How a Global Mining Company

Delivered Optimized Maintenance Strategy on Time and Within Budget

Challenges:

Develop a Maintenance Strategy for a Newly Installed Longwall Shearer at an Underground Coal Mine

The client is a major primary coal producer, conducting mine operations across the globe. One of the client's underground coal mining operations had recently replaced a 30 year old longwall mining system. The progressive project manager wanted a good preventive maintenance program and commissioned schedules from the start.

The client had previously conducted an RCM study with another tool of the old shearer. The analysis took six weeks and the maintenance tasks were not grouped into PMs or implemented.

Our goal was to prepare and implement a robust maintenance strategy for the new shearer in five weeks using the vendor manuals provided in collaboration with local maintenance personnel.

- Build the equipment hierarchy for the new equipment and apply the vendor maintenance strategy
- Review the vendor recommended maintenance strategies
- Group the new maintenance tasks into PMs
- Produce implementation schedules

Solution:

Strategy Optimizer Software and PMO Process Were Chosen to Conduct the Analysis

The five week assignment involved electrical, mechanical, and operator groups providing input during the strategy review. At the conclusion of the analysis, the new tasks were grouped into sequenced tasks. The resulting outputs included all PM programs and commissioning schedules.

- Equipment hierarchy was built and verified, and the vendor maintenance strategies were reviewed and revised to assure they covered the necessary failure modes
- Non-value adding/non-cost effective tasks were removed
- Intervals were extended for tasks that were too frequent
- Additional tasks added for failure modes that were missed
- Tasks were grouped into PMs and commissioning schedules were produced

Results:

The New Maintenance Program Was Ready for Implementation in a Total of 5 Weeks

The vendor recommended schedule was estimated as 4% total time. Strategy Optimizer found that this was double the required amount. Numerous simple modifications were also identified and introduced in order to improve reliability, maintainability, and fault detection.

964	21%	23%	50%	50%
Maintenance Tasks Reviewed	Non-Value Adding Tasks Removed	Tasks Intervals Were Extended	Maintenance Resource Utilization	Reduction in PM Downtime

Strategy Management

Zero tolerance for unexpected failures.

Think of your assets as the value delivery engine of your business. The most important function of these assets should be to operate as engineered for their intended design life so the business can generate a greater return on capital employed (ROCE). The goal should be to strategically manage your assets for optimum returns regardless of uncontrollable external factors like macroeconomic conditions, monetary policy, or fiscal policy.

+1.919.488.0068
info@nexusglobal.com