a world-class safety management structure at EMG and MWG included the development of a work environment that fosters trust and openness and invites collaboration between company management and its employee union. The process has also created professional development opportunities for employees in the areas of safety management, project management, team building, process methodology, and leadership skills.

**Knowledge Transfer and Sustainability**
Since sustainability is a primary goal of every DuPont safety consulting engagement, an annual Safety Summit was created to help maintain and strengthen improvement across all of EMG. Each year, successes are celebrated at the summit and continuous improvement opportunities are identified. As a result, this event has helped anchor and reinforce safety sustainability throughout the company and over time.

**Conclusion**
To maintain a world-class safety management structure and safety culture, an organization must establish high safety standards; regularly review its performance, monitor operations and processes; make needed improvements promptly; and continue safety training, coaching, and other awareness-building activities so that all employees understand their responsibilities and know how to work safely. Today MWG continues to operate by the core set of safety principles that DuPont helped the company develop and implement.

For more information on DuPont Sustainable Solutions and its world-class safety management system consulting services, call us today at 1-800-532-SAFE (7233) or visit us at www.sustainablesolutions.dupont.com