



**Where:** North West Canada

**Product:** Dust Sentry Outdoor Dust Monitors

**Installed:** 2013

**Result:** Early warning system for coal dust

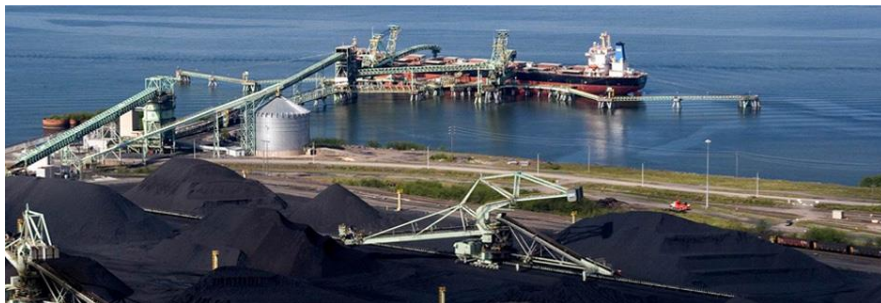
## Managing coal dust with the Dust Sentry

### THE CUSTOMER

Ridley Terminals Inc. (RTI) owns and operates a world class marine bulk handling terminal, which provides continuous, high quality and high performance rail car unloading, product storage and vessel loading services.

RTI provides an export point for metallurgical and thermal coal, and petroleum coke from British Columbia, Alberta and the United States to Asia. The facility, located on Ridley Island in Prince Rupert, handles 12 million tonnes annually, expanding to 25 million tonnes annually by 2015.

RTI operates seven days per week, 24 hours per day and is certified under the ISO 9001, ISO 14001, and OHSAS 18001 standards.



**“Ridley Terminals’ priority was to measurably improve its environmental performance in the key area of air emissions.”**

### THE PROBLEM

To help prevent coal dust pollution to neighbours, storage piles are regularly dampened with water from automatic spray heads and mobile water tanker trucks. All weather parameters that affect the propensity of dust particles to become airborne are continually monitored. They found that dust exceedances occurred most often during the dry summer months when the wind is from the west.

Like many industrial facility operators they looked into the procurement of dust monitoring equipment to monitor these exceedances. Ridley wanted something that would sound the alarm immediately, allowing them to implement mitigation strategies before dust pollution became a problem. Also, due to no mains power being available at the chosen installation site, the monitor needed to have a low power consumption to allow solar panels to be installed.

## THE SOLUTION

Aeroqual's local representative Environmental Analytical Systems won the project by putting forward the Dust Sentry PM10 monitor.

The station, located on the RTI site contained a nephelometer for measuring PM10 particulates and a fully integrated weather station to measure wind speed and direction, liquid precipitation, barometric pressure, air temperature and relative humidity. Both the Dust Sentry and integrated weather station were powered off two solar panels connected to the monitor.

The unit was fitted with an IP cellular modem which pushes data from the instrument to a cloud-based data acquisition and reporting system that is accessed securely online by Ridley as well as their stakeholders. Data is viewed in real-time and then downloaded for reporting purposes.

This system allows for early warning of environmental changes that could result in the creation of dust and other environmental hazards. Alarms are sent to staff and management via SMS and e-mail. When an alarm is announced, the spray heads are turned on and the mobile water tanker trucks deployed.



## EVALUATION

To date, the system is operating at over 99% uptime and requires only simple routine maintenance. This is despite the fact that Ridley Terminals operates in a remote location and has limited experience with air quality monitoring equipment.

The customer reports that some minor fine tuning of the reporting system is on-going, and they are receiving close support from Aeroqual and Environmental Analytical Systems throughout.

