



Case Study: Landfill Monitoring

Romtech, our Romanian distributor, supplied a Skye Instruments Weather Station to monitor a landfill site in Romania. It was installed in winter time when the temperature was -15°C outside and therefore needed to be robust and capable of dealing with harsh conditions. The sensors needed to have all standard weather parameters including both wind speed and direction, air temperature, evaporation, and rainfall via a heated rain gauge. This gives them a good idea about the movement of levigate and evaporation from soil. It also helps with odour control and allows them to make calculations based on wind speed and direction.

As it is not possible to monitor odour concentrations at the receptor (because of low thresholds and the variable nature of odours) it was necessary to use dispersion modelling to predict odour movement. This means it is necessary for them to determine compliance of new or proposed odour emissions to determine compliance.

As dispersion models are probabilistic, model outputs can be used as a relative risk quantifier, however the success of predicting odour concentrations at the receptor is dependent on two main factors; firstly the quality of the model inputs (odour, emission rates, source characteristics, meteorological data and land use), and secondly, the quality of the dispersion model and its appropriateness to the study area.



This means that meteorological data must be representative of weather conditions at the site as it defines the direction of plume travel, ambient turbulence intensities and depth of the surface mixing layer. For Romtech, it is also critical for defining the environment between the odour source and the odour receptors where odour nuisance standards are in effect.

Please visit the company website www.romtech.ro For more information.



Acknowledgements and Contacts

We would like to thank Romtech for supplying us with a case study.

For more information please contact: **Tel:** 0269 233465 **Fax:** 0269 233482
E-mail: office@romtech.ro

Skye Instruments Ltd

21, Ddole Enterprise Park, Llandrindod Wells, Powys LD1 6DF, United Kingdom

TEL: +44 (0)1597 824811 EMAIL: skyemail@skyeinstruments.com WEB: www.skyeinstruments.com