

# Monitoring Landfill Odor at Brasov Landfill

## *Our Client*

The Fin-Eco has been involved in implementing a major project for environmental recovery and protection: The integrated waste management system in the Brasov area. They offer European solutions for the management of urban solid waste. They manage the Braşov zonal landfill for municipal waste, which was built per all specific regulations. They chose Oizom to monitor the waste storage processes and landfill operations, such as waste collection, transportation, and disposal at designated sites.



## *The Challenge*

Landfill odor pollution was a serious concern for nearby residents and impacted their health and quality of life. Fin-Eco wanted to monitor waste storage and landfill operations, such as leachate treatment, landfill gas flaring, and sorting, to check whether these processes emit toxic gases. They also wanted to identify and monitor the sources that can generate the odor nuisance noticed by the inhabitants in the vicinity of the landfill. They also wanted to minimize the landfill's environmental impact and manage the complaints they were receiving from the nearby residents. To solve this, they were looking for a reliable solution to identify the toxic odors and their sources.

### *The Solution*

To solve this problem and safeguard the workers' and residents' health from overexposure to hazardous gases and odors, our partner Klarwin installed Odosense to monitor odourful gases in the landfill. This solution helped them monitor the crucial points during landfill management and operation activities. Wind and other meteorological conditions are primary factors that influence odor dispersion. Incorporating wind, temperature, humidity, and pressure data into the analysis provided a more holistic understanding of odor behavior and the origin of odor emissions. This data provided them insight into the odor of SO<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, TVOC, CH<sub>4</sub>, and CO<sub>2</sub> so they could take effective action before they become inconvenient. With the devices' data, landfill's operators can make strategies to control odor if its levels reach or exceed regulatory limits.



### Installation Details

6 Unit of  
Odosense Custom

### *The Result*

Odosense systems are strategically positioned around the facility's perimeter to monitor emissions that lead to olfactory discomfort. These monitors simultaneously gather critical meteorological data, including wind speed, direction, temperature, humidity, and atmospheric pressure, which enables a detailed analysis of how weather conditions influence odor dispersal and perception. Regular assessments of the monitoring data verify the efficacy of the implemented odor mitigation strategies. This ongoing evaluation guarantees and ensures that the facility remains in compliance with the stringent odor limits mandated by the integrated environmental permit.

The real-time data helped make better decisions about waste management and odor control. Visualizing data with pollution rose and wind rose charts provided invaluable insights into pollution sources and their dispersal patterns. The real-time accurate odor data allows the landfill's operators to proactively manage odors and optimize odor control strategies, such as deploying odor suppression systems in the most impactful locations.

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.