

**BEFORE THE NATIONAL GREEN TRIBUNAL  
WESTERN ZONE BENCH, PUNE  
ORIGINAL APPLICATION NO. 88 OF 2024 (WZ)**

**In the matter of**

Siddharth Ambaji Patil & Anr. .... Applicant

Versus

Pen Municipal Council & Ors. .... Respondents

**INDEX**

Sr. No.	Particulars	Page No.
1	Affidavit in compliance of Hon'ble NGT order dtd. 08/11/2024 in O. A. 88 of 2024 (WZ)	554-556
2	<b>Exhibit I:</b> Hon'ble NGT order dtd. 08/11/2024 in O. A. 88 of 2024 (WZ)	557-559
3	<b>Exhibit II:</b> MSW authorization dtd. 19.08.2004 valid up to 14.08.2005	560-560
4	<b>Exhibit III:</b> MSW authorization dtd. 31.03.2009 valid up to 31.03.2010	561-561
5	<b>Exhibit IV:</b> MSW authorization dtd. 08.07.2013 valid up to 31.07.2014	562-569
6	<b>Exhibit V:</b> MSW authorization dtd. 11.11.2016 valid up to 31.07.2017	570-579
7	<b>Exhibit VI:</b> MSW authorization dtd. 18.12.2019 valid up to 31.12.2020	580-589
8	<b>Exhibit VII:</b> MSW authorization dtd. 30.09.2021 valid up to 31.12.2023	590-599
9	<b>Exhibit VIII and IX:</b> Copy of Municipal Solid Wastes (Management and Handling) Rules, 2000 and Solid Waste Management Rules, 2016, published by (MoEF&CC), Government of India	600-718
10	<b>Exhibit X:</b> Copy of the categorisation	719-776
11	<b>Exhibit XI:</b> Circular dated 06.09.2021	777-778





**BEFORE THE NATIONAL GREEN TRIBUNAL  
WESTERN ZONE BENCH, PUNE  
ORIGINAL APPLICATION NO. 88 OF 2024 (WZ)**

Siddharth Ambaji Patil and Anr ..... Applicants

Vs

Pen Municipal Council and Ors ..... Respondents

**ADDITIONAL AFFIDAVIT ON BEHALF OF MAHARASHTRA  
POLLUTION CONTROL BOARD AS PER ORDER DATED  
08/11/2024 PASSED BY OF HON'BLE TRIBUNAL: -**

I, Rutuja Bhalerao, Age 37 years, Occupation-Service, the Sub Regional Officer, Raigad-2 of the Maharashtra Pollution Control Board at Raigad having my office at Raigad Bhavan, C. B. D. Belapur, Navi Mumbai is submitting this report on behalf of the Member Secretary, Maharashtra Pollution Control Board (MPCB) in compliance of the order dated 08/11/2024 (attached as **Exhibit I**) passed by the Hon'ble Tribunal.

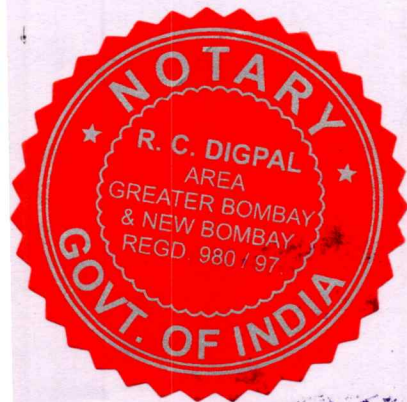
1. I say and submit in compliance of this Hon'ble Tribunal Order dated 8.11.2024 has directed to the Respondent No 2 and 3 (MPCB) to give status of Consent and Authorization which were obtained by Pen Municipal Council (Respondent No1), from time to time, within two weeks' time.
2. I say and submit that as per the available records with this office, the Pen Municipal Council has obtained six MSW (Municipal Solid Waste) Authorisations from Maharashtra Pollution Control Board, under MSW Management Rules published by the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India from time to time, which are as follow-

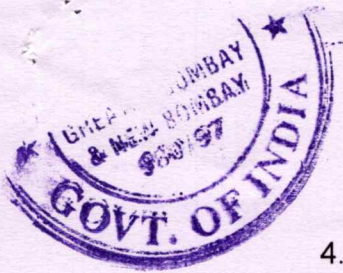
**Table- MSW Authorizations obtained by Pen Municipal Councils**

from time to time

Sr. No.	Date of grant of MSW Authorization	Date of validity of MSW Authorisation	Exhibit No. (copy enclosed)
1	19-08-2004	14-08-2005	II
2	31-03-2009	31-03-2010	III
3	08-07-2013	31-07-2014	IV
4	11-11-2016	31-07-2017	V
5	18-12-2019	31-12-2020	VI
6	30-09-2021	31-12-2023	VII

3. I say and submit that the Pen Municipal Council has not obtained any Consent to Establish or Consent to Operate from Maharashtra Pollution Control Board as of date.






4. I say and submit that as per the Municipal Solid Wastes (Management and Handling) Rules, 2000 and Solid Waste Management Rules, 2016, published by (MoEF&CC), Government of India, it is not specified whether Urban Local Body (ULB) including Municipal Council is required to obtain the Consent to Establish/Operate from the SPCB. A copy of the aforesaid Rules is enclosed as **Exhibit No. VIII and Exhibit No. IX.**
5. I say and submit that as per the industries categorisation published by Central Pollution Control Board from time to time, Solid Waste Management related separate category is not specified. Separate categories for Waste-to-Energy plant (R-9), Biomass Briquettes (G-5), Re-processing of Waste plastic including PVC (O-60) and Compressed/refined biogas production from biodegradable waste (O-86), are covered under consent regime, which are part of solid waste management (O-86) as per the said categorisation. A copy of the aforesaid categorisation is enclosed as **Exhibit No. X.**
6. I say and submit that Maharashtra Pollution Control Board (MPCB) has published a Circular dated 06/09/2021, regarding policy decision of consent management for solid waste processing plants/ facilities, wherein it is decided to grant Consent to Establish/ Consent to Operate for Solid Waste Management facilities by all types of Urban local bodies (including Municipal Council), and other than local bodies (individual operator/ industry installing MSW based processing plant). A copy of the Circular is enclosed as **Exhibit No. XI.**
7. In view of above, MPCB has directed to the Pen Municipal Council to obtain Consent to Establish and Consent to Operate from MPCB as per the aforesaid Circular vide email dated 26/11/2024. A copy of the said email dated 26.11.2024 is enclosed as **Exhibit No. XII.**

Solemnly affirmed on this ..... day of November 2024 at .....

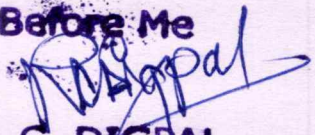
For and on behalf of Maharashtra  
Pollution Control Board,

  
(Rutuja Bhalerao)

Sub Regional Officer, Raigad-2



Before Me

  
R. C. DIGPAL  
ADVOCATE & NOTARY  
MUMBAI

REGISTERED VIDE

SL NO.:

1713(B)

DT:

29 NOV 2024

1713(B)

Item No.8

(Pune Bench)

**BEFORE THE NATIONAL GREEN TRIBUNAL  
WESTERN ZONE BENCH, PUNE**

[Through Physical Hearing (with Hybrid Option)]

**ORIGINAL APPLICATION NO.88 OF 2024 (WZ)**

Siddharth Ambaji Patil &amp; Anr.

... **Applicants****Versus**

Pen Municipal Council &amp; Ors.

... **Respondents**

Date of Hearing : 08.11.2024

**CORAM : HON'BLE MR. JUSTICE DINESH KUMAR SINGH, JUDICIAL MEMBER  
HON'BLE DR. VIJAY KULKARNI, EXPERT MEMBER**Applicants : Ms. Nilima Datta, Advocate holding for Mr. Zaman Ali,  
AdvocateRespondents : Mr. Preshit Surve, Advocate for R-1 with officer of R-1  
Ms. Manasi Joshi, Advocate for R-2 and R-3  
Mr. Pravin Pawar, SDO, Pen for R-4  
Mr. Aniruddha Kulkarni, Advocate for R-5/Envnt.Deptt,  
R-6/UDD and R-7/CPCB  
Mr. A.J. Pathak, Advocate for R-8**ORDER**

1. In compliance with our previous order dated 21.08.2024, respondent Nos.2 and 3 – MPCB, being nodal agency of the Joint Committee, has submitted the report of the Joint Committee, wherein the opinion is expressed that the claim made by the applicants with regard to cultivation of paddy and loss caused due to agricultural income from the impugned lands is found to be baseless and false as no documentary evidence could be extended in support of such loss. Learned counsel further states that she would like to file an affidavit stating therein the Consent and Authorization, which were obtained by respondent No.1 – Council from time to time. We allow her two weeks' time from the date of uploading of this order for the same.

2. Further as regards EDC amount to be levied from Pen Municipal Council – respondent No.1, it is submitted in this report that the Council has not provided any treatment system for management of leachate and the leachate was found discharged outside the premises without any treatment into Survey Nos.157 and 158, wherein concentration of SS, BOD, COD and TDS are on much higher side. Soil sample was found contaminated with heavy metals. Total EDC is assessed to be Rs. 4,08,34,737.6 and there are several recommendations in paragraph No.8.0 of its report made by the Joint Committee. Copy of this Joint Committee report has been stated to have been served on respondent No.1 – Pen Municipal Council as well as the applicants yesterday only, learned counsel for whom are praying for time to be allowed to file objections against the same. We grant them four weeks' time for the said purpose.

3. We had, by our previous order dated 21.08.2024, granted four weeks' time to respondent No. 8 – CGWB to file their reply. Today, learned counsel Mr. A.J. Pathak, representing respondent No.8, submits that as no relief is sought against the said respondent, he does not want to file reply.

4. From the side of respondent No.1 – Pen Municipal Council, learned counsel Mr. Preshit Surve has appeared along with an officer of respondent No.1 and states that the affidavit-in-reply dated 06.11.2024 has been filed, saying that the same could not be e-filed earlier because of some difficulty. We direct him to take assistance from the Registry for e-filing of the same. But we also take a copy of the said reply on record, which has been submitted before us by the officer of respondent No.1 today. It is stated that copy of the said reply has already been served on other parties, who may file rejoinder thereto within two weeks from the date of uploading of this order.

5. From the side of respondent Nos.5/Environment Department, No.6 – Urban Development Department and No.7 – CPCB, learned counsel Mr. Aniruddha Kulkarni has appeared and states that he does not want to file

reply on behalf of these respondents because no relief is prayed against them.

6. Put up this matter for next consideration on 19.12.2024.

**Dinesh Kumar Singh, JM**

**Dr. Vijay Kulkarni, EM**

November 08, 2024  
ORIGINAL APPLICATION NO.88/2024(WZ)  
npj

# Maharashtra Pollution Control Board

(Regional Office Raigad)

Telefax : 2756 2132  
2757 2620



Raigad Bhavan, 6th Floor,  
Sector-11, C.B.D. - Belapur,  
Navi Mumbai - 400 614.

No.MPCB/ROR/TB/292

Dated: 19/08/2004.

FORM-III  
[See Rule 6 (3)]

To,

✓ The Chief Officer,  
Municipal Council Pen,  
Dist. Raigad.

Ref:- Your application for grant of authorisation received through  
SRO, Raigad-II, vide letter No.SROR-II/TB/214 dtd.13/08/04.

The Maharashtra Pollution Control Board after examining the proposal hereby authorises the Chief Officer, Municipal Council Pen, Dist. Raigad, having their administrative office at Municipal Council Pen, Dist. Raigad, to set up and operate waste processing / waste disposal facility at S.No. 156, Hissa No.1-05-at Ambeghar, Tal. Pen, Dist. Raigad, on the terms and conditions (including the standards to comply) attached to this authorization letter as Annexure-I.

1. The validity of the authorisation is till 14/8/2005 . After the validity, renewal of authorisation is to be sought.

2. The Maharashtra Pollution Control Board may at any time revoke any of the condition applicable under the authorisation and shall communicate the same in writing.

3. Any violation of the provision of the Municipal Solid Wastes (Management & Handling) Rules, 2000 will attract the penal provision of the Environment (Protection) Act, 1986 (29 of 1988)

4. Subject to the above mentioned site clearance from competent Govt. Authorities.

D.A.: Annexure-I

(V.N. Mundhe) 19/08/2004  
Regional Officer, Raigad.

Copy submitted to:

1) Collector Raigad, Alibag, District-Raigad.

Being one of the implementing authorities having overall responsibility for 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 and disposed of in accordance with the said Rules.

Copy to:

Sub Regional Officer, Raigad-II, MPCB, Navi Mumbai, for necessary action.

S.W.M. (Cely)

8/8

पेण नगरपरिषद, पेण

आ.क्र. 100/2004

१) रजिस्ट्रार

२) व.स.प.स.

३) लेखा

४) सहायक लेखा

५) व.स.प.स.

६) मा.स.प.

७) आ.स.प.

८) पाणपुरी

९) भांडार

मुख्याधिकारी

# Maharashtra Pollution Control Board

## Regional Office Raigad

Fax : (022) 2756 21 32  
Tel. : (022) (D) 2757 26 20  
(022) (O) 2757 60 34



Raigad Bhavan, 6<sup>th</sup> Floor,  
Sector - 11, C. B. D. Belapur,  
Navi Mumbai - 400 614.  
Dist. - Thane, Maharashtra.

Ref. NO./ROR/TB/06

Date : 31 / 3 / 2009

**FORM-III**  
[See Rule 6 (3)]

To,  
**The Chief Officer,**  
Municipal Council, Pen,  
Tq. Pen Dist. Raigad.


Sub:- **Your application for authorisation under MSW ( M & H ) Rules 2000, site located at Sr. No. 156, (1-05-2) village – Ambeghar Tq. Pen Dist. Raigad.**

Ref:- Your application for grant of authorisation received through Sub- Regional Officer Mahadl, vide letter No. MPCB/SRO Raigad-II/TB-701, dated 23.03.2009.

The Maharashtra Pollution Control Board after examining the proposal hereby authorises the Chief Officer, Municipal Council Pen, Dist. Raigad, having their administrative office at Municipal Council Pen, Dist. Raigad, to set up and operate waste processing / waste disposal facility at S.No.156, ( 1-05-2) At. Village - Ambeghar Tq. Pen Dist. Raigad , on the terms and conditions (including the standards to comply) attached to this authorization letter as Annexure-I.

1. The validity of the authorisation is till 31.03.2010. After the validity, renewal of authorisation is to be sought.
2. The Maharashtra Pollution Control Board may at any time revoke any of the condition applicable under the authorisation and shall communicate the same in writing.
3. Any violation of the provision of the Municipal Solid Wastes (Management & Handling) Rules, 2000 will attract the penal provision of the Environment (Protection) Act, 1986 (29 of 1988)

D.A.: Annexure-I

  
(S.K. More)  
Regional Officer, Raigad.

Copy submitted to:  
**Collector Raigad, Alibag, District-Raigad.**

Being one of the implementing authorities having overall responsibility for 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 and disposed of in accordance with the said Rules.

Copy to:

✓ Sub Regional Officer, MPCB Raigad-II, for necessary action.

