

# MAHARASHTRA POLLUTION CONTROL BOARD

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No: BO/MSWT/B-CAC-380

Date: 02/04/2012  
103/2012

FORM -III

[See – Rule 6 (3)]

To,  
**The Commissioner**  
Nanded Waghala City Municipal Corporation  
Nanded

**Sub:** Authorization under Municipal solid waste (Management and Handling) Rules, 2000

**Ref :** Your application for grant of authorization.

**The Maharashtra Pollution Control Board** after examining the proposal hereby authorizes **The Commissioner**, Nanded Waghala City Municipal Corporation, Nanded, having their administrative office at Nanded, to set up and operate waste processing / waste disposal facility at Gat No. 372, Village Tuppa, Tal. & Dist. Nanded, on the terms and conditions (including the standards to be complied with) attached to this authorization.

1. The validity of the authorization is till **31/01/2017**. After the validity, renewal of authorizations is to be sought.
2. The Maharashtra Pollution Control Board may at any time revoke any of the condition applicable under the authorization and shall communicate the same in writing.
3. Any violation of provisions of **Municipal Solid Waste (Management & Handling) Rules, 2000** attracts the penal provisions of the **Environment (Protection) Act, 1986 (29 of 1986)**.

This is issued with the approval of **Consent Appraisal Committee** of the Board in its meeting held on 2<sup>nd</sup> March, 2012.

  
(Milind Mhaiskar, IAS)  
Member Secretary

**D. A. - Annexure-I**

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**The District Collector, Nanded** - Being one of the implementing authorities, having overall responsibility for the enforcement of the provisions of Municipal Solid Wastes (M & H) Rules, 2000, it is obligatory on your part to see that the Municipal Solid Waste is processed & disposed off in accordance with the said Rules.

**Copy to:**

- 1) Regional Officer, MPCB, Aurangabad/ Sub Regional Officer, MPCB, Nanded  
- For information and necessary action.
- 2) Master File

## **ANNEXURE -I**

Terms & Conditions to Set Up and Operate Municipal Solid Waste Processing/ Waste Disposal Facility by **The Commissioner**, Nagpur Municipal Corporation, at S.No. 111, 112/1, 12/2, 102, 114,115,116, Bhanewadi.

**1. 250 MT/Day of Municipal Solid Waste generated shall be processed and disposed as below.**

- i. Composting and allied Products i.e. RDF, Plastic items, Scrap material for recycling by adopting Integrated processing Technology.  
**(Project on Boot Basis by M/s A to Z Infrastructure Ltd., Plot No. 44 Sector 32, Institutional area, Gurgaon, Haryana-122001).**
- ii. Segregated waste like metallic paper, plastic etc. shall be Disposed through rag pickers by sale for recycle.
- iii. Construction debris/ and such other innocuous material shall be disposed off by sanitary land filling.
- iv. The non biodegradable inert waste, residues of waste processing facilities as well as pre processing rejects from waste processing facilities shall be disposed off by sanitary landfill.

Note : 1] Old quarries and low-lying areas within a city may be earmarked for filling only with construction waste, debris, road- waste, road dust silt from open drains & similarly non- toxic inert material, without any prior preparation. After filling, such sites should preferably be reserved as open spaces, parks, playgrounds, exhibition- grounds or parking - lots with trees.

2] The odour nuisance from the site can be controlled by periodic spraying of microbial culture or any suitable method.

3] At the initial stage of collection of Municipal Solid Wastes the waste minimization and segregation shall be carried out to avoid burden on the waste processing site.

**2. The municipal authority shall comply with these rules as per the implementation Schedule laid down in **Schedule I** as per MSW (M &H) Rules, 2000.**

**3. Conditions for Landfill sites -**

- i. The landfill site shall be planned and designed with proper documentation of phased construction plan as well as closure plan.
- ii. Bio-medical waste shall be disposed off in accordance with the Bio Medical Waste (Management & Handling) Rules, 1998 and Hazardous Waste shall be management in accordance with the Hazardous Waste (Management & Handling) Rules, 1989 as amended from time to time.
- iii. The landfill site shall be large enough to last for 20 to 25 years.
- iv. The landfill site shall be away from habitation, clusters, forest areas, water bodies, monuments, national parks, wet lands and places of important cultural, historical or religious interests.
- v. A buffer zone shall be maintained around landfill site and shall be incorporated in the Town Planning Department's land-use plans.
- vi. Landfill site should be 20 Kms away from airport including airbase. Necessary approval of airport or air base authorities prior to the setting up the landfill site shall

be obtained in case where the site is to be located Within 20 Km of an airport or an airbase.

