

TRIALS FOR ODOUR CONTROL AT GARBAGE DUMPING SITE HADAPSAR, RAMTEKDI

FRESHIN 10X AND LEMMOX

The dumping site receives garbage continuously from morning 8am till 4pm daily. The site is in the industrial estate surrounded by industries and residents. The dump is about 4 years old. The incoming garbage is leveled with JCB's and site is managed by Disha waste Management. The odor control is consistent and it is a persistent problem in all the Dump Sites.

Proposal

A request was put forward to Mr. Gaware, Asst. Commissioner (Solid Waste Management) to allow Lemmens Shardlow (I) Pvt Ltd to demonstrate odor control with Bio products (Jaivik) namely Freshin and a Green Chemical namely Lemmox on the wet garbage.

A meeting was arranged on Friday 28th between Mr. Suresh Jagtap, Joint commissioner, PMC, Mr. Gaware, Asst. commissioner (Solid waste management) and Mr. Taru from corporation and Lemmens Shardlow (I) Pvt. Ltd's R.M Mr. Hiren Pancholi at Hadapsar corporation office.

Permission

Permission was given by Mr. Suresh Jagtap to carry out a trial at Hadapsar, Ramtekdi, dump site immediately.

Demo and monitoring team

A demo was fixed for 7th March at corporations' Hadapsar, Ramtekdi, site, to be followed by 2/3 days observation before coming to any conclusion.

The trial was decided to be monitored by Mr. Taru, head of pesticide department and Mr. Kamble, departmental Health Officer and we also plan to take opinion of supervisor Mr. Asif of Disha Waste Management.

Observation Parameters

1. Reduction of odor for longer duration
2. Reduction of flies
3. Continuation of Natural bacterial degradation activity of treated waste

Treatment Proposed

A bio-solution was offered, which is **The Paradigm Shift in Approach** against harmful chemicals in the name of environment friendly chemicals.

A Biological solution (Jaivik) **Freshin 10X** and **Green Chemical Lemmox** was suggested to remove odor from wet garbage from the source for longer duration, keeping its biological degradation activity continued, so that natural composting process continues.

1. **Freshin 10X** was used in the ratio of 1 Ltr to 1250 Ltr of water. The water is taken from dump site water connection used for Vermicomposting beds.
2. The solution is constantly aerated by bubbling air via a pump attached to the tanker.
3. **Freshin 10x**, Biological spray is done at 1 pm. The solution is sprayed on to the garbage as uniformly as possible on app. 4 ton freshly arrived wet hotel garbage waste.
4. **Lemmox, Green Chemical**, (1 Ltr to 1250 ltr of water) spray is done at 3 pm. The solution was sprayed on to the garbage as uniformly as possible on app. 6 ton freshly arrived wet hotel garbage waste.
5. Odor was monitored:

- After 1 hour of application
- On 8th March 2nd day of application
- On 9th March 3rd day of application
- On 10th March 4th day of application and lastly
- On 11th March 5th day of application

Observation

A perceptible reduction in odour was reported 30mins after application. The officers and supervisor of the dumping site has many years of experience of dump site, confirmed odor reduction after 1 hour, so did workers. Despite the high dilution, there was about 20 cm of foam on the surface of the solution at the activation stage.

The observation, after the demo, was jointly monitored by Mr. Taru, Mr. Kamble and Mr. Hiren Pancholi daily till 11th March and there was no odor from both the treated waste till the 5th day of application.

On 11th March, 5th day of treatment, both the treated waste hips were shuffled in presence of Mr. Kamble with JCB, many times, then also **there was no odor felt from the waste**. This proves product's claim that it removes odor from its source and are not masking agents unlike other chemicals.

Flies had reduced from the Biological **Freshin 10X** sprayed waste, after completion of spray on 7th March itself and was not there till last day of observation on 11th March. **Flies were reduced considerably on Lemmox waste** on the 11th March, where as lesser amount of flies were found in earlier observation.

Both the waste **started turning black**, which was indication of biological activity, which we had claimed and it is required to keep natural degradation process on.

Results

The application of Freshin 10X and Lemmox for odor control was achieved to its best limit. Flies were reduced and natural degradation continued. Three parameters were set for the trial and it was achieved to the best satisfaction of corporation's officers and site supervisors and workers.

Goal

To give a Bio Solution to the burning concern for the corporations with the paradigm shift in approach to the traditional practice of masking odor to removing odor from its source and also keeping natural degradation activity of the garbage continued and reducing flies problem from the dump site.

Concerns

Dump sites are always opposed by the local residents because of the foul odor in the air, continued movement of garbage vehicles, again giving out foul smell which is health hazard for the people surrounding these areas and the leachates polluting the underground water.

A Better programme can be worked out jointly for odor control from the dump sites and for the vehicles transporting wet garbage to and fro from the city to dump site to arrive at a logical solution which could be a win- win situation for the corporation, keeping citizens less complaining and carrying out important solid waste management activity on.

The products will be economical when the overall benefits are considered as mentioned under the observation parameters. Public opposition for the odor surrounding the dump site will be overcome, stench from the air will be reduced and important Solid Waste Management activity can be carried out smoothly.

Applications

Many areas of applications for odor control, which can be discussed in the meeting.

Figure 1: Dump Site Hadapsar Ramtekdi



Figure 2: Vehicle mounted pressure pump used for demo



Figure 3: Thick foaming from Freshin 10 X diluted solution after aeration with the pump



Figure 4: Wet Garbage 1st vehicle dumped for demo of Freshin 10 X



Figure 5: Spray with Freshin 10 X



Figure 6: Wet Garbage 2nd vehicle dumped for demo of Freshin 10 X



Figure 7: Spray with Freshin 10 X, Mr. Taru and Mr. Kamble monitoring the process



Figure 8: Spray with Freshin 10 X on garbage vehicle to remove odor, before going for the next pick up, so that on road it do not stinks



Figure 9: Wet Garbage 2nd vehicle dumped for demo of Lemmox, Mr. Taru and Mr. Kamble in the back ground



Figure 10: Separating poly begs before Lemmox Spray in the presence of Mr. Taru and Mr. Kamble.



Figure 11: Sprays with Lemmox



Figure 12: Relaxing comfortably next to wet garbage of app.10 tons on near Completion of spray.



