

Case Study

BiOWiSH® Odor

BiOWiSH® Reduces Odor at Municipal Solid Waste Transfer Stations - India

Background

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BiOWiSH[®] Odor trials were performed at four different municipal solid waste (MSW) transfer stations. The trials were designed to quantify the reduction in different odor indicators for solid waste material before it was transferred to the landfill site for disposal. These trials were conducted throughout one week of regular activities in Jodhpur and Udaipur, India. Master of Environmental Engineering students, from M.B.M Engineering College, Jodhpur carried out the trial.

The odor generated from the municipal solid waste negatively affected people in the surrounding areas. The most commonly reported odor producing compounds are hydrogen sulfide gas (H_2S) and ammonia gas (NH_3) generated from the waste transfer station, landfill site, or dumping ground.



MSW transfer station in Jodhpur

Objectives

The objectives of the trial were to:

- Quantify levels of odor pollutant gases like H₂S and NH₃ at various transfer stations in Jodhpur and Udaipur
- Measure the reduction in concentration of H₂S and NH₃ gases due to the application of BiOWiSH[®] Odor
- Assess the reduction in the odor problem (by personal sensing)

Implementation Program

Simple backpack sprayers were used to dose BiOWiSH[®] Odor on the waste. Dosing was done on a daily basis for a week at all four selected waste transfer stations.



Spraying BiOWiSH® Odor on Fresh MSW at Udaipur Transfer Station

MSW transfer station in Udaipur

BiOWiSH® Odor

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- Removes rather than masks odors
- Fast acting
- Effective on a wide range of volatile organic compounds (VOC)
- Cost effective
- Operative at low dosage rates
- Long residual effective period
- Natural and non-toxic

Available Sizes

- 100g/3.5oz
- 1kg/2.2lbs
- 5kg/11lbs
- 10kg/22lbs

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Results

NH₃ and H₂S were monitored on a daily basis for one week. These gases were chosen as they are reliable indicators for commonly odorous compounds at the municipal solid waste site, transfer stations, and disposal sites.



Figure 1: Reduction in NH₃ across various MSW transfer stations in India



Figure 2: Reduction in H₂S across various MSW transfer stations in India

Conclusion

The BiOWiSH[®] Odor Trial conducted at these four transfer stations in Rajasthan, India showed significant reduction in odor throughout the entire study. The H₂S and NH₃ gas levels were recorded at very low levels during the 7-day trial. BiOWiSH[®] Odor provides a safe and natural means to reduce (not mask) odor causing compounds in municipal solid waste.



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