# MAHARASHTRA POLLUTION CONTROL BOARD

37/4020781  
4/4035273  
2/4024068 /4023516



Kalpataru Point, 3rd & 4th floor, Sion- Matunga  
Scheme Road No. 8, Opp. Gine Planet Cinema, Near  
Sion Circle, Sion (E),

enquiry@mpcb.gov.in

Mumbai - 400 022

Visit At <http://mpcb.gov.in>

Auth No.: MPCB/ROR/MSW-13/130708FT0137

Date: 8/07/2013

FORM -III

[See - Rule 6 (3)]

To,  
The Chief Officer  
Pen Municipality Council,  
Survey No-156, At-Ambeghar,  
Kamarli, Dist-Raigad

Sub: Application for grant of authorization.

Ref: Your application for grant of authorization received through SRO Raigad II, dated 30/06/2013.

The Maharashtra Pollution Control Board after examining the proposal hereby authorizes Chief Officer, Pen Municipality Council, District: Raigad having their administrative office at to set up and operate waste processing / waste disposal facility At: Survey No-156, Ambeghar, Tq. Pen & Dist: Raigad on the terms and conditions (including the standards to be complied with) attached to this authorization.

The validity of the authorization is 31/07/2014. After the validity, renewal of authorizations is to be sought.

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.

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).

मुख्याधिकारी

D/A- Annexure-I

Copy f. w. cs

The District Collector, Raigad

--- 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, RO, Raigad. - for necessary action.
- 2] Sub Regional Officer, SRO Raigad II- for necessary action.

(Bhagwan P. Solunke)  
Regional Officer, Raigad

e33

Bp

(100)

ANNEXURE -I

Terms & Conditions to Set Up and Operate Municipal Solid Waste Processing/ Waste Disposal Facility by The Chief Officer, Pen Municipal Council, At: Survey No-156 , Ambeghar, Tq. Pen Dist:Raigad.

1. 13 MT/ Day of Municipal Solid Waste generated shall be processed and disposed as below.

- I. By Bio Methanisation & Power generation .
- II. Bottom residue of Biomethane plant being organic can be used as manure gardening agricultural purpose.
- III. Segregated waste like Metallic paper, plastic etc. Shall be Disposed through pickers by sale for recycle.
- IV. Construction debris/ and such other innocuous material shall be disposed off sanitary land filling.
- V. The non biodegradable inert waste, residues of waste processing facilities as well preprocessing rejects from waste processing facilities shall be disposed off by sanitary landfill.

Note:-

- a. 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 & similar non- toxic inert material, without any prior preparation. After filling, such sites should preferably be preserved as open spaces, parks, playgrounds, exhibition grounds or parking - lots with trees.
- b. The odour nuisance from the site can be controlled by periodic spraying of microbial culture or any suitable method.
- c. 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 phase 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 managed in accordance with the Hazardous Waste (Management & Handling) Rules, 1989 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.

EP

VI. I

a

b

a

4. Facilities5. Specific

a.

b.

c.

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.

Waste Disposal  
eghar, Tq. Pe

used as below

l as manure

sed through

disposed off

ilities as well  
ed off by ser

filling only w  
rains & simila  
filling, such s  
inds, exhibitio  
ying of micro

Waste minimizat  
rocessing site.

entation Sched

ntation of phas

o Medical Wa  
l be managem  
Rules, 1989

as, water bodi  
ural, historical

e incorporated

4. Facilities at the site :

- Landfill site shall be fenced and hedged and provided with proper gate to Monitor incoming vehicles or other modes of transportation.
- The landfill site shall be protected to prevent entry of unauthorized persons and stray animals.
- Approach and other internal roads for free movements of vehicles and other machineries shall exist at the landfill site.
- 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.
- 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.
- 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.
- Safety provisions including health inspection of workers at landfill site shall be periodically made.

5. Specifications for land filling:

- 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.
- 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.
- 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.
- After completion of landfill, the final cover shall be designed to minimize infiltration and erosion. The final cover shall meet the following specifications
  - 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.

SBP

#### 6. Pollution Prevention -

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

- 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.
- Construction of non permeable lining system at the base and walls of waste disposal area. For landfill receiving residues of waste processing facilities (mixed waste or waste having contamination of hazardous materials (such as aerosols, bleaches, polishes, batteries, waste oils, paint products, pesticides) minimum liner specifications shall be composite barrier having 2 mm high density polyethylene (HDPE) geo-membrane, 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.
- Provisions for management of leachates collection and treatment shall be made. The treated leachates shall meet the standards specified in Schedule 8. Amb
- Prevention of run-off from landfill area entering any stream, river, lake or pond.

#### 7. Water Quality Monitoring:-

- 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.
- 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

SBP

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

- 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	120 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>

- 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.

#### 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.

EP

10. Closure of landfill site and Post-care:

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

- Maintaining the integrity and effectiveness of final cover, making repairs preventing run-on and run-off from eroding or otherwise damaging the cover,
- Monitoring leachate collection system in accordance with the requirements
- Monitoring of ground water in accordance with the requirements maintaining ground water quality.
- Maintaining and operating the landfill gas collection system to meet Standards.

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 specified standards.

11. Standards for Composting and Treated Leachates -

i. The waste processing or disposal facilities shall include composting, pelletisation, energy recovery or any other facility based on state-of-the-art technology duly approved by 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 safe disposal of solid waste and other relevant terms and conditions.

iii. In order to prevent pollution problems from compost plant and other processing facilities, 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 a 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 infection shall be stopped and arrangements be worked out for diversion of waste to the landfill site.

iv. In order to ensure compost quality

Parar
Arsen
Cadn
Chro
Copp
Lead
Merc
Nick
Zinc
C/N
pH

\* Con used crops

v. The disposal of

Maharashtra Pollution Control Board Maharashtra

No.	
1	Suspended
2	Dissolved s max
3	pH value
4	Ammoniac max
5	Total kjel max
6	Biochemi days at 27
7	Chemical max
8	Arsenic (a
9	Mercury (
10	Lead (as p
11	cadmium
12	Total chr
13	Copper (a
14	Zinc (as z
15	Nickel (a

Sp

v. 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.

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

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	-

EP

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 leachate being discharged and the quantity of dilution water available in the receiving body shall be given due consideration.

12. Every municipal authority shall, within the territorial area of the municipality 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, 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 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 its own or through an operator of a facility shall meet the specifications and Standards 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 earlier authorization issued vide Letter No.BO/MSWA/B-3056 dated 15.05.2006 valid upto 31.12.2007 stands cancelled due to change of location.

BP  
(Bhagwan P. Soiunkar)  
Regional Officer, Raigad

BP

Seen  
BP  
1/27

Environment

जा.ब्र  
प्रति,  
मा. 3  
महान

पर परिषद, पेण  
१५००  
दि

प्रशासन

पना  
विभाग

वठा

महोदय,

करण्याच

मुख्याधिकारी

अंमलबज

तंत्रज्ञानार्च

करण्यासंब

स

घनकचरा

एकत्रित क

व्यवस्थापन

८६२

**MAHARASHTRA POLLUTION CONTROL BOARD**

Phone : 022- 27576034  
022-27572620  
Fax : 022- 27562132  
Email : roraigad@mpcb.gov.in  
Visit At : <http://mpcb.gov.in>



**Regional Office Raigad,**  
Raigad Bhavan, 6th floor,  
Sector - 11,  
C.B.D Belapur  
Navi Mumbai - 400614

**LETTER OF MUNICIPAL SOLID WASTE AUTHORISATION**

ROR/MSWA/06

Date: 11/11/2016

**FORM-III**  
[See - Rule 6 (3)]

To,  
**The Chief Officer,**  
Pen Municipal Council  
Survey No-156, At-Ambeghar, Post-Kamarli  
Dist- Raigad

**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 Chief Officer,** Pen Municipal Council, Pen, to set up and operate waste processing / waste disposal facility at Survey No. 156, At-Ambeghar Post-Kamarli Dist-Raigad Solid waste (Management & Handling ) Rules 2000, on the terms and conditions (including the standards to be complied with) attached as Annexure -I to this authorization as per the functions and responsibilities fixed under the Municipal Solid Waste (Management and Handling) Rules, 2000 responsibility are

Sr. No	Name of Agency	Responsibility	Waste quantity	Location	Technology
1	Pen Municipal Council Mahad	Implementation of MSW Rules on its own, and/or by appointing agency (s), for infrastructure development for collections, storage, segregation, transport, processing and disposal facility (Schedule*-II,III,IV)	15.0 T/D	Survey No-156, At-Ambeghar, Post-Kamarli, Dist-Raigad	As per parametes laid down in Schedule*- II

\*Schedule refers to Schedule appended in Municipal Solid Waste (Management & Handling) Rules 2000

- The validity of the authorization is till **31/07/2017**. After the validity, renewal of authorizations is to be sought. The application for renewal of the authorization shall be made at least 60 days before the date of the expiry of the authorization.

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).
4. This authorization contains two Parts; separating, the responsibility of the corporation at Part A and responsibility of Operator of Waste Processing Facility, at Part B.
5. This authorization is issued without prejudice to Hon'ble High Court order issued and being issued in the matter

For AND ON BEHALF OF M.P.C. BOARD

*11/11/2016*  
 (Dr. A.N. Harshvardhan)  
 Regional Officer, Raigad.

(When consent issuing authority is other than Member Secretary, State)

Date :

Place:

**D. A. -Part A , Part B and Annexure-I**

Copy f. w. c.s.-

The District Collector, Raigad - 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) Sub-Regional Officer, SRO Raigad II
- 2] Master File

### Part A-Responsibilities of Local Body

Terms & Conditions to Set Up and Operate Municipal Solid Waste Processing/ Waste Disposal Facility by The Chief Officer, Pen Municipal Council, Pen ,at Survey No. 156, At-Ambeghar, Post-Kamarli, Dist-Raigad,

1. The municipal authority shall comply and strictly abide with the conditions stipulated in Schedule-I, II, III, and IV of Municipal Solid Waste (Management & Handling) Rules 2000.
2. 15.0 Ton/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, through the operator of facility.
  - 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.
3. 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.
4. Whenever an accident occurs due to 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.
5. The inert created during handling and processing of MSW shall be properly land filled.
6. The council shall establish/setup and operate the facility within six months to comply with the rules.
7. The authorization is issued without prejudice to Hon'ble High Court order issued and being issued in the matter.
8. **The Council shall submit a Bank Guarantee of Rs.25,000/- (Twenty Five Thousand only) to Regional Officer, Raigad within 15 days from the date of issue of this authorization for compliance of the stipulated conditions of the authorization.**

9. This authorization, as per Sr. No. 5 of Schedule-II, authorizes only M/s Pen Municipal Council, Pen for processing of municipal Solid waste.
10. The Council shall apply and submit the list of other facility provider involved in municipal solid waste management system as per Schedule II of the MSW Rules.
11. The Local body shall inform to Board on addition, deletion or change of facility provider

For AND ON BEHALF OF M.P.C BOARD

  
(Dr.A.N. Harshvardhan)  
Regional Officer, Raigad.

Maharashtra Pollution Control Board

**ANNEXURE -I**

**Terms & Conditions to Set Up and Operate Municipal Solid Waste Processing/ Waste Disposal Facility by The Chief Officer, Pen Municipal Council. Survey .No. 156, At-Ambeghar, Post-Kamarli, Dist-Raigad**

**1. 15.0 Ton/Day of Municipal Solid Waste generated shall be processed and disposed as below.**

- i Composting and allied Products i.e. RDF, Plastic items, Paving blocks, Scrap material for recycling by adopting Integrated processing Technology.
- 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.
- v. 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.
  - 4] The waste shall be transported in closed vehicles to avoid scattering and odour nuisance.

**2. Conditions for Landfill sites -**

- i. The landfill site shall be finalized in accordance with the approval of District level site selection committee, constituted by Water Supply and Sanitation Dept. Govt. of Maharashtra dt. 26/08/2003 and MPCB Check list issued vide No. B-4746 dt. 05/08/2003
- ii. The landfill site shall be planned and designed with proper documentation of phased construction plan as well as closure plan.
- iii. 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 and Trans boundary Movement ) Rules, 2008,as amended thereof.
- 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 with the approval of Urban Development Department, Govt. of Maharashtra.

- 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.

**3. 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.

**4. 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.
- iii. The local municipal authority or operator of facility as per their responsibility as determined by their contract, shall be responsible for the reimbursement of the sampling and analytical charges to MPCB as per the polluter pays principle.

**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 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.
- 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,
  - Monitoring leachates collection system in accordance with the requirement,
  - Monitoring of ground water in accordance with the requirements and maintaining ground water quality.
  - 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 leachete 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 C <sub>6</sub> H <sub>5</sub> OH), mg/l, max	1	5	-

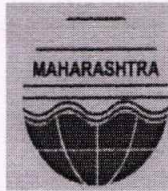
Note: While discharging treated leachates into inland surface waters, quantity of leachates being discharged and the quantity of dilution water available in the receiving water body shall be given due consideration.

For AND ON BEHALF OF M.P.C. BOARD

(Dr.A.N. Harshvardhan)  
Regional Officer, Raigad.

**MAHARASHTRA POLLUTION CONTROL BOARD**

Phone : 022- 27576034  
022-27572620  
Fax : 022- 27562132  
Email : roraigad@mpcb.gov.in  
Visit At : <http://mpcb.gov.in>



**Regional Office Raigad,**  
Raigad Bhavan, 6th floor,  
Sector - 11,  
C.B.D Belapur  
Navi Mumbai - 400614

**LETTER OF MUNICIPAL SOLID WASTE AUTHORISATION**

MPCB/ROR/MSWA/1912000004

Date: 18-12-2019

**FORM-II**

[See – Rule 16 (1)]

To,  
The Chief Officer,  
Pen Municipal Council,  
Tal-Roha, Dist- Raigad.

**Sub: Authorization under Solid Waste Management Rules, 2016.**

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

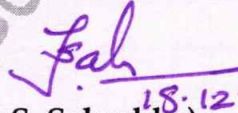
The Maharashtra Pollution Control Board after examining the proposal hereby authorizes, **The Chief Officer, Pen Municipal Council, Pen** to set up and operate waste processing /recycling/treatment/disposal facility at site **Sr. No156, At- Ambeghar, Post-Kamarli, Tal-Pen, Dist. Raigad.** site to comply the terms & conditions of authorization (including the standards to be complied with) attached to this authorization in Annexure I.

Sr. No	Name of Agency	Responsibility	Waste quantity	Location	Technology
1	Pen Municipal Council	Implementation of MSW Rules on its own, and/or by appointing agency (s), for infrastructure development for collections, storage, segregation, transport, processing and disposal facility (Schedule*-II,III,IV)	15.0 MT/day ( 9.0 MT/day-wet waste and 6.0MT/day dry waste as per DEP.)	<b>Sr. No156, At- Ambeghar, Po st-Kamarli, Pen, Dist. Raigad.</b>	As per paramete slaid down in Schedule*- II

\*Schedule refers to Schedule appended in Municipal Solid Waste (Management & Handling) Rules 2016

1. The authorization is hereby granted to operate the facility for processing, treatment and disposal of solid waste.
2. The validity of the authorization is till **31/12/2020**. After the validity, renewal of authorizations is to be sought.
3. The authorization is subject to the terms and conditions stated below and such conditions as may be otherwise specified in these rules and the standards laid down in Schedules I and II under these rules
4. 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.
5. Any violation of provisions of **Solid Waste Management Rules, 2016** attracts the penal provisions of the **Environment (Protection) Act, 1986 (29 of 1986)**.
6. **This authorization is granted without prejudice or being prejudice of the order passed/ to be passed by Hon'ble High Court/NGT.**

For AND ON BEHALF OF M.P.C. BOARD

  
(J. S. Salunkhe)

Regional Officer, Raigad

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

**Copy f. w. cs-**

**The District Collector, Raigad** - Being one of the implementing authorities having overall responsibility for the enforcement of the provisions of Solid Waste Management Rules, 2016, it is obligatory on your part to see that the Solid Waste is processed & disposed off in accordance with the said Rules.

