

# COVERED

## Assessing the olfactory impact of a landfill site

### The site

- Non-hazardous waste landfill operated by COVERED, waste management division of the SAUR group
- Multi-site waste disposal facility: household and industrial waste collection, waste sorting, waste storage, composting, recovery of biogas
- ISO 14001 and OHSAS 18001 certifications
- Odor reduction program



Landfill "La Baillaudière", France

### Challenges

- Meeting the needs of local residents and authorities
  - Compile reliable and accurate information on the odor impact of the site
  - Correlate instrumental measurements with possible odor complaints
  - Develop workable solutions to address and reduce odor nuisances
- Check compliance with the odor concentration objective defined in the French composting regulations, even if they are not applicable to the site: 5 ou<sub>E</sub>/m<sup>3</sup> not to be exceeded more than 175h per year (2% of time) in residential areas



RQ Box electronic nose

### Solution

Two complementary approaches:

- RQ Box solution including:
  - A mobile RQ Box electronic nose for continuous measurement of:
    - odors in ou<sub>E</sub>/m<sup>3</sup> (according to the EN13725 standard)
    - pollutant gases: H<sub>2</sub>S, NH<sub>3</sub> and VOCs in ppm
  - A wireless communication system
  - RQ Net software for results acquisition and display
- Dispersion study based on the data gathered during one year with the RQ Box solution



Dispersion map

### Results

- **Compliance with the odor concentration objective defined in the French composting regulation (site not subject to this regulation)**
  - ⇒ Limit of 5 ou<sub>E</sub>/m<sup>3</sup> (98th percentile) achieved in residential areas for the period studied (one year)
  - ⇒ Confirmation of the results obtained in a previous study based on sensory data
  - ⇒ More accurate and more representative dispersion modeling thanks to continuous measurements
- **Contribution to the significant reduction in odor complaints**
  - ⇒ Better control of emissions with the continuous monitoring
  - ⇒ Instant alerts through emission thresholds configured in the RQ Box
  - ⇒ Improved responsiveness and faster corrective actions
- **Further deployments of the RQ Box solution within the SAUR group**
- **Ongoing integration with Olfaweb, the odor monitoring website of the SAUR group**