Successful capital-intensive industries have realized a highly effective maintenance organization will increase shareholder and stakeholder value. Studies have shown dedication to maintenance excellence will positively impact safety, environmental stewardship, customer satisfaction, cost, productivity and return on invested capital. The most effective operations are those that have established excellence in maintenance.

Hibbing Taconite Company, managed by Cliffs Natural Resources, is committed to being one of those companies. In September 1995, Cliffs Natural Resources organized a corporate-wide Maintenance Leadership Team (MLT) to champion maintenance excellence uniformly throughout Cliffs. The work of the MLT set the foundation for our current maintenance and reliability systems.

In 2006, Hibbing Taconite performed a thorough assessment of the entire maintenance and reliability systems by asking the simple question “Are we executing today what was set forth in 1995 and what we see today in world class maintenance practices?” The assessment indicated we had some work to do. We tightened up the metrics we use to measure our processes as well as redefined our position roles and responsibilities within the maintenance and reliability system. Most importantly, we re-educated the maintenance teams which had experienced significant turnover, in our current standards and in the new reliability practices we wanted to embed.

As part of this process, our reliability department reviewed the preventative and predictive maintenance work being generated in our Computerized Maintenance Management System (CMMS). We found that through the years of open access to the system and system upgrades, the Preventive Maintenance system needed to be cleaned up and standardized before we could get a true measurement of how well our PM efforts were performing. The reliability engineers were charged with the task of cleaning up the system and rewriting the PMs for the proper content, sequence and timing. This effort provided Hibbing Taconite a clean and manageable PM structure to build our reliability systems.

By the middle of 2007, the systems work was completed and we began to track and analyze our system performance metrics. The four metrics tracked were PM and Schedule Compliance, Schedule Loading Hours, and Break-in work. Analyzing these metrics on a weekly drum beat provided clarity as to where to focus our floor activities.

Concurrently, we evaluated various predictive maintenance technologies. From this evaluation we implemented best practices in predictive technologies such as: oil analysis and lubrication, vibration analysis, and thermography. These technologies are the foundation of our condition based maintenance strategy. We also moved our maintenance philosophy for our most critical equipment to proactive maintenance and condition based component change out. Through early detection, we believe that in many critical areas we have the ability to prevent failures.

Improvements were embedded one work group at a time over the course of three years until all work groups were stabilized under our current best maintenance and reliability practices. Once stable, we turned our focus on improving process capability. Maintenance and reliability systems improvement have been our focus since late 2010 and continues to be our focus going forward.

Hibbing Taconite Company firmly believes through investment in our employees and their engagement in the improvement process, an effective maintenance and reliability team has been established; a team that uses a tried and true maintenance system to provide reliable equipment which ensures the safety of the employees, protects the environment and meets the production needs of Hibbing Taconite Company.