

Monitoring dust for the largest coal producer in the world

Our Client

Northern Coalfields Limited (NCL) is a subsidiary of the largest coal producer in the World, Coal India Limited. NCL is India's highest producer of composite (Coal+OBR), contributing more than 1/10th of the energy supply for the country. The company was established in the year 1985 and soon attained one of India's highest award status of 'Mini Ratna' in 2007. It has achieved a record of dispatching coal of over 115 million tonnes in the year 2020-21. It is currently headquartered in Singrauli and has an employee strength of more than 16,226 people across the world.



The Challenge

The Singrauli Coalfield belonging to the NCL is spread across the districts of Singrauli and Sonebhadra in the Indian States of Madhya Pradesh and Uttar Pradesh. Since the mines are situated so close to the city, it was important to monitor the air quality around the coal mines. The company wanted to keep track of the $PM_{2.5}$ and PM_{10} levels on a regular basis. This was to ensure the residents of the city nearby and the workers for safe breathing air. It was essential that such a dust monitor be compact and easy to shift to different locations. This was so that they could get an accurate reading from all sides of the mines.

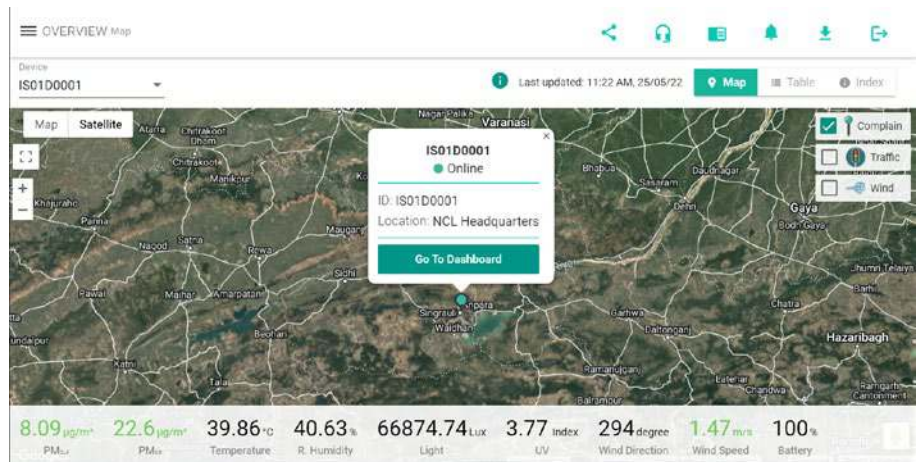
Installation Details

Dustroid Lite has been installed in the Singrauli, Madhya Pradesh, and later shifted to Bhatgaon, Chhattisgarh.



The Solution

Oizom with ISO TECH offered Dustroid Lite to the NCL for monitoring dust levels around the coal mines. Dustroid can accurately detect $PM_{2.5}$, PM_{10} , PM_{100} , temperature, and humidity on a real-time basis. It can also be customized to detect and monitor the wind speed and wind direction so that NCL can keep track of the direction of the dust being carried forward. This can help them identify the source of dust emission and make appropriate decisions that best suit their need. Dustroid also comes equipped with Data analysing and Visualization software that helps the NCL in keeping track of the historical data and trends of the dust emitting from the coal mines. It also comes equipped with a robust, compact and lightweight body which makes it convenient for the NCL to move the Dust monitor to different places whenever required.



The Result

The NCL is now capable of real-time monitoring the dust levels and the direction from where it is originating around the coal mines. Oizom's smart, robust and accurate dust monitoring system has assisted NCL in reassuring the residents of the nearby city of safe breathing conditions. Dustroid's compact and lightweight body has brought forward a hassle-free installing and shifting of the monitor to different places around the coal mines.

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“Dust monitoring equipment is performing well since we did not require to calibrate it on a frequent basis.”
- Amay ISO TECH

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Oizom is an environmental IoT company offering data-driven environmental solutions for better decision making. With our sensor-based hardware, we monitor various environmental parameters like air quality, noise, odour, radiation, weather conditions, etc. Our data analytics platform derives many actionable insights for authorities, communities, and industries. Oizom strives to play an essential role in a sustainable future through smart environmental solutions and data science.