**Copy to:**

**Sub Regional Officer, SRO- II MPCB, - For necessary follow up & submit compliance report .**

**ANNEXURE -I**

Terms & Conditions to set up and operate waste processing/ treatment/disposal facility by **Chief Officer, Pen Municipal Council, Roha, Survey No:156, At- Ambeghar, Post-Kamarli, Tal-Pen, Dist. Raigad.**

1. **15 MT/ Day of Municipal Solid Waste generated shall be processed and disposed as below(6 MT/ dry waste & 9 MT wet waste)**
  - I. Composting / Biomethanisation & power generation.
  - II. Bottom residue of Biomethane plant being organic can be used as manure for gardening & agriculture purpose.
  - III. Segregated waste like Metallic paper, plastic etc. shall be Disposed through rag pickers by sale for recycle.
  - 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 at authorised landfill site only.

**Note :**

- 1] The odour nuisance from the site can be controlled by periodic spraying of microbial culture or any suitable method.
1. The municipal authority shall comply with these rules as per the implementation Schedule laid down in **Schedule I** as per Solid Waste Management Rules, 2016.
2. **The council shall submit its annual report in Form-IV to Maharashtra Pollution Control Board and the Secretary-in-Charge of the Department of Urban Development of the concerned State or Union Territory in case of metropolitan city and to the Director of Municipal Administration or Commissioner of Municipal Administration or Officer in -Charge of Urban local bodies in the state in case of all other local bodies of state on or before the 30th day of June every year.**
3. **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-VI to the Secretary In charge of the Urban Development. Department in metropolitan cities and to the District Collector in all other cases.**
4. The inert created during handling and processing of MSW, operator of facility shall install integrated facility for handling of inert material.
5. The municipal authority will have to abide by the provisions of Solid Waste Management Rules, 2016.
6. Tipper and Dumper shall be avoided. Closed body bins can be used or compactor shall be used for MSW collections.

7. Raw waste material shall not be dumped/stored temporary at this site.
8. All recyclable material shall be segregated at source and before receiving at disposal site.
9. All mitigation measures like odour, smoke, fire, dust, nuisance etc. shall be taken by the council.
10. Environment Management Plan and Disaster Management Plan shall be prepared and implemented by the corporation.
11. Council/ Operator shall submit Bank Guarantee of Rs. 50,000/- towards compliance of authorization conditions to the Board within 15 days period from issuance of this authorization, which will be valid for a period of Five year.
12. The operator of the facility shall design and set up the facility as per the technical guidelines issued by the Central Pollution Control Board in this regard from time to time and the manual on solid waste management prepared by the Ministry of Urban Development.
13. The operator of the facility shall be responsible for the safe and environmentally sound operations of the solid waste processing and or treatment facilities as per the guidelines issued by the Central Pollution Control Board from time to time and the Manual on Municipal Solid Waste Management published by the Ministry of Urban Development and updated from time to time.
14. Council shall submit short term & Long term EMP & DMP shall prepared & shall implemented by Council.
15. This authorization is granted without prejudice or being prejudice of the order passed/ to be passed by Hon'ble High Court/NGT.

For AND ON BEHALF OF M.P.C. BOARD

(J. S. Salunkhe)  
Regional Officer, Raigad

- 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.
  - 4] The waste shall be transported in closed vehicles to avoid scattering and odour nuisance.



2. **Conditions for Landfill sites -**

- i. The landfill site shall be finalized in accordance with the approval of District level site selection committee, constituted by Water Supply and Sanitation Dept. Govt. of Maharashtra dt. 26/08/2003 and MPCB Check list issued vide No. B-4746 dt. 05/08/2003.
- ii. The landfill site shall be planned and designed with proper documentation of phased construction plan as well as closure plan.
- iii. Bio-medical waste shall be disposed off in accordance with the Bio Medical Waste (Management & Handling) Rules, 1998 amended therein and Hazardous Waste shall be management in accordance with the Hazardous Waste (Management, Handling and Trans boundary Movement ) Rules, 2008,as amended thereof.
- 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 with the approval of Urban Development Department, Govt. of Maharashtra.
- 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.

3. **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.



**4. 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.

**5. 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.



**6. 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.
- iii.

The following specifications for drinking water quality shall apply for monitoring purpose, namely:-

S. No.	Parameters	IS 10500:2012, Edition 2.2(2003-09) Desirable limit (mg/l except for pH)
1	Arsenic	0.01
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

**7. 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.
  - a. Six times in a year for cities having population of more than 50 lakhs.
  - b. Four times in a year for cities having population between 10 & 50 lakhs.
  - c. Two times in a year for town or cities having population between 1 & 10 lakhs.
- iii. The local municipal authority or operator of facility as per their responsibility as determined by their contract, shall be responsible for the reimbursement of the sampling and analytical charges to MPCB as per the polluter pays principle.

**8. Plantation at landfill site :**

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

- a. Selection of locally adopted non edible perennial plants that resistant to brought an extreme temperatures shall be allowed to grow,
- b. 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.
- c. Selected plants shall have ability to thrive low nutrient soil with minimum nutrients addition.
- d. Plantation to be made in sufficient density to minimized soil erosion.

**9. 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 leachates 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.

**10. 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 leachete 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) Organic Compost (FCO 2009)
Arsenic	10
Cadmium	5
Chromium	50
Copper	300
Lead	100
Mercury	0.15
Nickel	50
Zinc	1,000
C/N ratio	<20
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),	50	50	-

	mg/l, max			
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.

For AND ON BEHALF OF M.P.C. BOARD

**(J. S. Salunkhe)**  
**Regional Officer, Raigad**

**To,**  
**The Chief Officer,**  
**Pen Municipal Council,**  
**Survey No 156 Village- Ambeghar Po. Kamarli ,**  
**Tal-Pen, Dist- Raigad.**

**MAHARASHTRA POLLUTION CONTROL BOARD**

Phone : 022- 27576034  
022-27572620  
Fax : 022- 27562132  
Email : roraigad@mpcb.gov.in  
Visit At : <http://mpcb.gov.in>



Regional Office Raigad,  
Raigad Bhavan, 6th floor,  
Sector - 11,  
C.B.D Belapur  
Navi Mumbai - 400614

**LETTER OF MUNICIPAL SOLID WASTE AUTHORISATION**

MPCB/ROR/MSWA/2109000005

Date: 30.09.2021

**FORM-II**

[See – Rule 16 (1)]

To,  
The Chief Officer,  
Pen Municipal Council,  
Tal-Pen, Dist- Raigad.

**Sub: Authorization under Solid Waste Management Rules, 2016.**

**Ref:** Your online application for grant of authorization UAN NO. MPCB-MSW-AUTH-0000000637.

The Maharashtra Pollution Control Board after examining the proposal hereby authorizes, The Chief Officer, Pen Municipal Council, Pen to set up and operate waste processing /recycling/treatment/disposal facility at **Survey no. 156, Vill. – Ambeghar, Dist Tal. – Pen, Dist. Raigad.** Area 1.05 hector, site to comply the terms & conditions of authorization (including the standards to be complied with) attached to this authorization in Annexure I.

Sr. No	Name of Agency	Responsibility	Waste quantity	Location	Technology
1	Pen Municipal Council	Implementation of MSW Rules on its own, and/or by appointing agency (s), for infrastructure development for collections, storage, segregation, transport, processing and disposal facility (Schedule*-II,III,IV)	15 MT/day	Survey no. 156, Ambeghar, area 1.05 hector, Pen	As per parametes laid down in Schedule*- II

\*Schedule refers to Schedule appended in Municipal Solid Waste (Management & Handling) Rules 2016



Page 1 of 10

1. The authorization is hereby granted to operate the facility for processing, treatment and disposal of solid waste.
2. The validity of the authorization is till **31/12/2023**. After the validity, renewal of authorizations is to be sought.
3. The authorization is subject to the terms and conditions stated below and such conditions as may be otherwise specified in these rules and the standards laid down in Schedules I and II under these rules
4. 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.
5. Any violation of provisions of **Solid Waste Management Rules, 2016** attracts the penal provisions of the **Environment (Protection) Act, 1986 (29 of 1986)**.
6. **This authorization is granted without prejudice or being prejudice of the order passed/ to be passed by Hon'ble High Court/NGT.**

For AND ON BEHALF OF M.P.C. BOARD

  
30/9/2021

(V. V. Killedar)

I/c. Regional Officer, Raigad

D. A. - Annexure- I and II

Copy f. w. cs-

**The District Collector, Raigad** - Being one of the implementing authorities having overall responsibility for the enforcement of the provisions of Solid Waste Management Rules, 2016, it is obligatory on your part to see that the Solid Waste is processed & disposed off in accordance with the said Rules.

Copy to:

**Sub Regional Officer, Raigad - II MPCB**, - For necessary action.



ANNEXURE -I

Terms & Conditions to set up and operate waste processing/ treatment/disposal facility by **Chief Officer, Pen Municipal Council, at Survey no. 156, Vill. – Ambeghar, Dist Tal. – Pen, Dist. Raigad.** Area 1.05 hector, site

1. **15.0 MT/ Day of Municipal Solid Waste generated shall be processed and disposed as below**
  - I. Composting / Biomethanisation & power generation.
  - II. Bottom residue of Biomethane plant being organic can be used as manure for gardening & agriculture purpose.
  - III. Segregated waste like Metallic paper, plastic etc. shall be Disposed through rag pickers by sale for recycle.
  - 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 at authorised landfill site only.

**Note :**

- 1] The odour nuisance from the site can be controlled by periodic spraying of microbial culture or any suitable method.
1. The municipal authority shall comply with these rules as per the implementation Schedule laid down in **Schedule I** as per Solid Waste Management Rules, 2016.
2. The council shall submit its annual report in **Form-IV** to Maharashtra Pollution Control Board and the Secretary-in-Charge of the Department of Urban Development of the concerned State or Union Territory in case of metropolitan city and to the Director of Municipal Administration or Commissioner of Municipal Administration or Officer in -Charge of Urban local bodies in the state in case of all other local bodies of state on or before the 30th day of June every year.
3. 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-VI** to the Secretary In charge of the Urban Development. Department in metropolitan cities and to the District Collector in all other cases.
4. The inert created during handling and processing of MSW, operator of facility shall install integrated facility for handling of inert material.
5. The municipal authority will have to abide by the provisions of Solid Waste Management Rules, 2016.
6. Tipper and Dumper shall be avoided. Closed body bins can be used or compactor shall be used for MSW collections.
7. Raw waste material shall not be dumped/stored temporary at this site.
8. All recyclable material shall be segregated at source and before receiving at disposal site.



9. All mitigation measures like odour, smoke, fire, dust, nuisance etc. shall be taken by the council.
10. Environment Management Plan and Disaster Management Plan shall be prepared and implemented by the corporation.
11. The operator of the facility shall design and set up the facility as per the technical guidelines issued by the Central Pollution Control Board in this regard from time to time and the manual on solid waste management prepared by the Ministry of Urban Development.
12. The operator of the facility shall be responsible for the safe and environmentally sound operations of the solid waste processing and or treatment facilities as per the guidelines issued by the Central Pollution Control Board from time to time and the Manual on Municipal Solid Waste Management published by the Ministry of Urban Development and updated from time to time.
13. Council shall submit short term & Long term EMP & DMP shall prepared & shall implemented by Council.
14. This authorization is granted without prejudice or being prejudice of the order passed/ to be passed by Hon'ble High Court/NGT.

For AND ON BEHALF OF M.P.C. BOARD

*(V. V. Killedar)*  
30/5/2021

(V. V. Killedar)

I/c. Regional Officer, Raigad

- 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.
  - 4] The waste shall be transported in closed vehicles to avoid scattering and odour nuisance.



**ANNEXURE-II****1. Conditions for Landfill sites -**

- i. The landfill site shall be finalized in accordance with the approval of District level site selection committee, constituted by Water Supply and Sanitation Dept. Govt. of Maharashtra dt. 26/08/2003 and MPCB Check list issued vide No. B-4746 dt. 05/08/2003.
- ii. The landfill site shall be planned and designed with proper documentation of phased construction plan as well as closure plan.
- iii. Bio-medical waste shall be disposed off in accordance with the Bio Medical Waste (Management & Handling) Rules, 1998 amended therein and Hazardous Waste shall be management in accordance with the Hazardous Waste (Management, Handling and Trans boundary Movement ) Rules, 2008,as amended thereof.
- 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 with the approval of Urban Development Department, Govt. of Maharashtra.
- 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.

**2. 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.



**3. 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.

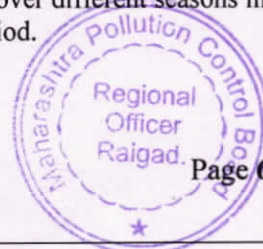
**4. Pollution Prevention -**

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.

**5. 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 10500:2012, Edition 2.2(2003-09) Desirable limit (mg/l except for pH)
1	Arsenic	0.01
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

**6. 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.
- iii. The local municipal authority or operator of facility as per their responsibility as determined by their contract, shall be responsible for the reimbursement of the sampling and analytical charges to MPCB as per the polluter pays principle.

7. **Plantation at landfill site :**

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

- a. Selection of locally adopted non edible perennial plants that resistant to brought an extreme temperatures shall be allowed to grow,
- b. 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.
- c. Selected plants shall have ability to thrive low nutrient soil with minimum nutrients addition.
- d. Plantation to be made in sufficient density to minimized soil erosion.

8. **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 leachates 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.

9. **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 runoff;
- 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) Organic Compost (FCO 2009)
Arsenic	10
Cadmium	5
Chromium	50
Copper	300
Lead	100
Mercury	0.15
Nickel	50
Zinc	1,000
C/N ratio	<20
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.

