Iron Ore Company of Canada (IOC) is the largest manufacturer of iron ore pellets in Canada. Its customer base covers North American, European and Asian steel producers. The company operates a mine, a concentrator, and a pelletizing plant in Labrador City, Newfoundland and Labrador, as well as port facilities located in Sept-Îles (Quebec). It also operates a 418-kilometer railroad that links the mine to the port. IOC has approximately 1900 employees and its major shareholder and operator is the international mining group, Rio Tinto, which has activities in more than 40 countries throughout the world.

In order to ensure efficient and effective maintenance tasks, a formal criticality review which was facilitated by the Asset Management Department with participation from maintenance, operations, the reliability group, and business evaluations using a custom built risk matrix.

In 2010, our reliability engineering team is responsible for doing Root Cause Analysis. Various methods have been used such as RCM and TapRooT, depending on the situation. All members of the reliability team, which includes the condition monitoring team, have been trained in most commonly used analysis methods. We have nine employees trained at Level I Airborne Ultrasonics and one employee trained to Level II Airborne Ultrasonics.

The most impactful application for airborne ultrasound is the detection and elimination of Haul Truck Engine dusting. Basically dusting is when engine connections are loose and allow small dust/dirt particles into the crankcase, spiking oil contamination and creating abrasive engine wear and excessive oil changes. With a 24/7 operation, increasing the availability of haul trucks is a major contributor to increased revenue.

We use the SDT 170 Airborne Ultrasonic Detector with a 200mW Bi-sonic Transmitter and flexible wand for doing the tightness testing. A third-party oil analysis lab is used in conjunction with an in-house hydrocarbon specialist for our oil sampling.

Iron Ore Company of Canada Program Highlights

Iron Ore of Canada Equipment

- Entek 2500 Vibration Analyzers
- Fluke Ti55 Thermography Camera
- SDT 170 Ultrasound Analyzer and various other pieces of test equipment for thickness, NDT, LP, MPI, etc.

Iron Ore Company of Canada

Best Ultrasound Mobile Fleet

From Left: Michel Vachon - Lubrication Team Leader/Condition Monitoring Technologist, Glen Oldford - Condition Monitoring Technologist, Doug Thomas - Hydrocarbon Specialist