

**MAGNETREE VENTURES PVT. LTD.**

*Get The Perfect Solutions*

**Solid Waste Management**

## Present problems

There is untreated solid waste which is being collated, shredded, incubated and residue disposed. The uncontrolled dump resulted in surface water and ground water contamination by Leachate and emanating foul smell around the dump. citizens have complained about both problems and serious action is required to eliminate the same.



Figure 3 Spray on the solid waste mound.

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The present process is supplemented with water spray jets and the leachate is drained into the neighbouring river/water body which causes serious problems with its toxicity and needs treatment.

### Our proposal:

The bio-remediation process helps to solve both the issues of foul odor and leachate contamination. Enclosed is our Technology, advantages, trials to various authorities throughout India to clean the water. Our Pro-biotic is capable of cleaning the water of its organic contamination and most of the inorganic contamination. Our technology is suitable for cleaning the stagnant and flowing water.

We propose to clean the fully contaminated leachate and other contaminants flowing to the nearby River. Applying Pro-Biotic will clean the water and make it suitable for reuse. we will set up power sprayers to the mound of garbage at the landfill and the leachate will be released of its organic contaminants. Also the pro-biotic will react with the organic and inorganic contents of the waste. The odor is reduced completely within ONE month. By continuous spray of the water with pro-biotic, the waste at site will be free of contamination and foul odor within 3 months at the maximum.

The organic waste free of contamination will be treated with our microbes to make it natural compost for use in agriculture, floriculture, horticulture, etc., which can be distributed through the departments of Agriculture and Horticulture as subsidized govt. product and this product saves about 80% of urea being used by the farmers and also the product is eco-friendly and can be used on sustainable basis for all the crops. It is going to be a base material for organic farming.

## Landfills

A landfill, also known as a dump, is a site for the disposal of waste materials by burial and is the oldest form of waste treatment. Historically, landfills have been the most common methods of organized waste disposal and remain so in many places around the world.

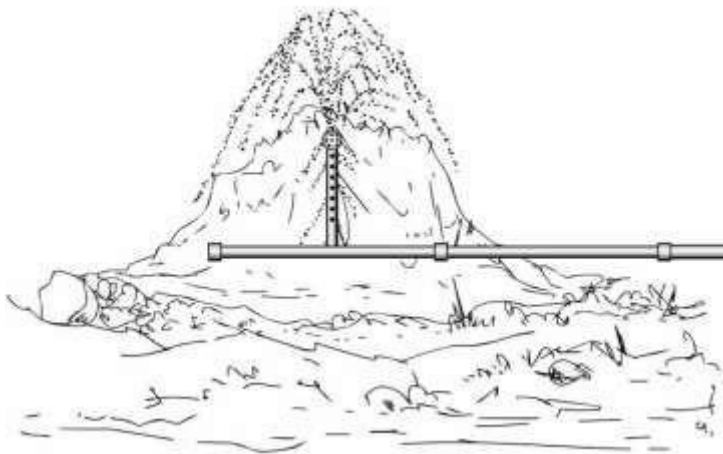


**What do we do with the Garbage?**

There is long term cost,

environmental, aesthetic and health benefits of covering the landfill and directing toxicity to managed sites instead of contaminated ground water.

- When the growth of a landfill is at its maximum capacity, landfill covers are installed.
- Geosynthetic material keeps the waste from being exposed to the outside elements.
- The accumulation and treatment of leachate can be reduced dramatically when the outside elements are kept from contacting the waste.
- Once covered, gases are directed to a flare and/or vents.
- This reduction of leachate and treatment is a definite cost savings



Water sprayed from above the garbage mound to form leachate containing toxicity from the waste.

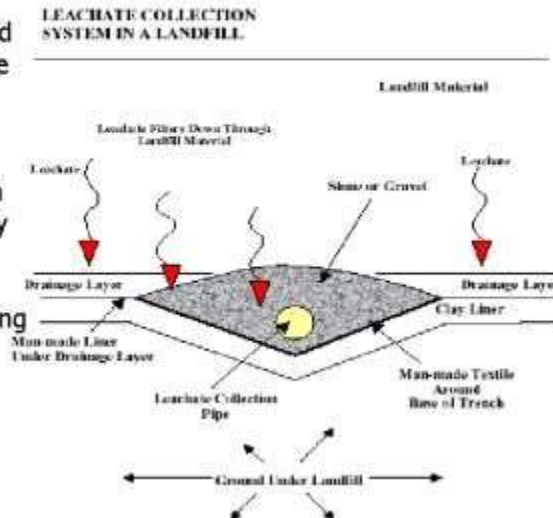
\*One pipe for illustration purposes only. Multiple spray pipes will be used for large piles

# Leachate collection system

- Leachate may be defined as the liquid that has percolated through solidwaste and has extracted dissolved or suspended materials from it.

- The rate of seepage of leachate from the bottom of a landfill is estimated by Darcys law.

- The use of clay has favored in reducing the leachate percolation .



## Leachate Problems

- they clog up from silt or mud;
- they can clog up because of growth of microorganisms in the pipes;
- they can clog up because of a chemical reaction leading to the precipitation of minerals in the pipes; or
- the pipes become weakened by chemical attack (acids, solvents, oxidizing agents, or corrosion) and may then be crushed by the tons of garbage piled on them.



### Our methodology:

- A consortium of Enzymes / Photo Synthesiser Culture which are capable to break down pollutants by oxidation process are sprayed to treat solid waste from toxicity, odor and other pollutants. These enzymes, in diluted form, shall be sprayed on the surface area of the mound.
- Over a period of 24-48 hours these enzymes break down the toxins into respective gases, thus the toxicity comes down to the minimum level. Methane, Carbon dioxide, traces of Sulphur Dioxide, etc escapes from the upper surface and the entire area will be free from foul odor and stinky smell.
- 3 Lts / Ton of Enzymes / Photo Synthesiser Culture is required to clear these heaps of organic waste. Suitable proportion of dilution is essential depending on waste content.
- For operational convenience a bound wall of approximately 1 meter height be built around the perimeter of the mound. Requisite number of sprinklers will be erected. The water will be sprayed from the sprinklers continuously. The penetrated water is going to be taken down through the river where we add additional enzymes to continue the reaction if required.
- Preferred spray pattern will be at every 6" height while heap is forming or continuous mix with the processed organic waste for improved reduction of foul odor.
- Once the heap is formed, the heap will be covered by tarpaulin or any heat retainer cover for incubation.
- Once the heap attains the max temp and starts cooling down to room temperature, the residual heap can be treated with our Bio Fertiliser – Sanjeevini. This will produce one of the best fertilizer for use in Agri/Horti/Flori culture and **will bring huge revenue.**