For AND ON BEHALF OF M.P.C. BOARD



*(Signature)*  
30/9/2021

(V. V. Killedar)

I/c. Regional Officer, Raigad

Maharashtra Pollution Control Board



# भारत का राजपत्र

## The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)

PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं. 861]

नई दिल्ली, शुक्रवार, अप्रैल 8, 2016/चैत्र 19, 1938

No. 861]

NEW DELHI, FRIDAY, APRIL 8, 2016/CHAITRA 19, 1938

### पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

#### अधिसूचना

नई दिल्ली, 8 अप्रैल, 2016

**का.आ. 1357(अ).**—ठोस अपशिष्ट प्रबंधन नियम, 2015 का प्ररूप भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना सं. सा.का.नि.451 (अ) तारीख 3 जून, 2015 को भारत के राजपत्र भाग II, खंड-3, उप खंड (i) में उसी तारीख को प्रकाशित किए गए थे, जिसमें उनसे प्रभावित होने वाले संभावित व्यक्तियों से नगरीय ठोस अपशिष्ट (प्रबंधन और हथालन) नियम 2000 को अधिक्रांत करते हुए उक्त अधिसूचना के द्वारा ठोस अपशिष्ट प्रबंधन नियम, 2015 के प्रकाशन की तारीख से साठ दिनों की अवधि की समाप्ति से पूर्व आक्षेप और सुझाव आमंत्रित किए थे।

उक्त राजपत्र की प्रतियां जनता को तारीख 3 जून, 2015 को उपलब्ध कराई गई थीं;

निर्धारित अवधि के भीतर उक्त प्रारूप नियमों पर प्राप्त आपत्तियों तथा टिप्पणियों पर केन्द्र सरकार द्वारा सम्यक रूप से विचार किया गया था;

पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3, 6 और 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए और नगरीय ठोस अपशिष्ट (प्रबंधन और हथालन) नियम, 2000, उन बातों के सिवाय अधिक्रांत करते हुए जिन्हें ऐसे अधिक्रमणों से पहले किया गया है या किए जाने का लोप किया गया है, केन्द्रीय सरकार ठोस अपशिष्टों का प्रबंधन करने के लिए निम्नलिखित नियम बनाती है अर्थात् :

#### 1. संक्षिप्त नाम और प्रारंभ.—

- (1) इन नियमों का संक्षिप्त नाम ठोस अपशिष्ट प्रबंधन नियम, 2016 है।
- (2) ये राजपत्र में इनके प्रकाशन की तारीख से प्रवृत्त होंगे।

**2. लागू होना-** ये नियम प्रत्येक शहरी स्थानीय निकाय, शहरी क्षेत्रों के विस्तार, भारत के महारजिस्ट्रार और जनगणना आयुक्त द्वारा यथा घोषित जनगणना नगरों, अधिसूचित क्षेत्रों, अधिसूचित औद्योगिक नगरी, भारतीय रेल के अधीन क्षेत्रों, विमानपत्तनों, वायुयान बेस, बंदरगाह और हारबर, रक्षा स्थापनाओं, विशेष आर्थिक जोन, राज्य और केन्द्रीय सरकारों के संगठनों, समय-समय पर क्रमशः राज्य सरकार द्वारा यथा अधिसूचित तीर्थ, धार्मिक तथा ऐतिहासिक महत्व के स्थानों और जिसमें औद्योगिक अपशिष्ट, परिसंकटमय अपशिष्ट, परिसंकटमय रसायन, जैव चिकित्सा अपशिष्ट, ई-अपशिष्ट, सीस-अम्ल बैटरियां और रेडियो सक्रिय अपशिष्ट पर्यावरण (संरक्षण) अधिनियम, 1986 के अधीन अलग से बनाए गए नियमों के अधीन आते हैं, के सिवाय प्रत्येक घरेलू, सांस्थानिक, वाणिज्यिक और किसी भी अन्य गैर-आवासीय ठोस अपशिष्ट जनितों पर लागू होंगे:-

**3. परिभाषाएं-** (1) इन नियमों में, जब तक कि संदर्भ से अन्यथा अपेक्षित न हो,- (1) **"वातजीवी कम्पोस्टीकरण"** से ऑक्सीजन की विद्यमानता में जैविक पदार्थ का सूक्ष्म जैवकीय विघटन अंतर्वलित कोई नियंत्रित प्रक्रिया अभिप्रेत है;

2. **"अवायुजीवी उपचारण"** से ऑक्सीजन के अभाव में जैविक पदार्थ का सूक्ष्म जैवकीय विघटन अंतर्वलित कोई नियंत्रित प्रक्रिया अभिप्रेत है;
3. **"प्राधिकार"** से यथास्थिति, राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति द्वारा किसी प्रसुविधा के प्रचालक या शहरी स्थानीय प्राधिकरण या ठोस अपशिष्ट के प्रसंस्करण और निपटान के उत्तरदायी किसी अन्य अभिकरण को दी गई अनुज्ञा अभिप्रेत है;
4. **"जैविक रूप से अपघटित अपशिष्ट"** से कोई ऐसी कार्बनिक सामग्री अभिप्रेत है जिसे सूक्ष्म जीव द्वारा सरलतर टिकाऊ सम्मिश्रण में निम्नीकृत किया जा सकता है;
5. **"जैविक मिथेनीकरण"** से ऐसी प्रक्रिया अभिप्रेत है जिसमें मिथेन से भरपूर जैव गैस का उत्पादन करने के लिए सूक्ष्मजीवी क्रिया द्वारा कार्बनिक पदार्थ का इंजाइमी अपघटन को अपरिहार्य बनाता है;
6. **"ब्रांडस्वामी"** से कोई व्यक्ति या कंपनी अभिप्रेत है जो किसी रजिस्ट्रीकृत ब्रांड लेवल के अधीन कोई वाणिज्यिक विक्रय करता है;
7. **"मध्यवर्ती परिक्षेत्र"** से ऐसा विकास रहित परिक्षेत्र अभिप्रेत है जिसमें 5 टीपीडी से अधिक की संस्थापित क्षमता वाली ठोस अपशिष्ट प्रसंस्करण तथा निपटान सुविधा के चारों ओर अनुरक्षित किया जाएगा। इसे ठोस अपशिष्ट के प्रसंस्करण तथा निपटान संबंधी सुविधा के लिए आवंटित कुल क्षेत्र के भीतर अनुरक्षित किया जाएगा;
8. **"भारी मात्रा में अपशिष्ट उत्पादक"** से अभिप्रेत है और इसके अंतर्गत औसतन 100 कि.ग्रा. प्रतिदिन की दर से अधिक अपशिष्ट उत्पादित करते हैं तथा इनसे केन्द्रीय सरकार के विभागों अथवा उपक्रमों, राज्य सरकार के विभागों या उपक्रमों, स्थानीय निकायों, सार्वजनिक या प्राइवेट सेक्टर की कंपनियों, अस्पतालों, नर्सिंग होम, स्कूलों, कॉलेजों, विश्वविद्यालयों, अन्य शैक्षिक संस्थाओं, छात्रावासों, होटलों, वाणिज्यिक स्थापनाओं, बाजारों, पूजा स्थलों, स्टेडियमों और खेल परिसरों द्वारा अधिकृत भवन भी है;
9. **"उप-विधि"** से स्थानीय निकाय, जनगणना शहर और अधिसूचित क्षेत्र टाउनशिप द्वारा, अपने अधिकारिता वाले क्षेत्र में इन नियमों को प्रभावी ढंग से कार्यान्वित करने को सुविधाजनक बनाने के लिए, अधिसूचित नियामक ढांचा अभिप्रेत है;
10. **"जनगणना नगर"** से भारत के महारजिस्ट्रार और जनगणना आयुक्त द्वारा यथा परिभाषित शहरी क्षेत्र अभिप्रेत है;

11. "ज्वलनशील अपशिष्ट" से प्लास्टिक, काष्ठ लुगदी आदि जैसी क्लोरोनीकृत सामग्री को छोड़कर गैर-जैवअवक्रमणीय, गैर-पुनर्चक्रणीय, गैर-पुनःउपभोज्य, गैर-परिसंकटमय ठोस अपशिष्ट अभिप्रेत है जिनका 1500 किलो कैलोरी प्रति कि.ग्रा. से न्यूनतम कैलोरिफिक मान हो;
12. "कम्पोस्टीकरण" से जैविक पदार्थ का सूक्ष्मजीवी अपघटन अंतर्वलित की एक ऐसी नियंत्रित प्रक्रिया अभिप्रेत है;
13. "ठिकेदार" से ऐसा व्यक्ति या फर्म अभिप्रेत है जो कोई सेवा करने के लिए या सेवा प्रदाता प्राधिकारी के लिए कार्य करने के लिए सामग्री या श्रम प्रदान करने की संविदा करता है या करती है;
14. "सह प्रसंस्करण" से प्राकृतिक खनिज संसाधनों और औद्योगिक प्रक्रियाओं में जीवाश्म ईंधनों को प्रतिस्थापित करने या उन्हें अनुपूरित, दोनों को करने के लिए कच्ची सामग्री के रूप में या ऊर्जा के स्रोत के रूप में 1500 किलो कैलोरी से अधिक कैलोरिफिक मूल्य वाले गैर-जैव अवक्रमणीय और गैर-पुनर्चक्रणीय ठोस अपशिष्ट का उपयोग अभिप्रेत है;
15. "विकेंद्रित प्रसंस्करण" से जैव अवक्रमणीय अपशिष्ट के प्रसंस्करण को अधिकतम करने के लिए विखरी हुई सुविधाओं की स्थापना और उत्पादन के स्रोत से निकटतम पुनर्चक्रण योग्य सामग्रियों की प्रतिप्राप्ति करना अभिप्रेत है ताकि प्रसंस्करण या निपटान के लिए अपशिष्ट का न्यूनतम परिवहन करना पड़े;
16. "निपटान" से भूजल, सतही जल, परिवेशी वायु के संदूषण तथा पशुओं या पक्षियों के आकर्षण को रोकने के लिए अनुसूची 1 में यथा विनिर्दिष्ट भूमि पर प्रसंस्करण के उपरांत अवशिष्ट ठोस अपशिष्ट और निष्क्रिय गली का कूड़ा, करकट और सतही नाले की गाद का अंतिम तथा सुरक्षित निपटान अभिप्रेत है;
17. "घरेलू परिसंकटमय अपशिष्ट" से घरेलू स्तर पर उत्पन्न संक्रामक अपशिष्टों जैसे फेंके हुए पेंट के ड्रम, कीटनाशी के डिब्बे, सीएफएल बल्ब, ट्यूब लाइटें, अवधि समाप्त औषधियां, टूटे हुई पारा वाले थर्मामीटर, प्रयुक्त बैटरियां, प्रयुक्त सूइयां, तथा सिरिंज और संदूषित पट्टियां आदि अभिप्रेत हैं;
18. "द्वार-द्वार संग्रहण" से घरों, दुकानों, वाणिज्यिक प्रतिष्ठानों, कार्यालयों, संस्थागत या किसी अन्य गैर आवासीय परिसरों से द्वार तक जाकर ठोस अपशिष्ट का संग्रहण करना और जिसके अंतर्गत किसी आवासीय सोसायटी, बहुमंजिले भवन या अपार्टमेंट, बड़े आवासीय, वाणिज्यिक या संस्थागत कॉम्प्लैक्स या परिसरों में भूतल पर प्रवेश द्वार या किसी अभिहित स्थल से ठोस अपशिष्ट का संग्रहण करना भी अभिप्रेत है;
19. "शुष्क अपशिष्ट" से जैव-निम्नीकरण अपशिष्ट और निष्क्रिय गली का कूड़ा-करकट से भिन्न अपशिष्ट अभिप्रेत है और जिसके अंतर्गत पुनर्चक्रणीय अपशिष्ट, गैर पुनर्चक्रणीय अपशिष्ट, दाह्य अपशिष्ट और स्वास्थ्यकर नैपकिन और डायपर आदि अपशिष्ट भी हैं;
20. "क्षेपण स्थल" से जिसका स्वास्थ्यकर भूमिभरण के लिए सिद्धांतों को पालन किए बिना ठोस अपशिष्ट के निपटान के लिए शहरी स्थानीय निकाय द्वारा उपयोग की गई कोई भूमि अभिप्रेत है;
21. "विस्तारित उत्पादक दायित्व" से पैकेजिंग उत्पादों के जीवन काल के अंत तक पर्यावरण की दृष्टि से अनुकूल प्रबंधन के लिए, पैकेजिंग उत्पादों जैसे प्लास्टिक, टिन, कांच और कॉरुगेटेड बक्सों इत्यादि के किसी उत्पादक के उत्तरदायित्व अभिप्रेत है;
22. "सुविधा" से ऐसा कोई स्थापन अभिप्रेत है जिसमें ठोस अपशिष्ट प्रबंध प्रक्रियाएं अर्थात् पृथक्करण पुनःप्राप्ति, भंडारण, संग्रहण, पुनर्चक्रण, प्रसंस्करण, उपचार या सुरक्षित निपटान किया जाता है;

23. "जुर्माना" से इन नियमों तथा/अथवा उप-विधियों के निदेशों के अनुपालन के लिए उपविधियों के अधीन अपशिष्ट जनित्रों या अपशिष्ट प्रसंस्करण के प्रचालकों और निपटान सुविधाओं पर लगाए गए जुर्माना अभिप्रेत है;
24. "प्ररूप" से इन नियमों से उपाबद्ध प्ररूप अभिप्रेत है;
25. "प्रहस्तन" के अंतर्गत ठोस अपशिष्टों की छंटाई, पृथक्करण, सामग्री की पुनःप्राप्ति, संग्रहण, गौण भंडारण, काटना, गट्टा बनाना, दलन, लदाई, उतराई, परिवहन, प्रसंस्करण तथा निपटान से संबंधित सभी क्रियाकलाप भी हैं;
26. "निष्क्रिय" से ऐसा अपशिष्ट अभिप्रेत है जो जैव अपघटनीय, पुनःचक्रणीय या दाह्य नहीं है, गली की सफाई तथा सतही नालियों से निकाली गई धूल तथा गाद भी हैं;
27. "भस्मीकरण" से उच्च तापमान पर अपशिष्ट सामग्रियों को तापीय रूप से निम्नीकृत करने के लिए ठोस अपशिष्ट का जलाना या दहन अंतर्वलित इंजीनियरीकृत प्रक्रिया अभिप्रेत है;
28. "अनौपचारिक अपशिष्ट संग्राहक" के अंतर्गत व्यक्ति, संगम ऐसे या अपशिष्ट व्यापारी सम्मिलित है जो पुनर्चक्रणीय सामग्रियों की छंटाई, विक्रय और खरीद से अंतर्वलित है;
29. "निक्षालितक" से ऐसा द्रव अभिप्रेत है जो ठोस अपशिष्ट के माध्यम से या अन्य माध्यम से रिसता है जिसमें उसमें घुली हुई या निलंबित सामग्री का सत्व है;
30. "स्थानीय निकाय" से अभिप्रेत इन नियमों के प्रयोजन के लिए और जिसके अंतर्गत म्युनिसिपल कॉरपोरेशन, नगर निगम, म्युनिसिपल कौंसिल, नगरपालिका, नगरपालिका परिषद, म्युनिसिपल बोर्ड, नगर पंचायत, और टाउन पंचायत, जनगणना नगर, अधिसूचित क्षेत्र और भारत के विभिन्न राज्यों और संघ राज्य क्षेत्रों में औद्योगिक नगरी चाहे उसका कोई भी नाम से पुकारा जाए, भी है;
31. "सामग्री पुनर्प्राप्ति सुविधा (एमआरएफ)" से ऐसी सुविधा अभिप्रेत है जहां गैर कंपोस्टीय ठोस अपशिष्ट को स्थानीय निकाय या नियम 2 में वर्णित कोई अन्य अस्तित्व या इसमें से किसी के द्वारा प्राधिकृत कोई व्यक्ति या अभिकरण जो अपशिष्ट को प्रसंस्करण या निपटान के लिए उसे परिदान या देने के पूर्व इस प्रयोजन के लिए स्थानीय निकाय या नियम 2 में वर्णित अस्तित्व द्वारा नियोजित अपशिष्ट चुनने वाले, अनौपचारिक पुनर्चक्रणकर्ता या कोई अन्य नियोजित कार्यबल को प्राधिकृत अनौपचारिक सेक्टर द्वारा अपशिष्ट के विभिन्न संघटकों से पृथक्करण, छंटाई या पुनर्चक्रण योग्य की पुनर्प्राप्ति की प्रसुविधा है;
32. "अजैविक निम्नीकरण योग्य अपशिष्ट" से कोई ऐसा अपशिष्ट अभिप्रेत है जिसका सूक्ष्म जीव द्वारा सरलतर स्थायी यौगिक में निम्नीकरण नहीं किया जा सकता है;
33. "सुविधा का प्रचालक" से ऐसा व्यक्ति या अस्तित्व अभिप्रेत है जो ऐसे ठोस अपशिष्ट के प्रहस्तन के लिए सुविधा का स्वामी है या प्रचालित करता है जिसके अंतर्गत स्थानीय निकाय और स्थानीय निकाय द्वारा नियुक्त कोई अन्य अस्तित्व या अभिकरण भी है;
34. "प्राथमिक संग्रहण" से पृथक्कृत ठोस अपशिष्ट को उसके उत्पादन के स्रोत जिसके अंतर्गत घर, दुकानें, कार्यालय और कोई अन्य गैर आवासीय परिसर भी हैं से या किसी संग्रहण बिंदु या शहरी स्थानीय निकाय द्वारा विनिर्दिष्ट किसी अन्य अवस्थान से संगृहीत करना, उठाना या हटाना अभिप्रेत है;
35. "प्रसंस्करण" से कोई वैज्ञानिक प्रक्रिया जिसके द्वारा ठोस अपशिष्ट को पुनः उपयोग, पुनः चक्रित या नए उत्पादों में परिवर्तित करने के प्रयोजन के लिए हथालित करना अभिप्रेत है;

