

BiOWiSH® Odor

Odor Trial on Refuse-Derived Fuel (RDF) Waste in Transit — India

Background

Geocycle India has a pan-India presence with fourteen co-processing facilities for sustainable waste management and six dedicated pre-processing facilities for handling large and varied waste volumes.

One of Geocycle India’s international standard waste co-processing and pre-processing facilities in Wadi, processes waste from industrial, biological, and municipal sources, converting them to uniform quality materials for use as Alternative Fuel and Raw Materials (AFRs).

Odor generated from the RDF waste has resulted in several complaints from:

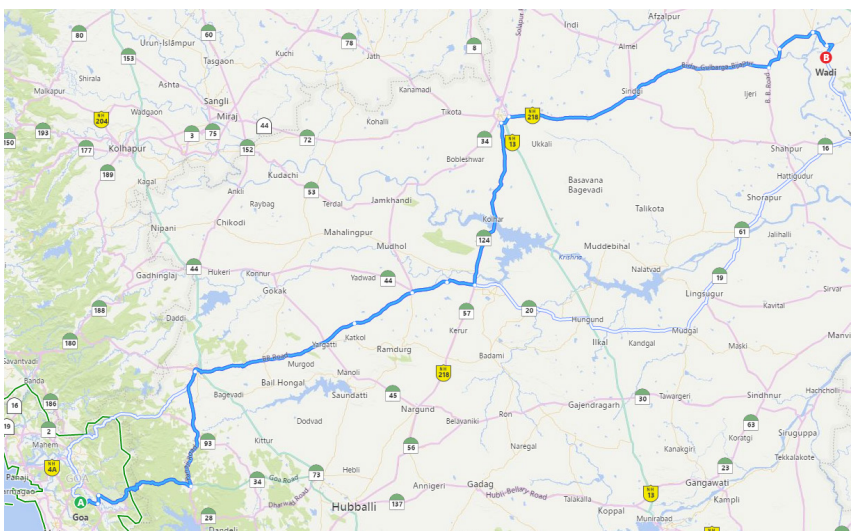
1. Residential areas through which the truck passes, between Goa and Wadi
2. Restaurant and Dhaba owners where the truck driver stops for a meal
3. Workers at the co-processing and pre-processing facilities in Wadi
4. Residents living close to the Wadi site

Geocycle Wadi approached BiOWiSH Technologies’ partner in India, InNow India Pvt Ltd., with a request to help reduce odor generated from RDF waste in transit from Goa to Wadi.

Objectives

The BiOWiSH® Odor trial began November, 29th 2017 at Hindustan Waste Treatment Pvt Ltd., Goa site. The main objective of the trial was to reduce the odor from RDF waste transported from Hindustan Waste Treatment Pvt Ltd., Goa site to Geocycle, Wadi.

- Trial start date:** November 29th, 2017.
- Observations:** December 1st to December 3rd, 2017
- Duration of trial:** 5 days
- Product used:** BiOWiSH® Odor



Route from Goa to Wadi, India (458 km)

BiOWiSH® Odor



- 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

Implementation Program

Dosing

The trials were conducted over three consecutive days. Each day had a different application method to confirm the most suitable and effective application process. Personnel from InNow India Pvt Ltd. were present at both the Goa and Wadi sites to ensure proper dosing and monitoring. Trucks were labeled with BiOWiSH stickers before leaving the Goa site.

Day	Application	Details
1	BiOWiSH® Odor-Applied On Waste Pile	500g of BiOWiSH® Odor, mixed with 200L of water, sprayed on an 80 ton RDF waste pile. The waste was then loaded in four trucks and sent to Geocycle, Wadi site.
2	Control	No BiOWiSH® Odor applied. The waste was loaded in four trucks and sent to Geocycle, Wadi site.
3	BiOWiSH® Odor-Applied On Truck	500g of BiOWiSH® Odor, mixed with 200L of water and sprayed on waste that was already loaded in four trucks. The trucks were then sent to Geocycle, Wadi site.



Day 1: Hindustan Waste Treatment Pvt Ltd, Goa Site



Day 3: Hindustan Waste Treatment Pvt Ltd, Goa Site

Odor Monitoring

A team of six people from Geocycle, along with a personnel from InNow India Pvt Ltd., monitored the results during the trial. All trucks, both treated and untreated, were observed at a distance of 30 meters, downwind.

Observations were noted during three phases: when the truck arrived at the site covered with tarpaulin, after removal of the tarpaulin, and during the unloading of the RDF.

Results

BiOWiSH® Odor treated RDF waste, in transit from Hindustan Waste Treatment Pvt Ltd., Goa to Geocycle, Wadi site, showed excellent odor reduction results.

Several interviews were conducted with the staff members on site. Based on observations during the trial, operations personnel agreed that dosing with BiOWiSH® reduced odor emanating from the RDF waste trucks by 60-80%.

They also found that the best method for dosing BiOWiSH® Odor on the waste pile was to do so before loading onto the truck. It resulted in more effective odor management when compared with RDF waste treated after it was loaded onto the truck.

The truck drivers reported significant reduction in odor from the RDF waste during their journey from Goa to Wadi. Additionally, no complaints were reported by the restaurant owner where the driver stopped for lunch.

Testimonial

"We have found that with the sprayed (BiOWiSH® treated) RDF, the smell reduces considerably, which is a very encouraging sign for us...I would say we've seen a 70% to 80% reduction in odor... I am very pleased about it."

— Mr. Ashish Kumar Mishra, Platform Head, Geocycle India



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Contact us:

wastewater@biowishtech.com

+1 312 572 6700

biowishtech.com

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