**4. Facilities at the site :**

- i. Landfill site shall be fenced and hedged and provided with proper gate to Monitor incoming vehicles or other modes of transportation.
- ii. The landfill site shall be protected to prevent entry of unauthorized persons and stray animals.
- iii. Approach and other internal roads for free movements of vehicles and other machineries shall exist at the landfill site.
- iv. The landfill site shall have wastes inspection facilities to monitor waste brought in for landfill, office facilities for record keeping and shelter for keeping equipments and machineries including pollution monitoring equipments.
- v. Provisions like weigh bridge to measure quantity of waste brought at landfill Site, fire protection equipments and other facilities as may be required shall be provided.
- vi. Utilities such as drinking water (preferably Bathing facilities for workers) and lighting arrangements for easy landfill operations when carried out in night hours shall be provided.
- vii. Safety provisions including health inspection of workers at landfill site shall be periodically made.

**5. Specifications for land filling :**

- i. Waste subjected to land filling shall be compacted in thin layers using landfill compactors to achieve high density of the wastes. In high rainfall areas where heavy compactors cannot be used, alternative measures shall be adopted.
- ii. Wastes shall be covered immediately or at the end of each working day with Minimum 10 cm of soil, inert debris or construction material till such time wastes processing facilities for composting or recycling or energy recovery are set up as per schedule-I.
- iii. Prior to commencement of monsoon season and intermediate cover of 40-65 cm thickness of soil shall be placed on the landfill with proper compaction and gardening to prevent infiltration during monsoon. Proper drainage berms shall be constructed to divert run off away from the active cell of the landfill.
- iv. After completion of landfill, the final cover shall be designed to minimize infiltration and erosion. The final cover shall meet the following specifications  
viz. -
  - a. The final cover shall have barrier soil layer comprising of 60 cm of clay or amended soil with permeability less than  $1 \times 10^{-7}$  cm/sec.
  - b. On top of barrier soil layer, there shall be drainage layer of 15 cm.
  - c. On top of the drainage layer there shall be a vegetative layer of 45 cm to support natural plant growth and to minimize erosion.

**6. Pollution Prevention -**

In order to prevent pollution control problems from landfill operations the following provisions shall be made, namely :-

- a] Diversion of storm water drain to minimize leachates generation and prevent Pollution of surface water and also for avoiding flooding and creation of marshy conditions.
- b] Construction of non permeable lining system at the base and walls of waste disposal area. For landfill receiving residues of waste processing facilities or mixed waste or waste having contamination of hazardous materials (such as aerosols, bleaches, polishes, batteries, waste oils, paint products and pesticides) minimum liner specifications shall be composite barrier having 1.5 mm high density polyethylene (HDPE) geomembrane, or equivalent, overlying 90 cm of soil (clay or amended soil) having permeability coefficient not greater than  $1 \times 10^{-7}$  cm/sec.

The highest level of water table shall be at least two meter below the base of clay or amended soil barrier layer.

- c] Provisions for management of leachates collection and treatment shall be made. The treated leachates shall meet the standards specified in Schedule-IV.
- d] Prevention of run-off from landfill area entering any stream, river, lake or pond.

#### 7. Water Quality Monitoring:-

- i. Before establishing landfill site, baseline data of ground water quality in the area shall be collected and kept in record for future reference. The ground water quality within 50 meters of the periphery of landfill site shall be periodically monitored to ensure that the ground water is not contaminated beyond acceptable limit as decided by the Ground Water Board or the State Board. Such monitoring shall be carried out to cover different seasons in a year that is, summer, monsoon and post monsoon period.
- ii. Usage of groundwater in and around landfill sites for any purposes (including drinking and irrigation) is to be considered after ensuring its quality. The following specifications for drinking water quality shall apply for monitoring purpose, namely:-