36. "पुनर्चक्रण" से पृथक्कृत ठोस अपशिष्ट को अजैव निम्नीकृत नए पदार्थ या उत्पाद या नए उत्पादों का उत्पादन करने के लिए कच्ची सामग्री के रूप में परिवर्तित करने की प्रक्रिया अभिप्रेत है, जिसमें मूल उत्पादों को समरूप किया जा सकेगा या नहीं किया जा सकेगा;
37. "पुनर्विकास" से जहां विद्यमान भवन और अन्य अवसंरचनाएं जीर्णशीर्ण हो गई हैं वहां उसी स्थल पर पुरानी आवासीय या वाणिज्यिक भवनों का पुनर्निर्माण अभिप्रेत है;
38. "कचरा व्युत्पन्न ईंधन (आरडीएफ)" से ठोस अपशिष्ट, जैसे प्लास्टिक, काष्ठ, लुगदी या कार्बनिक अपशिष्ट, क्लोरीनीकृत पदार्थों से भिन्न ठोस अपशिष्ट को सुखाकर कतरन, निर्जलीकरण और संहनन द्वारा गुटिका या रोएं के कप में उत्पादित बाह्य अपशिष्ट प्रभाजी से व्युत्पन्न ईंधन अभिप्रेत है;
39. "अवशिष्ट ठोस अपशिष्ट" से और उसके अंतर्गत ऐसी ठोस अपशिष्ट प्रसंस्करण सुविधाओं, जो पुनर्चक्रण या अतिरिक्त प्रसंस्करण के लिए उपयुक्त नहीं हैं, से प्राप्त अपशिष्ट और अस्वीकृत भी अभिप्रेत है;
40. "स्वास्थ्यकर भूमिभरण" से अवशिष्ट ठोस अपशिष्ट के अंतिम और सुरक्षित निपटान और भूजल, सतही जल या क्षणभंगुर वायु धूल, हवा से उड़ा हुआ कूड़ाकरकट, दुर्गंध, अग्नि परिसंकट, पशुओं का खतरा, पक्षियों का खतरा, नाशकजीव, कृतकनाशी, ग्रीनहाउस गैस उत्सर्जन, सतत जैव प्रदूषणकारी तत्व प्रावण्य अस्थिरता तथा अपरदन के प्रदूषण के प्रति संरक्षात्मक उपायों सहित प्रकल्पित सुविधा में भूमि पर निष्क्रिय अपशिष्ट अभिप्रेत है;
41. "स्वास्थ्यकर अपशिष्ट" से प्रयोग किए गए डायपर, स्वास्थ्यकार तौलिए या नैपकिन, टैम्पोन, कन्डोम, इनकंटीनेंस शीट और कोई अन्य समरूप अपशिष्ट से मिलकर बना अपशिष्ट अभिप्रेत है;
42. "अनुसूची" से इन नियमों से उपाबद्ध अनुसूची अभिप्रेत है;
43. "गौण भंडारण" से प्रसंस्करण या निपटान सुविधा को अपशिष्ट के आगे परिवहन के लिए गौण भंडारण डिपो या एमआरएफ या आधानों पर संग्रहण के पश्चात ठोस अपशिष्ट का अस्थायी संदूषक अभिप्रेत है;
44. "पृथक्करण" से ठोस अपशिष्ट के विभिन्न संघटकों अर्थात् जैविक निम्नीकरण अपशिष्ट जिसके अंतर्गत कृषि और दुग्धपालन अपशिष्ट अजैविक निम्नीकरण अपशिष्ट जिसके अंतर्गत पुनःचक्रणयोग्य अपशिष्ट, गैर पुनःचक्रणयोग्य दाह्य योग्य अपशिष्ट, स्वास्थ्यकर अपशिष्ट और गैर चक्रण योग्य कूड़ाकरकट अपशिष्ट, घरेलू परिसंकटमय अपशिष्ट तथा सन्निर्माण और विध्वंस अपशिष्ट भी है, की छंटाई और पृथक् भंडारण अभिप्रेत है;
45. "सेवा प्रदाता" से जल, मलवहन, विद्युत, टेलीफोन, सड़क, जल निकास आदि अभिप्रेत हैं;
46. "ठोस अपशिष्ट" से ठोस या अर्द्धठोस घरेलू अपशिष्ट अभिप्रेत है और इसके अंतर्गत स्थानीय प्राधिकरण और नियम 2 में वर्णित अन्य अस्तित्व के अधीन क्षेत्र में उत्पन्न स्वास्थ्यकर अपशिष्ट, वाणिज्यिक अपशिष्ट, सांस्थानिक अपशिष्ट, खानपान और बाजार अपशिष्ट तथा अन्य गैर-आवासीय अपशिष्ट, गली की सफाई, सतह नालियों से हटाई गई या एकत्रित गाद, उद्यान कृषि अपशिष्ट, कृषि और डेयरी अपशिष्ट, औद्योगिक अपशिष्ट को छोड़कर उपचारित जैव चिकित्सक अपशिष्ट और ई-अपशिष्ट, बैटरी अपशिष्ट, रेडियो सक्रिय अपशिष्ट भी अभिप्रेत है;
47. "छंटाई करना" से मिश्रित अपशिष्ट से पुनःचक्रणयोग्य विभिन्न संघटकों और प्रवर्गों जैसे कागज, प्लास्टिक, गत्ता, धातु, कांच आदि को समुचित पुनःचक्रण सुविधा में पृथक् करना अभिप्रेत है;
48. "स्थिरीकरण" से जैव निम्नीकरण अपशिष्ट को जैवीय अपघटन को स्थायी अवस्था में परिवर्तित करना अभिप्रेत है जहां वह निक्षालन या अरुचिकर सुगंध उत्पन्न नहीं करता है और कृषि भूमि, भू-कटाव नियंत्रण तथा भूमि उपचार के लिए उपयुक्त है;

49. **"मार्गविक्रेता"** से किसी गली, लेन, पार्श्व पथ, पैदल पथ, खडंजा, सार्वजनिक उद्यान या किसी अन्य सावर्जनिक स्थान या प्राइवेट क्षेत्र, अस्थायी रूप से निर्मित संरचना या स्थान से स्थान घूमकर साधारण जनता को दैनिक उपयोग के वस्तु, माल, सौदा, खाद्य मद या वाणिज्यिक वस्तु के विक्रय करने या उन्हें एक स्थान से दूसरे स्थान तक स्थानांतरित करने में लगे व्यक्ति अभिप्रेत हैं जिसके अंतर्गत फेरीवाला, पैकार, आबादकर तथा ऐसी सभी अन्य समानार्थी पद जो स्थानीय या विनिर्दिष्ट क्षेत्र में हो सकते हैं, भी है और "मार्ग विक्रय" शब्दों को उनके व्याकरणिक रूप भेदों और सजातीय पदों का अर्थ तदनुकूल किया जाएगा;
50. **"बख्शीश फीस"** से स्थानीय प्राधिकरण या राज्य सरकार द्वारा प्राधिकृत कोई राज्य अभिकरण द्वारा कोई फीस या समर्थन मूल्य अभिप्रेत है जो ठोस अपशिष्ट प्रसंस्करण सुविधा के ग्राही या प्रचालक या भूमिभरण पर ठोस अपशिष्ट के निपटान के लिए अवधारित संदात्त है;
51. **"अंतरण स्थल"** से संग्रह क्षेत्रों से ठोस अपशिष्ट प्राप्त करने को सृजित सुविधा और अपशिष्ट प्रसंस्करण और, या निपटान सुविधा को आच्छादित यानों या आधानों में बड़ी मात्रा में परिवहन अभिप्रेत है;
52. **"परिवहन"** से ठोस अपशिष्ट चाहे वह या तो उपचारित आंशिक उपचारित या अनुपचारित को एक स्थान से दूसरे स्थान पर किसी पर्यावरणीय रूप से युक्ति युक्त रीति में विशिष्ट रूप से अभिहित और आच्छादित परिवहन प्रणाली जैसे दुर्गंध, कूड़ा कचरा और घृणित दशा को रोकने के लिए प्रवहन अभिप्रेत है;
53. **"उपचार"** से किसी अपशिष्ट के भौतिक, रसायनिक या जैविक लक्षणों या संघटन में रूपांतरण की अभिहित पद्धति, तकनीक या प्रक्रिया अभिप्रेत है जिससे उसके आयतन और क्षितिकारक क्षमता को कम करता है;
54. **"उपयोक्ता फीस"** से ठोस अपशिष्ट संग्रहण, परिवहन प्रसंस्करण और निपटान सेवाओं को उपलब्ध कराने की कुल या आंशिक लागत को प्राप्त करने में अपशिष्ट जनित पर स्थानीय निकाय और नियम 2 में वर्णित किसी अस्तित्व द्वारा अधिरोपित फीस अभिप्रेत है;
55. **"कृमि कम्पोस्ट बनाना"** से केचुओं का प्रयोग करते हुए कम्पोस्ट में संपरिवर्तित करने की जैव निम्नीकरण प्रक्रिया अभिप्रेत है;
56. **"अपशिष्ट जनित्र"** से और इसके अंतर्गत सम्मिलित से, रेल तथा रक्षा स्थापनाओं सहित प्रत्येक व्यक्ति या व्यक्तियों का समूह या प्रत्येक आवासीय परिसर तथा गैर आवासीय स्थापनाएं भी है, जो ठोस अपशिष्ट उत्पन्न करते हैं, अभिप्रेत है;
57. **"अपशिष्ट की क्रमबद्धता"** से ऐसा प्राथमिकता क्रम अभिप्रेत है जिसके अनुसार ठोस अपशिष्ट का प्रबंधन निवारण, कटौती, पुनःउपयोग, पुनर्चक्रण, पुनः प्राप्ति और निपटान पर बल देकर किया जाना चाहिए जिसमें निवारण को सर्वाधिक प्राथमिकता और भू-भरण में निपटान को न्यूनतम वरीयता का विकल्प होगा;
58. **"अपशिष्ट चुनने वाला"** से ऐसा व्यक्ति या व्यक्तियों का समूह अभिप्रेत है जो अपशिष्ट उत्पादन के स्रोत से पुनः उपयोजनीय तथा पुनर्चक्रण योग्य ठोस अपशिष्ट के संग्रहण और साथ ही पुनर्चक्रकों को उनकी आजीविका अर्जित करने के लिए सीधे या उनके मध्यवर्तियों के माध्यम से विक्रय के लिए गलियों, डिब्बों, प्रसंस्करण तथा अपशिष्ट निपटान सुविधाओं से अपशिष्ट को उठाने में औपचारिक रूप से लगे हुए हैं;
- (2) इसमें प्रयुक्त जिन शब्दों और पदों का अर्थ परिभाषित नहीं किया गया है, परंतु जो पर्यावरण (संरक्षण) अधिनियम 1986, जल (प्रदूषण निवारण और नियंत्रण) अधिनियम, 1974 जल (प्रदूषण निवारण और नियंत्रण) उपकर अधिनियम 1977 तथा वायु (प्रदूषण निवारण और नियंत्रण) अधिनियम, 1981 में परिभाषित है, के अर्थ होंगे जो संबंधित अधिनियमों में हैं।

