

SWM PRACTICE IN CMC.UDUPI

Udupi cmc, has formed on 20-10-1995, has 35 wards, 37 tons/day waste generates, 68.23 sq km area, 1,35,679 present population, about 30,000 households, about 2,000 slum holds, 265 km total road length. 24 wards had been outsourced for street sweeping.

Segregation at source was not insisted upon. Throwing of waste on road, drains and open space was a common practice. The waste collection from generators was based on a bin based system. RCC cylinders were used as bins. The street sweeping was done based on ad hoc plans. The concept of secondary storage of wastes were not exist. The primary collection receptacles were also the secondary collection equipment. Tractor- trailers/lorries were used as transport equipment. These were not equipped with tipping mechanisms. Loading was manual. There was no processing of wastes undertaken. Wastes were being dumped unscientifically in the Dumpsite situated 2 Km from city.

Situation now:

IEC activity: Presently segregation of waste is not being practiced in Udupi . Awareness Campaigns are being undertaken for the communities through IEC programmes organized by the NGO (SKDRDP) under KUDCEM project and about 45% of waste is collected through SHGS therefore further IEC activity is needed.

Street Sweeping : All 35 wards have been out sourced for street sweeping. At present the No. of PK's are 45 permanent, 4 loaders, 2 gardeners, 9 EPEW. But percentage of absentees is around 40 to 50 % so that only 25-30 PK's will be available. So these PK's are deployed other than street sweeping purpose.

Primary Collection: In 26 wards primary collection of MSW (d/d collection) is being practiced .Out of 26 wards, 19 wards have been made d/d collection through 8 groups of self help groups and total no. of households covered by SHGs' is around 10000 and remaining wards by private agencies and total no. of households covered by' private agencies is around 1500 .

Udupi cmc has given 50% subsidy amount (of total cost of P. Collection vehicle) to SHG's & SHGs are procured 7 no. Auto tippers and 01 no.407 & deployed to work.

Waste Collection in bulk generators area: Presently the waste from bulk generators, such as Hotels, Bar & Restaurants, Kalyanamantapa's etc, is collected by the SHGS' But separate plan is required for this purpose to cmc, udupi to collect waste from bulk generators .

Waste Collection in slum area: is practiced by street sweeping workers (out sourced) and no user fee collected from slum households.

Secondary transportation of wet waste: Presently CMC is having 2 dumper placers vehicles through which secondary transportation of wet waste practiced and 2 no. big lorries, 2 no. tractors trailers are used by contractors to carry waste to the dumpsite.

Processing and disposal of waste: Processing of waste is presently not practiced in Udupi. The solid waste is collected from all over the city and is being transported to Beedinagudde open dumping yard. Which is 2 k.m. from the city?

LAND FILL SITE

Introduction:

The CMC has identified and acquired land of area 22 acres at Alevoor village for setting up an integrated waste processing and disposal site for municipal solid waste managements. (The site is about 8 k.m. away from the city and authorization has been obtained from KSPCB to set up Land fill site. It is proposed to set up a waste inertisation and sanitary land fill facility at the proposed site as a part of Karnataka Urban infrastructure development and coastal environmental management project (KUDCEM)

Udupi is one of the 5 towns taken up in package - I for urban Infrastructure development under KUDCEM project of KUIDFC with Asian development Bank assistance.

The waste arriving at the present dumping ground contains both organic and inorganic materials. Only the organic matter has to be Inertised and inorganic materials such as glass, plastic etc have to be removed and some of these inorganic materials have a resale value.

The Inertisation facility would accept mixed municipal solid waste and Inertise the organics. The waste at the end of Inertisation or that are rejected and cannot be recycled would be land filled in a sanitation landfill

Table – 1

Waste quantity for Inertisation and landfill

	Waste generation	work to be Inertised	Land fill quantity with composting	Land fill quantity with Inertisation
% waste to land fill			30%	55%
year		tpd	tpd	tpd
1-5	46	37	9.4	17.3
5-10	56	45	11.5	21
10-15	68	54	13.8	25.2
15-20	83	66	16.8	30.9
20-25	101	81	20.7	37.9

