

Real-time Air Quality Monitoring in Mahavir Coal Washeries, India

Our Client

Mahavir Coal Washeries Pvt. Ltd. (MCWPL) is a flagship company of Mahavir Group, incorporated in the year 2007. It is established as a heavy media bath based coal beneficiation plant, headquartered in Chhattisgarh. This means It is responsible for cleaning, sizing, and pulverizing the raw coal as per the requirement of various governmental and private sectors. Their clientele includes some of the biggest coal producers in the world, namely Coal India Limited. They are also involved in mining and agglomeration of hard coal, and manufacturing of other solid fuels.



The Challenge

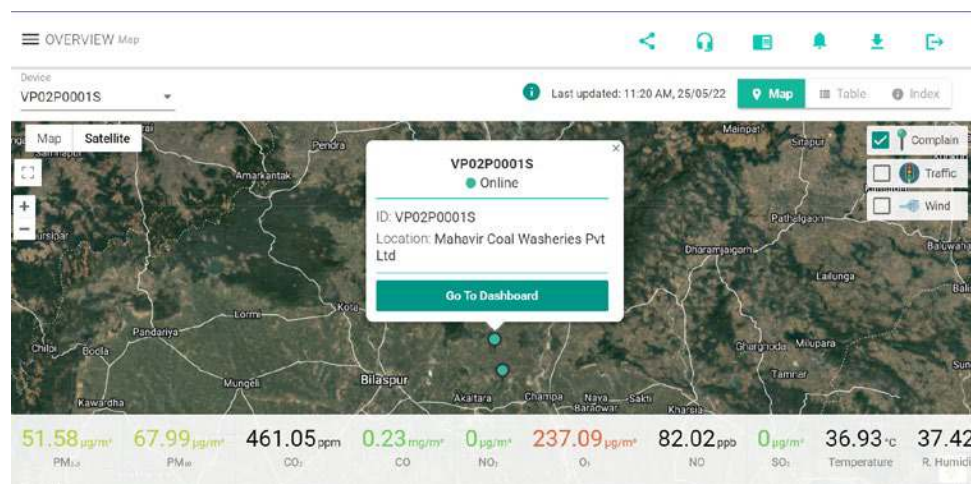
A Coal washery process includes unloading raw coal, storing, handling, crushing, screening and coal washing in a washery unit. In this process, a high concentration of $PM_{2.5}$, PM_{10} , SO_2 , and CO is emitted into the air. If such emissions travel to the nearby villages, it could bring about disastrous consequences for the residents' health. This is why the MCWPL needed an Air Quality Monitoring system to ensure the workers and the residents of the nearby village that no excessive harmful emissions are occurring from the Coal Washeries. It was also important that such a monitoring system offer all the required parameters' sensors within the same device.

The Solution

Oizom's partner, Vasudeva PMPL with SN Enviro Tech offered the MCPWL to install 2 units of Polludrone in and around the Coal Washery units. Polludrone can monitor the various dust and gaseous emissions from the Coal washery on a real-time basis. It comes equipped with a Data Analysing and Visualization software (Envizom), which collects the data from the monitor and can display it through the MCPWL's display devices. With this data, they can monitor and ensure the workers and residents of the nearby village of clean air. Polludrone is also robust and compact, which makes it function despite harsh weather conditions, with a minimum need for space.

Installation Details

2 units of Polludrone Smart were installed in the Mahavir Coal Washeries, Chhattisgarh



The Result

The MCPWL is now capable of monitoring the dust and hazardous gaseous air pollutant levels on a real-time basis. The company is now enabled to inform and ensure the workers and residents nearby of clean and safe breathing air. Polludrone has helped the company save time, money and space with its smart, robust and compact monitoring system. Its Data Analytics & Visualization Software has further empowered the company in accessing the various parameter levels of gaseous and dust levels from the Coal washeries on a real-time basis.

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“Product is monitoring PM values accurately in the Mahavir Coal Washeries. The Data Analytics Software is very user friendly and the installation was done hassle-free.” - Chait Ram Patel, Service Engineer, SNENVIRO.

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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.