#### 4. अपशिष्ट उत्पन्नकर्ताओं के कर्तव्य, प्रत्येक अपशिष्ट उत्पन्नकर्ता,-

- (क) उनके द्वारा उत्पन्न किए गए अपशिष्ट को पृथक्कृत और तीन पृथक शाखाओं अर्थात् जैव निम्नीकरणयोग्य, गैर निम्नीकरणयोग्य और घरेलू परिसंकटमय अपशिष्ट के तीन अलग-अलग डिब्बों में भंडारित करेगा और समय-समय पर स्थानीय प्राधिकरणों द्वारा निदेश या अधिसूचना के अनुसार पृथक किए गए अपशिष्टों को प्राधिकृत अपशिष्ट चुनने वालों या अपशिष्ट संग्रहकर्ताओं को सौंपेगा;
- (ख) प्रयोग किए गए स्वास्थ्यकर अपशिष्ट जैसे डायपरों और स्वास्थ्यकर पैडों आदि इन उत्पादों के निर्माताओं या ब्रांड स्वामियों द्वारा उपलब्ध कराई गई थैली में या स्थानीय प्राधिकारियों द्वारा यथा निर्देशित उपयुक्त लपेटन सामग्री में शुष्क अपशिष्ट या अजैविक निम्नीकरण अपशिष्ट के लिए बनाए गए डिब्बे में उसे डालेगा;
- (ग) संनिर्माण और विध्वंस अपशिष्ट को पृथक रूप से अपने ही परिसर में भंडारित करेगा, जब कभी वह उत्पन्न होता हो, और उसे संनिर्माण और विध्वंस अपशिष्ट नियम, 2016 के अनुसार निपटान करेगा; और
- (घ) अपने परिसर से उत्पन्न कृषि उद्यान अपशिष्ट और उद्यान अपशिष्ट को अपने ही परिसर में पृथक रूप से भंडारित करेगा और समय-समय पर स्थानीय निकाय द्वारा निदेशानुसार इसका निपटान करेगा;
- (2) कोई अपशिष्ट जनित्र उसके द्वारा उत्पन्न अपशिष्ट को गली, खुले सार्वजनिक स्थानों, नाली या जलाशयों में न फेंकेगा, न जलाएगा और न गाड़ेगा;
- (3) सभी अपशिष्ट उत्पन्नकर्ता ऐसी उपयोक्ता फीस का संदाय करेंगे जो ठोस अपशिष्ट प्रबंधन के लिए स्थानीय निकायों की उपविधियों में विनिर्दिष्ट किया जाए;
- (4) कोई व्यक्ति अग्रिम रूप से कम से कम तीन कार्य दिवस पूर्व स्थानीय निकाय को सूचित किए बिना किसी गैर अनुज्ञप्ति वाले स्थान पर एक सौ व्यक्तियों से अधिक का ऐसा कोई आयोजन या समारोह आयोजित नहीं करेगा। ऐसा व्यक्ति या ऐसे आयोजन का आयोजक स्रोत पर अपशिष्ट के पृथक्करण की व्यवस्था करेगा और पृथक्कृत अपशिष्ट को स्थानीय निकाय द्वारा अभिहित अपशिष्ट चुनने वाले को या अपशिष्ट संग्रहण अभिकरण को सौंपेगा;
- (5) प्रत्येक मार्ग विक्रेता अपने कार्यकलाप के दौरान उत्पन्न अपशिष्ट जैसेकि खाद्य अपशिष्ट प्रयोज्य (डिस्पोजेबल) प्लेटों, कपों, डिब्बों, रैपरों, नारियल के छिलकों, शेष बचे भोजन, सब्जियों, फलों आदि के लिए उपयुक्त पात्र रखेगा और ऐसे अपशिष्ट को स्थानीय प्राधिकरण द्वारा यथा अधिसूचित अपशिष्ट भंडारण डिपो या पात्र या वाहन में डालेगा;
- (6) इन नियमों के अधिसूचित होने की तारीख से एक वर्ष से अंदर सभी आवास कल्याण और बाजार संघ स्थानीय प्राधिकरण की भागीदारी में इन नियमों में यथा विहित जनित्रों द्वारा अपशिष्ट को स्रोत पर पृथक करने, पृथक किए गए अपशिष्ट को अलग-अलग पात्रों में संग्रहण करने में सहायता और पुनर्चक्रणीय सामग्री को प्राधिकृत अपशिष्ट उठाने वालों अथवा प्राधिकृत पुनर्चक्रकों को सौंपना सुनिश्चित करेंगे। जैव-अवक्रमणीय अपशिष्ट का जहां तक संभव होगा परिसर के अंदर संसाधित, उपचारित और कंपोस्ट करके अथवा बायोमिथानेशन के जरिए निपटान किया जाएगा। शेष अपशिष्ट स्थानीय प्राधिकरण द्वारा यथा निर्देशित अपशिष्ट संग्रहकर्ताओं या अभिकरण को दिया जाएगा;
- (7) इन नियमों के अधिसूचित होने की तारीख से एक वर्ष के अंदर 5,000 वर्ग मीटर से अधिक क्षेत्रफल वाले सभी गेट लगे समुदाय और संस्थान स्थानीय प्राधिकरण की भागीदारी में इन नियमों में यथा विहित जनित्रों द्वारा अपशिष्ट को स्रोत पर ही पृथक करना, पृथक किए गए अपशिष्ट को अलग-अलग पात्रों में संग्रहण करने में सहायता करना तथा पुनर्चक्रकों को सौंपना सुनिश्चित करेंगे। जैव अवक्रमणीय अपशिष्ट का जहां तक संभव होगा परिसर के अंदर संसाधित, उपचारित और कंपोस्ट करके अथवा बायोमिथानेशन के जरिए निपटान किया जाएगा। शेष अपशिष्ट स्थानीय प्राधिकरण द्वारा यथा निर्देशित अपशिष्ट संग्रहकर्ताओं या अभिकरण को सौंप दिया जाएगा;
- (8) इन नियमों के अधिसूचित होने की तारीख से एक वर्ष के अंदर सभी होटल और रेस्टोरेंट स्थानीय प्राधिकरण की भागीदारी में इन नियमों में यथा विहित जनित्रों द्वारा अपशिष्ट को स्रोत पर पृथक करना, पृथक किए गए अपशिष्ट को अलग-अलग पात्रों में संग्रह करने में सहायता करना तथा पुनर्चक्रणीय सामग्री को प्राधिकृत अपशिष्ट उठाने वालों अथवा प्राधिकृत

पुनर्चक्रकों को सौंपना सुनिश्चित करेंगे। जैव-अवक्रमणीय अपशिष्ट का जहां तक संभव होगा परिसर के अंदर संसाधित उपचारित और कंपोस्ट करके अथवा बायोमिथानेशन के जरिए निपटान किया जाएगा। शेष अपशिष्ट स्थानीय प्राधिकरण द्वारा यथा निर्देशित अपशिष्ट संग्रहकर्ताओं या अभिकरण को दिया जाएगा।

**5. पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय के कर्तव्य.-** (1) पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय देश में इन नियमों के अनुपालन की मॉनीटरी के लिए उत्तरदायी होगा। यह सचिव, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अध्यक्षता के अधीन केन्द्रीय मॉनीटरी समिति का गठन करेगा, जिसमें निम्नलिखित अधिकारी शामिल होंगे जो संयुक्त सचिव या सलाहकार की पंक्ति से निम्न के नहीं होंगे अर्थात् :

- (1) शहरी विकास मंत्रालय
- (2) ग्रामीण विकास मंत्रालय
- (3) रसायन एवं उर्वरक मंत्रालय
- (4) कृषि मंत्रालय
- (5) केन्द्रीय प्रदूषण नियंत्रण बोर्ड
- (6) तीन राज्य प्रदूषण नियंत्रण बोर्ड/प्रदूषण नियंत्रण समिति, चक्राणुक्रम द्वारा
- (7) तीन राज्य सरकारों के शहरी विकास विभाग, चक्राणुक्रम द्वारा
- (8) दो राज्य सरकारों के ग्रामीण विकास विभाग, चक्राणुक्रम द्वारा
- (9) तीन शहरी स्थानीय निकाय, चक्राणुक्रम द्वारा
- (10) दो जनगणना (सेंसस) शहर, चक्राणुक्रम द्वारा
- (11) एफआईसीसीआई, सीआईआई
- (12) दो विषय विशेषज्ञ

2. इस केन्द्रीय मानीटरी समिति की बैठक इन नियमों के अनुपालन का मॉनीटर करने और पुनर्विलोकन करने के लिए एक वर्ष में कम से कम एक बार होगी। पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय दो विशेषज्ञों को, यदि आवश्यक हो, सहयोजित कर सकेगा। समिति का प्रत्येक तीन वर्ष में नवीकरण किया जाएगा।

**6. शहरी विकास मंत्रालय के कर्तव्य.-** (1) शहरी विकास मंत्रालय राज्य सरकारों तथा संघ राज्य क्षेत्र के प्रशासनों के साथ निम्नलिखित के लिए समन्वय करेगा, -

(क) ठोस अपशिष्ट प्रबंधन व्यवहारों को सुधारने के लिए राज्यों तथा स्थानीय निकायों द्वारा किए गए उपायों तथा मंत्रालय और बाह्य अभिकरणों द्वारा वित्त पोषित ठोस अपशिष्ट प्रबंधन परियोजनाओं के निष्पादन का वर्ष में कम से कम एक बार आवधिक पुनर्विलोकन करेगा तथा सुधारात्मक उपाय करने पर सलाह देगा;

(ख) इन नियमों की अधिसूचना की तारीख से छह मास के भीतर पणधारियों के साथ परामर्श से ठोस अपशिष्ट प्रबंधन पर राष्ट्रीय नीति तथा रणनीति तैयार करना, जिसके अंतर्गत अपशिष्ट से ऊर्जा की नीति भी है;

(ग) राष्ट्रीय ठोस अपशिष्ट प्रबंधन नीति और राष्ट्रीय शहरी स्वच्छता नीति पर आधारित ठोस प्रबंध के संबंध में राज्य नीति और रणनीति को तैयार करने में राज्यों तथा संघ राज्य क्षेत्रों का मार्गदर्शन करना और उन्हें सुकर बनाना;

(घ) ठोस अपशिष्ट प्रबंध सेक्टर में अनुसंधान और विकास को प्रोत्साहन देना तथा राज्यों और स्थानीय निकायों के लिए सूचना का प्रसार करना;

(ङ) स्थानीय निकायों और अन्य पणधारियों को प्रशिक्षण देना और उनका क्षमता निर्माण करना; और

(च) समय सीमाओं और मानकों को सुकर बनाने के लिए ठोस अपशिष्ट प्रबंधन पर राज्यों, संघ राज्य क्षेत्रों और स्थानीय निकायों को तकनीकी मार्गदर्शी सिद्धांत तथा परियोजना वित्त प्रदान करना;

**7. उर्वरक विभाग, रसायन और उर्वरक मंत्रालय के कर्तव्य.-** (1) उर्वरक विभाग समुचित क्रियाविधि के माध्यम से, -

(क) नगर कम्पोस्ट के बाजार विकास में सहायता उपलब्ध कराएगा; और

(ख) कंपनियों को विपणन के लिए इस सीमा तक उपलब्ध कराना कि उर्वरक कंपनियों द्वारा 3 से 4 थैले: 6 से 7 थैले के अनुपात में रासायनिक उर्वरकों के साथ कम्पोस्ट के सह विपणन का संवर्धन सुनिश्चित हो।

**8. कृषि मंत्रालय, भारत सरकार के कर्तव्य :-** कृषि मंत्रालय समुचित तंत्र के माध्यम से:-

(क) कंपोस्ट के विनिर्माण एवं बिक्री के लिए उर्वरक नियंत्रण आदेश को लचीलापन प्रदान करेगा;

(ख) कृषि भूमि पर कंपोस्ट के उपयोग को बढ़ावा देगा;

(ग) स्थानीय प्राधिकारियों या उनकी प्राधिकृत एजेंसियों द्वारा उत्पादित कंपोस्ट की गुणता जांच के लिए प्रयोगशालाएं स्थापित करेगा;

(घ) कंपोस्ट की गुणता बनाए रखने और कृषि भूमि पर कंपोस्ट का उपयोग करते समय कंपोस्ट की तुलना में रासायनिक उर्वरकों के उपयोग के अनुपात के लिए समुचित मार्गदर्शक सिद्धांत जारी करेगा।

**9. विद्युत मंत्रालय के कर्तव्य.-** विद्युत मंत्रालय समुचित तंत्र के माध्यम से :- (क) ठोस अपशिष्ट पर आधारित अपशिष्ट से ऊर्जा पैदा करने वाले संयंत्रों से उत्पादित विद्युत के लिए टैरिफ या प्रभार निर्धारित करेगा;

(ख) ऐसे अपशिष्ट से उत्पन्न विद्युत की खरीद को वितरण कंपनियों द्वारा ऊर्जा संयंत्रों के लिए अनिवार्य बनाएगा।

**10. नवीन और नवीकरणीय ऊर्जा स्रोत मंत्रालय के कर्तव्य.-** नवीन और नवीकरणीय ऊर्जा स्रोत मंत्रालय समुचित तंत्र के माध्यम से :-

(क) अपशिष्ट से ऊर्जा पैदा करने वाले संयंत्रों के लिए अवसंरचना सृजन को सुविधाजनक बनाएगा; और

(ख) ऐसे अपशिष्ट से ऊर्जा पैदा करने वाले संयंत्रों के लिए समुचित सब्सिडी या प्रोत्साहन प्रदान करेगा।

**11. राज्यों और संघ राज्य क्षेत्रों में शहरी विकास के प्रभारी सचिव के कर्तव्य.-**

(1) राज्य या संघ राज्य क्षेत्र में सचिव, राज्य शहरी विकास विभाग म्युनिसिपल प्रशासन के आयुक्त या निदेशक या स्थानीय निकायों के निदेशक के माध्यम से निम्नलिखित सुनिश्चित करेगा :

(क) इन नियमों से सुसंगत अपशिष्ट प्रबंधन के क्षेत्र में अपशिष्ट चुनने वालों के प्रतिनिधियों, स्वयं सहायता समूह और समान समूहों सहित पणधारियों के परामर्श से राज्य या संघ राज्य क्षेत्र के लिए राज्य नीति और ठोस अपशिष्ट प्रबंधन रणनीति तैयार करना जो इन नियमों की अधिसूचना की तारीख से एक वर्ष की अवधि के भीतर शहरी विकास मंत्रालय को राष्ट्रीय ठोस अपशिष्ट प्रबंधन नीति और राष्ट्रीय शहरी स्वच्छता नीति से समरूप होगी;

(ख) ठोस अपशिष्ट प्रबंधन के संबंध में राज्य नीति और रणनीति तैयार करते समय भूमिभरण में जाने वाले अपशिष्ट का न्यूनीकरण को सुनिश्चित करने तथा राज्य नीति और ठोस अपशिष्ट प्रबंधन रणनीति में मानव स्वास्थ्य और पर्यावरण पर ठोस अपशिष्ट के प्रभाव को न्यूनीकृत करने के लिए ठोस अपशिष्ट के विभिन्न संघटकों के अपशिष्ट में कमी, पुनःउपयोग, पुनर्चक्रण, वसूली और अनुकूलतम उपयोग पर बल देगा;

(ग) राज्य नीतियों और रणनीतियों में कूड़ा चुनने वालों एवं अपशिष्ट संग्रहकर्ताओं और पुनर्चक्रण उद्योग के अनौपचारिक सेक्टर द्वारा अपशिष्ट को कम करने में निभाई गई महत्वपूर्ण भूमिका को स्वीकार किया जाना और अपशिष्ट प्रबंधन प्रणाली में अपशिष्ट चुनने वालों या अनौपचारिक अपशिष्ट संग्रहकर्ताओं के एकीकरण के बारे में विस्तृत मार्गदर्शक सिद्धांत उपलब्ध कराना;

(घ) सभी स्थानीय प्राधिकरणों द्वारा इन नियमों के उपबंधों के क्रियान्वयन को सुनिश्चित करना;

(ड.) राज्य के शहरी योजना विभाग को यह सुनिश्चित करने के लिए निदेश देना कि उन शहरों को छोड़कर जो साझा अपशिष्ट प्रसंस्करण सुविधा या शहरों के एक समूह के लिए क्षेत्रीय स्वच्छता भूमिभरण के सदस्य हैं, राज्य या संघ राज्य क्षेत्र में प्रत्येक शहर की मास्टर प्लान में ठोस अपशिष्ट प्रसंस्करण और निपटान सुविधाएं स्थापित करने के लिए प्रावधान हैं;

(च) ठोस अपशिष्ट के लिए प्रसंस्करण और निपटान सुविधाएं स्थापित करने के लिए एक वर्ष के अंदर स्थानीय निकायों के वास्ते उपयुक्त भूमि की पहचान और आवंटन सुनिश्चित करना और उन्हें महानगर एवं जिला योजना समितियों या नगर एवं ग्राम योजना विभाग के माध्यम से राज्य/शहरों की मास्टर योजना (भूमि उपयोग की योजना) में शामिल करना;

(छ) राज्य और स्थानीय निकायों के शहरी योजना विभाग को यह सुनिश्चित करने के लिए निदेश देना कि 200 से अधिक आवास वाले या 5,000 वर्ग मीटर से अधिक क्षेत्रफल के प्लॉट वाली गुप हाउसिंग या वाणिज्यिक, सांस्थानिक या अन्य गैर-आवासीय परिसर के लिए विकास योजना में ठोस अपशिष्ट के पृथक्करण, भंडारण, विकेंद्रित प्रसंस्करण के लिए एक अलग स्थल चिन्हित किया जाता है;

(ज) विशेष आर्थिक जोन, औद्योगिक संपदा, औद्योगिक पार्क के विकासकों को निदेश देना कि प्लॉट के कुल क्षेत्रफल का कम से कम 5 प्रतिशत प्लॉट या शैड वसूली या पुनर्चक्रण सुविधा के लिए आरक्षित करें;

