

## 基于改进高斯烟羽模型的废弃物处理设施负效应测度

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### A Model for Obnoxious Effect of Waste Disposal Facilities Measurement Based on Improved Gaussian Plume Model

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- 摘要
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**摘要** 废弃物处理设施的选址和运营是公众参与度较高的决策领域。负效应测度既是这类设施选址优化的焦点和难点,也是设施运营后负效应评价和治理的关键。根据风向、风速和其他气象资料设置典型情景;对高斯烟羽模型进行改进,建立基于情景的多点源、多污染气体种类的受影响点气体污染计量模型;开发了由污染气体浓度、气体毒害系数和恶臭因子决定的负效应测度函数;结合情景持续时间,建立较长时期内综合负效应测度模型。通过算例验证模型的效果并提出负效应治理策略。

**关键词:** 高斯烟羽模型 废弃物处理设施 负效应测度

**Abstract:** As the environment consciousness of people is enhanced, more and more public concentration focuses on the location and operation decision of waste disposal facilities. The measurement of obnoxious effect is not only the focus in location optimization of these facilities, but also the key factor in the evaluation and control of noxious effect of facilities in operation. In this paper, some improvement is made on Gaussian Plume Model to make it applicable to measurement of pollutant concentration of waste disposal facilities. A mathematic model based on various scenarios is established to calculate the gas concentration, the multi-facilities, multi-kinds of gas, multi-directions of wind and multi-kinds of atmospheric stability are taken into account simultaneously in the model. An obnoxious effect measuring function is devised. A virtual example is designed to test the model and the parameter analysis is carried based on the example.

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