S. No.	Parameters	IS 10500 1991 Desirable limit (mg/l except for pH)
1	Arsenic	0.05
2	Cadmium	0.01
3	Chromium	0.05
4	Copper	0.05
5	Cynide	0.05
6	Lead	0.05
7	Mercury	0.001
8	Nickel	-
9	Nitrate as NO <sub>3</sub>	45
10	pH	6.5-8.5
11	Iron	0.3

12	Total hardness (as CaCO <sub>3</sub> )	300
13	Chlorides	250
14	Dissolved solids	500
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	0.001
16	Zinc	5
17	Sulphate (as SO <sub>4</sub> )	200

**8. Ambient Air Quality Monitoring:**

- i. Ambient air quality at the landfill site and at the vicinity shall be monitored to meet the following specified standards, namely :-

S. No.	Parameters	Acceptable levels
1	Sulphur Dioxide	80 ug/m <sup>3</sup> (24 hrs)
2	Suspended Particulate Matter	500 ug/m <sup>3</sup> (24 hrs)
3	Methane	Not to exceed 25% of the lower explosive limit (equivalent to 650 mg/m <sup>3</sup> )
4	Ammonia daily average (sample duration 24 hrs)	0.4 mg/m <sup>3</sup> (400 ug/m <sup>3</sup> )
5	Carbon monoxide	1 hour average : 2 mg/m <sup>3</sup> 8 hour average : 1 mg/m <sup>3</sup>

- ii. The ambient air quality monitoring shall be carried out by the concerned authority as per the following schedule, viz.
- Six times in a year for cities having population of more than 50 lakhs.
  - Four times in a year for cities having population between 10 & 50 lakhs.
  - Two times in a year for town or cities having population between 1 & 10 lakhs.

**9. Plantation at landfill site :**

A vegetative cover shall be provided over the completed site in accordance with the following specifications, viz.

- Selection of locally adopted non edible perennial plants that resistant to brought an extreme temperatures shall be allowed to grow,
- The plants grown be such that their roots do not penetrate more than 30 cm. This condition shall apply till the landfill site is stabilized.
- Selected plants shall have ability to thrive low nutrient soil with minimum nutrients addition.
- Plantation to be made in sufficient density to minimized soil erosion.

**10. Closure of landfill site and Post-care:**

- i. The Post-care of landfill site shall be conducted for at least 15 years and long term monitoring or care plan shall consist of the following, viz.

- a. Maintaining the integrity and effectiveness of final cover, making repairs and preventing run-on and run-off from eroding or otherwise damaging the final cover,
  - b. Monitoring leachate collection system in accordance with the requirement,
  - c. Monitoring of ground water in accordance with the requirements and maintaining ground water quality.
  - d. Maintaining and operating the landfill gas collection system to meet the Standards.
  - ii. Use of landfill site after 15 years of post closure monitoring can be considered for human settlement or otherwise only after ensuring that gases and leachates analysis comply with the specified standards.
- 11. Standards for Composting and Treated Leachates -**
- i. The waste processing or disposal facilities shall include composting, palletisation, energy recovery or any other facility based on state-of-the-art technology duly approved by the Central Pollution Control Board.
  - ii. In case of engagement of private agency by the municipal authority, a specific agreement between the municipal authority and the private agency shall be made particularly, for supply of solid waste and other relevant terms and conditions.
  - iii. In order to prevent pollution problems from compost plant and other processing facilities, the following shall be complied with, namely :-
    - a] The incoming wastes at site shall be maintained prior to further processing. To the extent possible, the waste storage area should be covered. If such storage is done in an open area, it shall be provided with impermeable base with facility for collection of leachate and surface water run-off into lined drains leading to a leachate treatment and disposal facility;
    - b] Necessary precautions shall be taken to minimize nuisance of odour, flies, rodents, bird menace and fire hazard;
    - c] Pre-process and post-process rejects shall be removed from the processing facility on regular basis and shall not be allowed to pile at the site. Recyclables shall be routed through appropriate vendors. The non-recyclables shall be sent for well designed landfill sites(s);
    - d] In case of compost plant, the windrow area shall be provided with impermeable base. Such a base shall be made of concrete or compacted clay, 50 cm thick, having permeability coefficient less than  $10^{-7}$  cm/sec. The base shall be provided with 1 to 2 percent slope and circled by lined drains for collection of leachate or surface run-off;
    - e] Ambient air quality monitoring shall be regularly carried out particularly for checking odour nuisance at down wind direction on the boundary of processing plant;
    - f] In case of breakdown or maintenance of plant, waste infect shall be stopped and arrangements be worked out for diversion of waste to the landfill site.
  - iv. In order to ensure safe application of compost, the following specification for compost quality shall be met, namely