(झ) लागत भागीदारी आधार पर क्षेत्रीय सुविधा से 50 कि. मी. (या अधिक) की दूरी के अन्तर्गत आने वाले शहरों और नगरों के समूह के साझा क्षेत्रीय स्वास्थ्यकर भूमिभरण की स्थापना को सुकर बनाना और ऐसे स्वास्थ्यकर भूमिकरणों के वृत्तिक प्रबंधन को सुनिश्चित करना;

(ञ) ठोस अपशिष्ट के प्रबंधन में शहरी स्थानीय निकायों के क्षमता निर्माण तथा स्रोत पर अपशिष्ट के पृथक्करण एवं परिवहन या प्रसंस्करण की व्यवस्था करना;

(ट) राज्य प्रदूषण नियंत्रण बोर्ड के साथ परामर्श करके 5 टन प्रतिदिन से अधिक के ठोस अपशिष्ट प्रसंस्करण और निपटान सुविधाओं के लिए बफर जोन अधिसूचित करना; और

(ठ) अपशिष्ट चुनने वालों और अपशिष्ट के व्यापारियों के पंजीकरण के संबंध में एक योजना शुरू करना ।

**12. जिला मजिस्ट्रेट या जिला कलक्टर या उपायुक्त के कर्तव्य.-** यथा स्थिति, जिला मजिस्ट्रेट या जिला कलक्टर या उपायुक्त,

(क) इन नियमों की अधिसूचना की तारीख से एक वर्ष के भीतर राज्य शहरी विकास विभाग के प्रभारी सचिव के निकट समन्वय से अपने जिले में स्थानीय निकायों को ठोस अपशिष्ट प्रसंस्करण तथा निपटान सुविधाओं की स्थापना करने के लिए नियम 11 के खंड (च) के अनुसार उपयुक्त भूमि की पहचान तथा आवंटन को सुकर बनाएगा;

(ख) अपशिष्ट के पृथक्करण, प्रसंस्करण, उपचार और निपटान पर एक तिमाही में कम से कम तीन मास में एक बार स्थानीय निकायों के अनुपालन का पुनर्विलोकन करेगा और निदेशक या नगरपालिका प्रशासन के आयुक्त या स्थानीय निकायों के निदेशक और राज्य शहरी विकास के प्रभारी सचिव के साथ परामर्श करके उपचारात्मक उपाय करेगा ।

**13. राज्य और संघ राज्य क्षेत्र में ग्राम पंचायत या ग्रामीण विकास विभाग के प्रभारी सचिव के कर्तव्य.-** (1) उन क्षेत्रों के लिए जो इन नियमों के अधीन आते हैं और उनके अधिकार क्षेत्र में हैं, राज्य और संघ राज्य क्षेत्र में ग्राम पंचायत या शहरी विकास विभाग के प्रभारी सचिव के कर्तव्य वहीं होंगे जो राज्य या संघ राज्य क्षेत्र में शहरी विकास के प्रभारी सचिव के हैं ।

**14. केन्द्रीय प्रदूषण नियंत्रण बोर्ड के कर्तव्य.-** केन्द्रीय प्रदूषण नियंत्रण बोर्ड -

(क) इन नियमों के कार्यान्वयन के लिए राज्य प्रदूषण नियंत्रण बोर्डों और प्रदूषण नियंत्रण समितियों के साथ समन्वय करेगा और स्थानीय निकायों द्वारा विहित मानकों का पालन करेगा;

(ख) सभी ठोस अपशिष्ट प्रसंस्करण और निपटान सुविधाओं की बाबत भूजल, परिवेशी वायु, ध्वनि प्रदूषण, निक्षालन के लिए मानक निश्चित करेगा;

- (ग) ठोस अपशिष्ट प्रसंस्करण सुविधाओं या उपचार प्रौद्योगिकियों के लिए विहित पर्यावरणीय मानकों और सन्नियमों का पुनर्विलोकन करना और जब कभी भी अपेक्षित हो, उनको अद्यतन करना;
- (घ) ठोस अपशिष्ट प्रसंस्करण सुविधाओं या उपचार प्रौद्योगिकियों के लिए विहित पर्यावरणीय मानकों के कार्यान्वयन को वर्ष में कम से कम एक बार राज्य प्रदूषण नियंत्रण बोर्डों/प्रदूषण नियंत्रण समितियों के माध्यम से पुनर्विलोकन और उनके द्वारा मॉनीटर किए गए आंकड़ों का संकलन करना;
- (ङ.) ठोस अपशिष्ट के प्रसंस्करण, पुनर्चक्रण और उपचार के लिए किसी नई प्रौद्योगिकी के प्रयोग पर राज्य प्रदूषण नियंत्रण बोर्डों या प्रदूषण नियंत्रण समितियों के प्रस्तावों का पुनर्विलोकन करना और छः माह के अंदर उनके लिए निष्पादन मानक, उत्सर्जन मानदंड विहित करना;
- (च) स्थानीय निकायों द्वारा इन नियमों के कार्यान्वयन को राज्य प्रदूषण नियंत्रण बोर्डों या प्रदूषण नियंत्रण समितियों के माध्यम से मॉनीटर करना;
- (छ) राज्य प्रदूषण नियंत्रण बोर्डों और समितियों से प्राप्त रिपोर्टों के आधार पर इन नियमों के कार्यान्वयन पर वार्षिक रिपोर्ट तैयार करना और उसे पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को प्रस्तुत करना तथा यह रिपोर्ट लोक अधिकार क्षेत्र में भी रखी जाएगी;
- (ज) प्रतिदिन 5 टन से अधिक ठोस अपशिष्ट का प्रबंधन करने वाली सुविधाओं के विभिन्न आकारों के लिए अपशिष्ट प्रसंस्करण और निपटान सुविधाओं की बाहरी सीमाओं से किसी आवासीय, वाणिज्यिक या किसी अन्य संनिर्माण संबंधी क्रियाकलाप को प्रतिबंधित करने वाले बफर जोन को बनाए रखने के लिए मार्गदर्शक सिद्धांतों को प्रकाशित करना;
- (झ) इन नियमों के प्रावधानों का अनुपालन करने के लिए ठोस अपशिष्ट के शहरी स्थानीय निकायों के समर्थ बनाने के लिए प्रसंस्करण और निपटान के पर्यावरणीय पहलुओं पर समय-समय पर मार्गदर्शक सिद्धांत प्रकाशित करना; और
- (ञ) अपशिष्ट के अंतरराज्यीय संचलन पर राज्यों या संघ राज्य क्षेत्रों को मार्गदर्शन प्रदान करना ।

**15. स्थानीय निकायों, और जनगणना नगरों की ग्राम पंचायतों तथा शहरी समूहों के कर्तव्य और उत्तरदायित्व.- (1)**  
स्थानीय निकाय और पंचायतें :-

- (क) राज्य नीति और रणनीति की अधिसूचना की तारीख से छह मास के भीतर ठोस अपशिष्ट प्रबंधन पर राज्य नीति और रणनीति के अनुसार ठोस अपशिष्ट प्रबंध योजना तैयार करना और उसकी एक प्रति राज्य सरकार या संघ राज्य प्रशासन द्वारा राज्य सरकार या संघ राज्य प्रशासन द्वारा प्राधिकृत अभिकरण से उसे अनुमोदित कराना;
- (ख) मलिन बस्तियों तथा अनौपचारिक बसावटों, वाणिज्यिक, संस्थागत और अन्य गैर आवासीय परिसरों सहित सभी घरों से पृथक्कृत ठोस अपशिष्ट का द्वार-द्वार के संग्रहण की व्यवस्था करना। बहु मंजिलों भवनों, बड़े वाणिज्यिक परिसरों, मॉलों, आवासीय परिसरों इत्यादि से अपशिष्ट का संग्रहण प्रवेश द्वार या किसी अन्य अभिहित स्थान किया जा सकता है;
- (ग) कूड़ा चुनने वालों/अनौपचारिक अपशिष्ट संग्रहकर्ताओं के संगठनों को मान्यता प्रदान करने की प्रणाली स्थापित करना और द्वार-द्वार जाकर अपशिष्ट संग्रह करने सहित ठोस अपशिष्ट के प्रबंधन में इनकी भागीदारी को सुकर बनाने के लिए इन प्राधिकृत चुनने वालों और अपशिष्ट संग्रहकर्ताओं के एकीकरण के लिए एक प्रणाली स्थापित करना;
- (घ) स्वयं सहायता समूह बनाने को सुकर बनाना, पहचान पत्र उपलब्ध कराना और तदुपरांत घर-घर जाकर अपशिष्ट संग्रह करने सहित ठोस अपशिष्ट प्रबंधन में एकीकरण को प्रोत्साहन देना;
- (ङ.) इन नियमों की अधिसूचना की तारीख से एक वर्ष के भीतर इन नियमों के उपबंधों को समाविष्ट करते हुए उपविधियां बनाना और समय पर कार्यान्वयन सुनिश्चित करना;

- (च) उपयोक्ता फीस, जो समुचित समझी जाए, समय-समय पर विहित करना और स्वयं या प्राधिकृत अभिकरण के माध्यम से ठोस अपशिष्ट उत्पन्नकर्ताओं से फीस का संग्रह करना;
- (छ) अपशिष्ट उत्पन्नकर्ताओं को निदेश देना कि कूड़ा करकट न फैलाएं अथवा कागज, पानी की बोतलें, पेय पदार्थों के केनों, टेट्रा पैक्स, फलों के छिलके, रैपर आदि या सड़क खुले सार्वजनिक स्थान, नालों अपशिष्ट निकायों पर न जलाए या कुंड में न फेंके या उनका निपटान न करें तथा इन नियमों के अधीन विहित किए गए अनुसार स्रोत अपशिष्ट को अलग-अलग करें और पृथक किए गए अपशिष्ट को स्थानीय निकाय द्वारा प्राधिकृत अपशिष्ट चुनने वालों या प्राधिकृत अपशिष्ट संग्रहकर्ता को सौंप दें;
- (ज) पुनर्चक्रणीय सामग्रियों छंटाई करने के लिए पर्याप्त स्थान के साथ सामग्री वसूली सुविधाएं या गौण भंडारण सुविधाएं स्थापित करना ताकि अनौपचारिक या प्राधिकृत अपशिष्ट चुनने वाले और अपशिष्ट संग्रह करने वाले अपशिष्ट में से पुनर्चक्रणीय सामग्रियों को अलग कर सकें या उत्पादन के स्रोत से या सामग्री वसूली सुविधाओं से कागज, प्लास्टिक, धातु, शीशा, कपड़ा आदि जैसे पृथक किए गए पुनर्चक्रणीय अपशिष्ट को संग्रह करने के लिए अपशिष्ट चुनने वालों और पुनर्चक्रकों को सुलभ मार्ग उपलब्ध कराना; जैव निम्नीकरण अपशिष्ट के भंडारण के लिए डिब्बे हरे रंग से मुद्रित होंगे, जो पुनर्चक्रण के अपशिष्ट के भंडारण के लिए सफेद रंग से मुद्रित होंगे और अन्य अपशिष्ट के भंडारण के लिए काले रंग से मुद्रित होंगे;
- (झ) घरेलू परिसंकटमय अपशिष्ट के लिए अपशिष्ट निक्षेपण केंद्रों की स्थापना करना और अपशिष्ट उत्पन्नकर्ताओं को निदेश देना कि घरेलू परिसंकटमय अपशिष्टों निक्षेपण परिसंकटमय अपशिष्ट निपटान सुविधा में उसके सुरक्षित निपटान के लिए इस केंद्र में करें। ऐसी सुविधा की स्थापना किसी शहर या नगर में इस ढंग से की जाएगी कि एक केंद्र की स्थापना बीस किलोमीटर क्षेत्रफल या उसके भाग के लिए हो जाए और इन केंद्रों में घरेलू परिसंकटमय अपशिष्ट प्राप्त करने के समय अधिसूचित होगा;
- (ञ) परिसंकटमय अपशिष्ट निपटान सुविधा तक घरेलू परिसंकटमय अपशिष्ट का सुरक्षित भंडारण और परिवहन सुनिश्चित करना या जो राज्य प्रदूषण नियंत्रण बोर्ड/प्रदूषण नियंत्रण समिति द्वारा निर्देश किया जाए;
- (ट) गली के सफाई कर्मचारियों को निदेश देना कि गली की सफाई से संग्रहीत पेड़ के पत्तों को न जलाएं तथा उन्हें अलग से भंडारण करे और स्थानीय निकाय द्वारा प्राधिकृत अपशिष्ट संग्रहकर्ता या अभिकरण को सौंपे;
- (ठ) अपशिष्ट चुनने वालों और अपशिष्ट संग्रहकर्ताओं को ठोस अपशिष्ट प्रबंधन का प्रशिक्षण देना;
- (ड) दिन-प्रतिदिन आधार पर बाजारों से सब्जियों, फलों, फूलों, मांस, कुक्कुट पालन और मछली बाजार से अपशिष्ट संग्रह करना और स्वास्थ्यकर स्थिति सुनिश्चित करने के लिए बाजारों में उचित स्थानों पर या बाजारों के आस-पास विकेन्द्रीकृत कंपोस्ट प्लांट या जैव मिथेनीकरण प्लांट की स्थापना को प्रोत्साहन देना;
- (ढ) जनसंख्या के घनत्व, वाणिज्यिक क्रियाकलाप और स्थानीय स्थिति पर निर्भर करते हुए दैनिक या वैकल्पिक दिवसों या सप्ताह में दो बार सड़कों, मार्गों, गलियों और उप-गलियों की सफाई के अपशिष्ट को पृथक रूप से संग्रह करना;
- (ण) सड़क की सफाई के कूड़े और सतही नालियों से निकाली गई गाद को जिन मामलों में इन अपशिष्टों का सीधा संग्रह करने के लिए परिवहन वाहन सुविधाजनक व्यवहार्य नहीं है, अस्थाई रूप से भंडारण करने के लिए आच्छादित गौण भंडारण सुविधा स्थापित करना। इस प्रकार संग्रह किए गए अपशिष्ट का संग्रह और निपटान स्थानीय निकाय द्वारा यथा निर्धारित नियमित अंतराल पर किया जाएगा;
- (त) बागवानी, उद्यानों और बगीचों के अपशिष्ट को पृथक रूप से संग्रह करना और जहां तक संभव हो उसका प्रसंस्करण पार्को और बगीचों में करना;
- (थ) पृथक किए गए जैव निम्नीकरणीय अपशिष्ट का परिवहन प्रसंस्करण सुविधाओं जैसे कंपोस्ट प्लांट, जैव मिथेनीकरण संयंत्र या ऐसी कोई सुविधा तक करना। ऐसे अपशिष्ट के स्थल पर प्रसंस्करण को अधिमान्यता दी जानी चाहिए;

(द) क्रमवर्ती प्रसंस्करण सुविधा या सामग्री पुनःप्राप्ति सुविधाओं या द्वितीयक भंडारण सुविधा को गैर जैव निम्नीकरणीय अपशिष्ट को परिवहन करना;

(ध) निर्माण और विध्वंस अपशिष्ट का परिवहन समय-समय पर यथासंशोधित निर्माण और विध्वंस अपशिष्ट प्रबंधन नियम, 2016 के उपबंधों के अनुसार करना;

(न) समुदाय सुविधा के आस-पास दुर्गंध के नियंत्रण और स्वास्थ्य रक्षक स्थितियों के अनुरक्षण के अध्यक्षीन समुदाय स्तर पर घरेलू कंपोस्टिंग, बायोगैस उत्पादन, अपशिष्ट के विकेंद्रित प्रसंस्करण में समुदायों को अंतर्वलित करना;

(प) दो वर्षों के भीतर रासायनिक खाद के उपयोग को चरणबद्ध रूप से समाप्त करना और स्थानीय निकायों द्वारा अनुरक्षित सभी उद्यानों, बगीचों में कंपोस्ट का प्रयोग करना और जहां कहीं संभव हो इसके अधिकारिता के अधीन अन्य स्थानों पर भी ऐसा करना अनौपचारिक अपशिष्ट पुनर्चक्रण क्षेत्र द्वारा की जाने वाली पुनर्चक्रण पहलों को प्रोत्साहन उपलब्ध कराए जा सकते हैं;

(फ) उपयुक्त प्रौद्योगिकी जिसके अंतर्गत निम्नलिखित प्रौद्योगिकियां भी हैं, को अंगीकृत करते हुए और समय-समय पर शहरी विकास मंत्रालय द्वारा समय-समय पर जारी मार्गदर्शी सिद्धांतों और केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी दिशानिर्देशों का पालन करते हुए ठोस अपशिष्ट के विभिन्न अवयवों के उचित उपयोग के लिए स्वयं या निजी क्षेत्र के सहभागी या किसी अभिकरण के माध्यम से ठोस अपशिष्ट प्रसंस्करण सुविधाओं और संबंधित अवसंरचना के संनिर्माण, प्रचालन और अनुरक्षण को सुकर बनाना: परिवहन लागत और पर्यावरणीय आघात को न्यूनतम करने के लिए विकेन्द्रीयकृत प्रसंस्करण को अधिमान्यता देना जैसे-.

