Improving Haul Truck Efficiency at Elkview Operations

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Improving efficiency is a key part of our efforts to reduce costs and improve the competitiveness of our operations. At our Elkview steelmaking coal operation (EVO) in southeast British Columbia, an opportunity to improve efficiency by reducing haul truck cycle times was identified.

“Haul truck cycle times are a major part of mining activity at site. Finding ways to improve the efficiency of those cycles has created major cost reductions and safely improved productivity. Our supervisors and employees should be proud of their accomplishments.” – Don Sander, General
EVO determined that the average haul truck cycle could be reduced. With the total cost to operate each truck at around $450 per hour, safely reducing cycle times had the potential to have a big impact on operating costs. Two challenges that needed to be resolved were increasing truck speeds in a safe and productive manner and reducing non-productive time (wait time) from the cycle.

Haul truck productivity functions as a system and requires teamwork from a number of people including: shovel operators who load haul trucks; maintenance teams that provide reliable equipment; drilling and blasting teams that provide efficient digging for shovels and assist with maintaining level benches for haul trucks; and haul truck operators themselves.

“As an interconnected system with many inputs, haul truck cycle improvements rely on contributions from everyone in order to be successful,” said Clayton Podrasky, Mine Operations Superintendent, who led the initiative.

Operations, Maintenance and Engineering teams at EVO worked together on a plan to improve systems, practices and infrastructure which was developed through ongoing feedback and insights from employees. As part of the strategy, the teams set expectations necessary for improvement and ensured they were focused on measuring the data that drove the highest value in terms of truck productivity.

The major changes to reduce haul truck cycle times included:

- Improving road and bench floor conditions so speeds could be enhanced
- Focusing on reducing truck queue time to minimize non-productive time
- Working with operators to maximize the assets to their safe design capabilities
- Using Dynamic Dispatch when opportunities existed
- Installing payload systems on shovels to ensure haul trucks were loaded to their rated capacity, but not overloaded, and installing additional light weight boxes to maximize material payload
- Modifying the dumping procedure to minimize haul truck delays
- Provide ongoing feedback in the form of scorecards
- Listening to the employees and their ideas
- Providing positive recognition for employee efforts

Since the project began in 2013, the results have been dramatic as cycle times have decreased by 20%. This has resulted in over $63 million in cost reduction and it has also reduced the need for adding additional haul trucks to the fleet. At the same time, safety at the operation continues to improve.

These improvements are the result of teamwork between supervisors and employees. A culture of excellence is being created at Elkview and there is an increased sense of pride among employees involved. Effort continues on this front and there is still work to do; however, teamwork will continue to be the greatest driver of success.

TAGS
- Energy Efficiency
- Cost Savings