Parameters	Concentration not to exceed * (mg/kg dry basis, except pH value and C/N ratio)
Arsenic	10
Cadmium	5
Chromium	50
Copper	300
Lead	100
Mercury	0.15
Nickel	50
Zinc	1,000
C/N ratio	20-40
pH	5.5 to 8.5

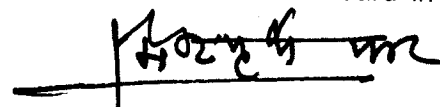
\* Compost (final product) exceeding the above stated concentration limit shall not be used for food crops. However, it may be utilized for purpose other than growing food crops.

v. The disposal of treated leachates shall follow the following standards, namely :-

Sr. No.	Parameter	Standards (Mode of disposal)		
		Island surface water	Public sewers	Land disposal
1	Suspended solids, mg/l, max	100	600	200
2	Dissolved solids (inorganic) mg/l, max	2,100	2,100	2,100
3	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
4	Ammonical nitrogen (as N), mg/l, max	50	50	-
5	Total Kjeldahl nitrogen (as N) mg/l, max	100	-	-
6	Biochemical oxygen demand (3 days at 27 C) max, mg/l	30	350	100
7	Chemical oxygen demand, mg/l, max	250	-	-
8	Arsenic (as As), mg/l, max	0.2	0.2	0.2
9	Mercury (as Hg), mg/l, max	0.01	0.01	-
10	Lead (as pb), mg/l, max	0.1	1	-
11	cadmium (as cd), mg/l, max	2	1	-
12	Total chromium (as Cr), mg/l, max	2	2	-
13	Copper (as Cu), mg/l, max	3	3	-
14	Zinc (as zn), mg/l, max	5	15	-
15	Nickel (as Ni), mg/l, max	3	3	-
16	Cynide (as Cn), mg/l, max	0.2	2	0.2
17	Chloride (as Cl), mg/l, max	1,000	1,000	600
18	Fluoride (as F), mg/l, max	2	1.5	-
19	Phenolic Compounds (as C6H5OH), mg/l, max	1	5	-

Note : While discharging treated leachates into inland surface waters, quantity of leachates being discharged and the quantity of dilution water available in the receiving water body shall be given due consideration.

12. The municipal authority shall, within the territorial area of the municipality, be responsible for the implementation of the provisions of these rules, and for the infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid wastes.
13. All municipal solid waste generated in a city or a town, shall be managed and handled in accordance with the compliance criteria and the procedure laid down in **Schedule-II**.
14. The municipal authority shall furnish its annual report in **Form-II**, to the District Magistrate or the Deputy Commissioner with a copy to the **Maharashtra Pollution Control Board**, on or before of the 30th day of June every year.
15. When an accident occurs of any municipal solid wastes collection, segregation, storage, processing, treatment and disposal facility or landfill site or during the transportation of such wastes, the municipal authorities shall forthwith report the accident in **Form-V** to the Secretary In charge of the Urban Development. Department in metropolitan cities and to the District Collector in all other cases.
16. The waste processing and disposal facilities to be setup by the Municipal Authority On their own or through an operator of a facility shall meet the specifications and Standards as specified in **schedule-III and IV**.
17. The municipal authority will have to abide by the provisions of Municipal Solid Waste (Management & Handling) Rules, 2000.
18. The inert created during handling and processing of MSW shall be properly land filled.
19. The council shall establish/setup and operate the facility within six months to comply with the rules as per Implementation Schedule laid down in **Schedule I**.
20. **The Corporation shall submit a Bank Guarantee of Rs. 05,00,000/-(Rupees five lacs only) for compliance of the stipulated conditions of the authorization.**
21. This is issued with the approval of Consent Appraisal Committee of the Board in its meeting held on 2nd March 2012.

  
(Milind Mhaskar, IAS)  
Member Secretary