

Case Study

BiOWiSH® Odor

Controlling Odor in Waste Sorting Facilities Hyderabad, India

Background

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This Municipal Solid Waste (MSW) site in Hyderabad, India receives approximately 5000 tons of waste per day. It is one of the largest landfill sites in Asia. BiOWiSH's local partner in India, InNow India Pvt, Ltd. was engaged by the site operator to demonstrate the efficacy of BiOWiSH® Odor in controlling intense odor in their waste sorting facilities.

The waste processing at this facility consisted of following steps:

- Weighbridges (CCTV and GPS monitoring)
- Tipper floor (unloading)
- Shredding / presorting (70mm screen)
- + 70mm waste as RDF (dry)
- 70mm (fully biodegradable) sent to windrow composting
- One windrow contains approximately 1000 tons
- Screening 20mm
- Screening 4mm
- + 20mm and +4mm inert material sent to secured landfill facility
- Leachate treatment (Rochem RO installed)





Waste receiving area

Presorting facility



Objectives

The objective of this study was to measure the effectiveness of BiOWiSH[®] Odor in reducing odor in municipal solid waste at the Hyderabad, India facility.

Implementation Program

The study took place over a period of 14 days. The following dosing program was implemented:

Day 1: A shock dose (100kg) of BiOWiSH[®] Odor was used to ensure proper coverage of the existing inventory of waste in the receiving and presorting areas. The 100kg of BiOWiSH[®] Odor was split between two tanks, each with 5,500 liters of water, then sprayed across the pre-sorting and unloading areas multiple times throughout the day.

Day 2: 16kg of BiOWiSH[®] Odor was mixed in a 5000 liter tank with water. The resulting solution was then sprayed on the presorting and waste unloading areas.

Day 3 to 14: Backpack sprayers were used to spray BiOWiSH[®] Odor during the day shift, while a single water tank (5500 liters) was used during the night shift. A total of 16kg of BiOWiSH[®] Odor was dosed between the two shifts.

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

Biological Help for the Human Race®



BiOWiSH - InNow personnel onsite Bio

BiOWiSH[®] Odor added to water tank Adding water to water tank

BiOWiSH[®] Odor sprayed on the waste

Results

Odor reduction was monitored using two methods: human perception and a Multi Gas Analyzer.

Human Perception: A series of interviews were conducted with the staff of the Municipal Solid Waste site. Operational personnel agreed that BiOWiSH[®] Odor proved to be a safe and cost effective tool to manage noxious odors at the site.

Scientific Data: A Multi Gas Analyzer was used to measure H₂S, NH₃, and VOC on fresh solid waste material at the tipping floor before and after the BiOWiSH[®] Odor application.

	Day 1		Day 2		Day 7		Day 14	
Parameter	Control (ppm)	BiOWiSH (ppm)	Control (ppm)	BiOWiSH (ppm)	Control (ppm)	BiOWiSH (ppm)	Control (ppm)	BiOWiSH (ppm)
H ₂ S	1.8	0	2.3	0	4.3	0	8.2	0
NH_3	6	3.75	5	1	3	0	6	5
VOC	43	32	54.6	26	113	46	48	20



Conclusion

The BiOWiSH[®] Odor Trial conducted at this MSW facility has shown drastic decreases in odor levels. The H₂S, VOC, and NH₃ gas levels of the treated waste material were recorded at extremely low levels during the 14-day BiOWiSH[®] Odor Trial.

BiOWiSH[®] Odor provides a safe and natural means to reduce (not mask) odor causing compounds in MSW. It is now being tested by the site operator as a natural means of reducing the organic loading of their leachate collection lagoons.



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