Real-Time Odour Monitoring at Malad Waste Water Treatment Facility Using Oizom Polludrone

INTRODUCTION: *Addressing Odour Pollution in Coastal Wastewater Facilities*

The Brihanmumbai Municipal Corporation (BMC) plays a crucial role in maintaining public health services across Mumbai, encompassing waste management and wastewater treatment. The Malad Waste Water Treatment Plant is near the coast and close to a Ready-Mix Concrete (RMC) batching plant, raising concerns about ambient air quality.

Earlier in 2024, the plant installed a US-based air-monitoring system to meet BMC's compliance requirements. However, the harsh coastal environment and heavy dust from nearby industrial activities often caused the system to clog, fail to monitor data accurately, and lack adequate service support. It also could not connect with BMC's server for real-time data transfer.

THE CHALLENGE: *Monitoring System Failure in a Harsh Environment*

Even though a system was in place, several issues limited its effectiveness:

1. **Clogging and Downtime:** The previous device often failed in dusty, coastal conditions, frequently going offline due to exposure to corrosive gases at higher concentrations.
2. **Poor Support and Maintenance:** A lack of local service led to prolonged downtime and unresolved issues.
3. **No API Integration:** The system was unable to share data with BMC's compliance servers.

Lack of real-time visibility: Without real-time visibility, it was difficult to predict or react quickly to spikes in odour levels.
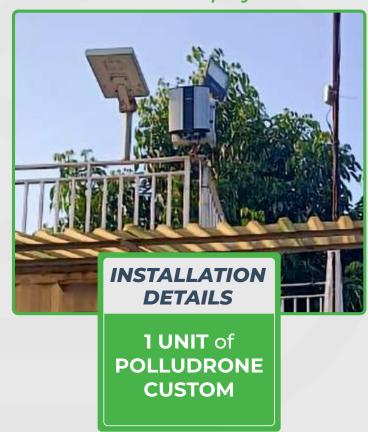
THE SOLUTION: *Oizom Polludrone Custom with Outdoor Display*

NCC Limited, working with Technovalue Solutions Pvt. Ltd., introduced Oizom's Polludrone Custom with an Outdoor Display Board as a strong replacement.

The deployment included:

1. A durable Outdoor Air Quality Monitor to handle coastal humidity and RMC dust.
2. A visual dashboard to track pollutant trends and generate automated compliance reports.
3. BMC API Compatibility for easy data transfer and regulatory compliance.
4. Early detection of odour-causing gases such as SO_2, NO_2, THP with high accuracy.

This solution provided continuous, real-time environmental data for better monitoring and proactive measures.

INSTALLATION DETAILS

1 UNIT of POLLUDRONE CUSTOM

THE TRANSFORMATION: *Empowering Farmers and Policy-Makers Alike*

The introduction of Oizom's Polludrone changed the site's monitoring capabilities:

1. **Real-Time Data Availability:** The system now provides live air quality values, enabling site managers to make informed, timely decisions.
2. **User-Friendly Operation:** The post-installation training empowered the safety team to operate the system independently.
3. **Worker Awareness and Safety:** The outdoor display keeps ground staff informed about ambient conditions, enhancing compliance and reducing health risks.

BROADER IMPACT: *Strengthening Municipal Environmental Compliance*

This deployment exemplifies how real-time environmental data can drive meaningful improvements in public infrastructure. By seamlessly integrating with BMC's compliance systems, Oizom's Polludrone empowers smarter decision-making, promotes regulatory accountability, and enhances worker health and safety in high-risk coastal treatment zones.

CLIENT FEEDBACK

The system provides live air quality values, enabling quick and accurate decision-making. The training conducted by the team helped our safety team operate the system with confidence. The robust design and professional appearance of the system have been well accepted, especially by the workers who appreciate the outdoor display for real-time awareness.

– Safety Officer, NCC Ltd.

CONCLUSION: *Supporting Smarter, Safer Urban Infrastructure*

By replacing an underperforming legacy system with Oizom's real-time Polludrone monitoring solution, BMC restored reliable air quality monitoring at Malad WWTP. This change meets regulatory compliance, improves worker safety and trust through precise, actionable data.

Oizom is a company specializing in environmental monitoring solutions. They offer products to monitor air quality, weather conditions, and other environmental factors. Utilizing advanced sensor technology and data analytics, Oizom aims to provide actionable insights for construction, industrial compliance, and community awareness. Their solutions can be applied in various sectors including government, industries, and community initiatives.