GreenField Ethanol is one of North America’s leading green fuel suppliers and Canada’s largest ethanol company, fuel grade ethanol accounting for the major portion of its sales. It also has the honour of being listed among the 50 best managed companies in Canada. The company, with more than two hundred and fifty employees, operates four distilleries in Canada, including one in Varennes, Quebec.

In operation since February 2007, GreenField Ethanol Quebec has produced over 175 million liters (47M gal) of fuel grade ethanol per year, more than 110 000 tons of CO2 per year (valorized by another company as dry ice) and 145 000 tons of distillers’ grains per year (aimed at the animal feed market). The Varennes plant is fortunate to have over fifty skilled employees and has obtained ISO 9001, ISO 14001 and OHSAS 18001 certifications.

Since the very beginning, reliability has played a key role in the development of the plant in Varennes. Predictive technologies have been introduced and a CMMS system implemented. Over time, we have reinforced the foundations of our reliability program by adding numerous elements such as: new predictive tools, a planning and scheduling process, a continuous improvement team based on World Class Maintenance, precision maintenance, PM and PdM optimization, execution and control of work, failure analysis and prevention, equipment management, FMEA, improvement of the CMMS and employee skills development. Moreover, continuous improvement methodologies have been adopted: SMED method, 5S’s and value stream mapping. Our reliability process is also characterized by elimination of waste and non-added value operations. KPIs and information analysis techniques make it possible for us to see patterns emerge and to take action before problems occur.

Our reliability process is reassessed annually using a rigorous method. We base our annual business plan on the results of that assessment in order to maintain our gains and to minimize our weaknesses. In the last four years, a great improvement in adhering to the scheduling has translated into a significant drop in unplanned shutdowns as well as a decrease in maintenance costs.

Despite good results achieved, there are still plenty of opportunities for improvement as far as maintenance and the reliability program are concerned. We have enjoyed successes and we have had failures that have led us to grow. We strive for excellence, which is not a few days adventure but an endless search.

Instruments
- Vibration Analysis : CSI 2130
- Thermography : Flir E60
- Ultra sound : SDR 170
- Ultrasonic Thickness measurement : Olympus 3BDL
- Electrical signature analysis : ALL-TEST IV PRO On Line II
- Motor circuit analyser : ALL-TEST IV PRO 2000
- Laser alignment : Fixature Laser Xpress alignment
- Belt tensioner : Status Pro Belt Tension Pro
- Pulley alignment : Vibration Belt Hog
- Data acquisition system : Astromed TMX

Software
- Vibration Analysis : AMS Machinery Health Manager
- Thermography : Flir Tools Software and Flir Report Center Software
- Ultrasonic Thickness measurement : Gaga View Software
- Electrical signature analysis : ATPRO ESA 6.2 Software
- Motor circuit analyser : EMCAT PRO and Condition Calculator 4.0 software
- Fluke scopemeter Software
- FieldMate Software
- Fluke Power Quality Software