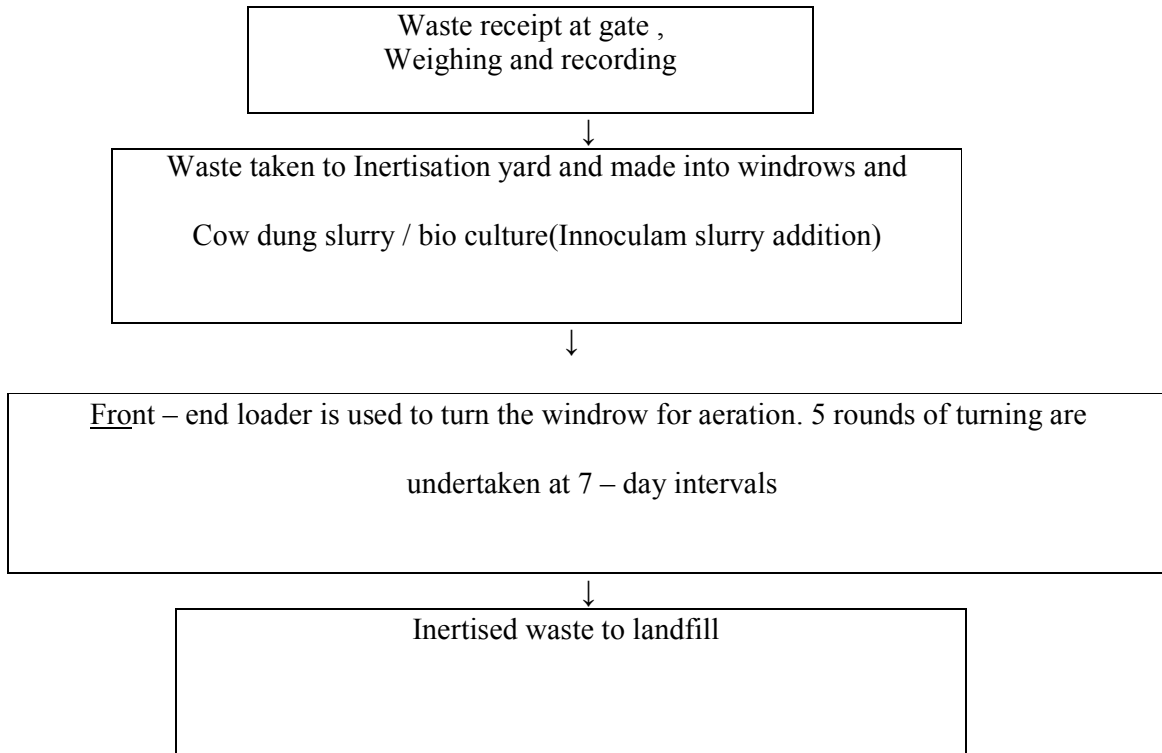
A. Component of common facilities.

- 1) Compound wall, gate and cattle grid
- 2) Security building.
- 3) Office block, staff facilities with parking.
- 4) Internal roads in the facilities.
- 5) **Laboratory:** .The laboratory would have facilities for laboratory testing the compost and leachate. The compost testing would be for the parameters of carbon, Nitrogen, ammonia, nitrates, pathogens, potassium and phosphorous.
The leakage would be analyzed for cod, and testing for other parameters would be done in pollution control approved labs.
- 6) Yard lighting and electrical connections
- 7) Water storage tank.
- 8) Monitoring well
- 9) Drains

B. Provision of inertisation facility:

Inertisation process is one of aerobic composting the organic matter in the waste using the windrow system. Aerobic composting is undertaken in presence of air and the micro organisms, which survive in presence of the air and convert the organic materials. In aerobic composting the organics are converted into compost by microorganisms which require the oxygen in air for their survival and growth.

Process flow chart



- 1) **Inertisation aerobic yard** : is a covered shed, the yard floor has been designed to take 40 t/srmt loding and all vehicles can move on the yard.
- 2) Drain around the yard
- 3) Leachate piping
- 4) Leachate tank .

C. landfill facilities :

- 1) land formation
- 2) construction of the bund
- 3) drain
- 4) liner: HDPE liner , geo – textile liner and clay liner
- 5) leachate piping
- 6) **leachate treatment plant** : which involves an aerobic pond having 5 day detention period and a stabilization pond having 5 day detention period .
- 7) HDPE pipeline for disposal of treated leachate

Present Situation: About 90% of civil works have completed and expected all works to be complete within a month.