(क) जैव-मिथैनिकरण, सूक्ष्म जैविक कंपोस्टिंग, वर्मी कंपोस्टिंग, अनारोबिक डार्इजेशन या जैव निम्नकरणीय-अपशिष्टों के जैव स्थिरीकरण के लिए कोई अन्य समुचित प्रसंस्करण;

(ख) अपशिष्ट के दहनशील भाग के लिए अवशिष्ट जनित ईंधन सहित अपशिष्ट से ऊर्जा प्रक्रियाएं या अपशिष्ट आधारित विद्युत प्लांटों या सीमेंट भट्टियों को फीड स्टॉक के रूप में आपूर्ति;

(ब) इन नियमों के अधीन विहित रीति से अवशेष अपशिष्टों के निपटान के लिए अनुसूची-1 के अनुसार स्वास्थ्यकर भरण स्थलों और आनुषंगिक अवसंरचना का निर्माण, प्रचालन और अनुरक्षण स्वयं या किसी अन्य अभिकरण के माध्यम से करना;

(भ) वार्षिक बजट में पूंजी निवेश के साथ-साथ ठोस अपशिष्ट प्रबंधन सेवाओं के प्रचालन और अनुरक्षण के लिए निधियों का पर्याप्त उपबंध करना और यह सुनिश्चित करना कि स्थानीय निकाय के वैवेकिक कृत्यों के लिए निधियां ठोस अपशिष्ट प्रबंधन तथा इन नियमों के अनुसार स्थानीय निकाय के अन्य बाध्यकारी कृत्यों के लिए आवश्यक निधियों की अपेक्षा पूर्ण करने के पश्चात् की आबंटित की जाएं;

(म) प्ररूप-1 में अपशिष्ट प्रसंस्करण, शोधन या निस्तारण सुविधा स्थापित करने के लिए प्राधिकार अनुदत्त करने के लिए आवेदन करना जिसके अंतर्गत यथास्थिति राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति से स्वास्थ्यकर भरण स्थल सहित प्रतिदिन 5 मीट्रिक टन से अधिक अपशिष्ट हो;

(य) प्राधिकार की विधिमान्यता समाप्त होने से कम से कम साठ दिन पूर्व प्राधिकार के नवीकरण के लिए आवेदन करना;

(यक) उत्तरवर्ती वर्ष के 30 अप्रैल या उसके पूर्व आयुक्त या निदेशक, नगरपालिका प्रशासन को या प्राधिकृत अधिकारी को प्ररूप-4 में वार्षिक रिपोर्ट तैयार और प्रस्तुत करना;

(यख) वार्षिक रिपोर्ट प्रत्येक वर्ष के 31 मई तक शहरी विकास विभाग के प्रभारी सचिव या ग्राम पंचायत या ग्रामीण विकास विभाग और संबंधित राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति को भेजी जाएगी;

(यग) कार्मिकों जिसके अंतर्गत संविदा कार्मिकों और पर्यवेक्षकों भी हैं, को पृथक किए गए अपशिष्ट के द्वार-द्वार से संग्रहण के लिए और प्रसंस्करण या निपटान सुविधा को प्राथमिक और द्वितीयक परिवहन के दौरान अमिश्रित अपशिष्ट के संबंध में प्रशिक्षण;

(यघ) यह सुनिश्चित करना कि प्रसुविधा का प्रचालक व्यक्तिगत सुरक्षा उपकरण अर्थात् वर्दी, प्रदीप्त जैकट, हाथ के दस्ताने, बरसाती, समुचित जूते और मास्क ठोस अपशिष्ट के प्रहस्तन में लगे सभी कार्मिकों को उपलब्ध कराए और कार्यबल द्वारा इनका उपयोग सुनिश्चित किया जाए;

(यड.) किसी ग्रुप हाउसिंग सोसाइटी या मार्केट काम्पलैक्स की निर्माण योजना के अनुमोदन से पूर्व सुनिश्चित करने की भवन योजना में पृथक किए गए अपशिष्टों के संग्रहण, पृथक्करण और भंडारण के लिए अपशिष्ट संग्रहण केन्द्र स्थापित किया जाना सुनिश्चित किया जाए;

(यच) कचरा फैलाने वाले या इन नियमों के उपबंधों का अनुपालन करने में असफल रहने वाले व्यक्तियों के लिए स्थल ही जुर्माना लगाने के लिए उपविधि बनाना और मापदंड विहित करना तथा बनाई गई उपविधियों के अनुसार स्थल पर ही जुर्माना लगाने की शक्तियां उचित अधिकारियों या स्थानीय निकायों को प्रत्यायोजित करना; और

(यछ) सूचना, शिक्षण और संचार अभियान के माध्यम से लोक जागरूकता का सृजन करना और निम्नलिखित के संबंध में अपशिष्ट उत्पन्न करने वालों को जानकारी देना;

- i. कचरा न फैलाना;
- ii. कम अपशिष्ट उत्पन्न करना;
- iii. संभव सीमा तक अपशिष्ट का पुनःउपयोग;
- iv. अपशिष्ट का जैव निम्नीकरणीय, गैर-जैव निम्नीकरणीय (पुनर्चक्रण योग्य तथा दहनयोग्य), स्वास्थ्यकर अपशिष्ट और घरेलू परिसंकटमय अपशिष्ट के रूप में स्रोत पर पृथक्करण;
- v. घरेलू कंपोस्टिंग, वर्मिन कंपोस्टिंग, बायोगैस उत्पादन या समुदाय स्तरीय कंपोस्टिंग/बायोगैस उत्पादन का व्यवहार करना;
- vi. उपयोग हुए प्रसाधन अपशिष्ट को ब्रांड स्वामियों द्वारा उपलब्ध कराए गए पाउचों या स्थानीय निकाय द्वारा विहित उपयुक्त लपेटने वाली सामग्री में लपेटना और इसे गैर जैव निम्नीकरणीय अपशिष्ट के लिए रखे गए डिब्बों में डालना;
- vii. स्रोत पर पृथक्कृत अपशिष्टों का अलग-अलग डिब्बों में भंडारण करना;
- viii. अपशिष्ट चुनने वालों, अपशिष्ट संग्राहकों, पुनःचक्रणकर्ताओं या अपशिष्ट संग्रहण अभिकरणों को पृथक्कृत अपशिष्ट सौंपना; और
- ix. अपशिष्ट एकत्र करने वालों या स्थानीय निकायों या स्थानीय निकाय द्वारा प्राधिकृत किसी अन्य व्यक्ति को ठोस अपशिष्ट प्रबंधन के लिए मासिक उपयोक्ता फीस या प्रभार का संदाय करना।

(यज) स्वास्थ्यकर स्थल की स्थापना और प्रचालन के लिए नियम 23 में यथाविनिर्दिष्ट समय सीमा के समाप्त होने के तुरंत पश्चात् मिश्रित अपशिष्ट से भरण स्थल को भरना या एकत्र करना बंद किया जाए;

(यझ) अपशिष्ट प्रसंस्करण सुविधाओं से केवल अप्रयोजनीय, गैर-पुनर्चक्रणयोग्य, गैर-जैवनिम्नीकरणीय, गैर-दहनशील और गैर-सक्रिय अपशिष्ट और पूर्व प्रसंस्करण अपशिष्टों तथा अवशिष्टों को ही स्वास्थ्यकर भरण स्थल पर जाने देने की अनुमति दी जाए और स्वास्थ्यकर भरण स्थलों द्वारा अनुसूची 1 में दी गई विशिष्टियों का अनुपालन किया जाएगा। तथापि, अवशिष्टों का यथासंभव पुनर्चक्रण या पुनःप्रयोग किए जाने के प्रयास किए जाने चाहिए ताकि भरण स्थल तक शून्य अपशिष्ट जाने के अपेक्षित लक्ष्य की प्राप्ति हो सके;

(यञ) सभी पुराने खुले मलबा स्थलों तथा विद्यमान प्रचालनरत मलबा स्थलों के जैव-खनन तथा जैव-उपचार की संभाव्यता के लिए जांच और विश्लेषण करना और जहां कहीं व्यवहार्य हो स्थलों के जैव-खनन या जैव-उपचार हेतु आवश्यक कार्रवाई करना;

(यट) मलबा स्थल के जैव-खनन और जैव-उपचार की संभाव्यता न होने की स्थिति में पर्यावरण को होने वाली क्षति को रोकने के लिए इसे भरण स्थल कैपिंग मानकों के अनुसार वैज्ञानिक रूप से आच्छादित जाएगा।

**16. राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति के कर्तव्य.-** (1) राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति द्वारा -

(क) अपनी-अपनी अधिकारिता में स्थानीय निकायों के माध्यम से राज्य में इन नियमों का प्रवर्तन किया जाएगा तथा संबंधित नगरपालिका प्रशासन निदेशालय या राज्य शहरी विकास विभाग के प्रभारी सचिव के निकट समन्वय से वर्ष में कम से कम दो बार इन नियमों के क्रियान्वयन की समीक्षा की जाएगी;

(ख) अपशिष्ट प्रसंस्करण और निस्तारण स्थलों के लिए अनुसूची I और अनुसूची II के अधीन यथा विनिर्दिष्ट पर्यावरणीय मानकों को मॉनीटर करना तथा शर्तों का पालन करना;

(ग) स्थानीय निकाय या स्थानीय निकाय द्वारा प्राधिकृत किसी अन्य अभिकरण से प्ररूप 1 में आवेदन की प्राप्ति के पश्चात् प्रस्ताव का परीक्षण करना और ऐसी जांच करना जो उचित समझा जाए;

(घ) प्राधिकार के प्रस्ताव की जांच करते समय, संबंधित अधिनियमितियों के अधीन सहमति की अपेक्षा और अन्य अभिकरणों जैसे राज्य शहरी विकास विभाग, नगर और ग्राम योजना विभाग, जिला योजना समिति या महानगरीय क्षेत्र योजना समिति, जैसा लागू हो, विमानपत्तन या एयरवेस प्राधिकरण, भू-जल बोर्ड, रेलवे, विद्युत वितरण कंपनियां, राजमार्ग विभाग और अन्य संबंधित अभिकरणों के विचारों को ध्यान में रखा जाएगा और उन्हें अपने विचार, यदि कोई हों, देने के लिए चार सप्ताह का समय दिया जाएगा;

(ङ.) स्थानीय निकाय या किसी सुविधा प्रचालक या स्थानीय प्राधिकरण द्वारा प्राधिकृत किसी अन्य अभिकरण को प्ररूप 2 में साठ दिन की अवधि के भीतर प्राधिकार जारी करना जिसमें यथाआवश्यक अन्य शर्तों सहित अनुसूची 1 और 2 में यथाविनिर्दिष्ट अनुपालन मापदंड और पर्यावरण मानक अधिकथित हों;

(च) ऐसे प्राधिकार की विधिमान्यता सहमतियों की विधिमान्यता के साथ समकालिक होगी;

(छ) यदि स्थानीय प्राधिकरण या सुविधा प्रचालक सुविधा का प्रचालन विहित शर्तों के अनुसार करने में असफल रहता है तो राज्य प्रदूषण नियंत्रण बोर्ड द्वारा खंड (क) के अधीन जारी उक्त प्राधिकार को निलंबित या रद्द किया जा सकेगा;

परंतु यथास्थिति, स्थानीय निकाय या प्रचालक को सूचना दिए बिना ऐसा कोई प्राधिकार निलंबित या रद्द नहीं किया जाएगा; और

(ज) नवीकरण के लिए आवेदन की प्राप्ति पर, प्रत्येक आवेदन को गुणागुण के आधार पर परीक्षा करने के पश्चात् और इस शर्त के अधीन रहते हुए कि सुविधा के प्रचालन में नियमों के सभी उपबंधों, प्राधिकार, सहमति या पर्यावरण अनापत्ति में विनिर्दिष्ट मानकों या शर्तों को पूर्ण कर दिया है, अगले पांच वर्षों के लिए प्राधिकार का नवीकरण करेगा;

(2) राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति आवेदक को सुने जाने का युक्तियुक्त अवसर देने के पश्चात् और लिखित में कारणों को लेखबद्ध करने के पश्चात् प्राधिकार अनुदत्त करने या नवीकरण करने से इंकार कर सकेगा।

(3) नई प्रौद्योगिकियों के मामले में, जहां यथास्थिति, केन्द्रीय प्रदूषण नियंत्रण बोर्ड, राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति द्वारा कोई मानक विहित नहीं किया गया है, मानक विनिर्दिष्ट करने के लिए केन्द्रीय प्रदूषण नियंत्रण बोर्ड से निवेदन करेगा।

(4) यथास्थिति, राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति जब कभी उचित समझा जाए किन्तु वर्ष में कम से कम एक बार, यथाअभिहित या अधिकथित मानकों तथा यथाअनुमोदित उपचार प्रौद्योगिकी तथा प्राधिकार में निर्दिष्ट शर्तों और इन नियमों के अधीन अनुसूची-1 और अनुसूची-2 में विनिर्दिष्ट मानकों का अनुपालन मॉनीटर करेगा।

(5) राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति परिसंकटमय अपशिष्ट भंडारण सुविधाओं में अपशिष्ट उत्पादकों द्वारा एकत्रित घरेलू परिसंकटमय अपशिष्ट के सुरक्षित प्रहस्तन और निस्तारण के लिए स्थानीय निकायों को निदेश देगा।

(6) राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति द्वारा अपशिष्ट के अंतर राज्य प्रचालन को विनियमित किया जाएगा।

**17. निपटानयोग्य उत्पादों तथा स्वास्थ्यकर नैपकिनों और डायपरों के विनिर्माताओं या ब्रांड स्वामियों के कर्तव्य.-** (1) निपटान योग्य उत्पादों जैसे टिन, कांच, प्लास्टिक पैकेजिंग इत्यादि के सभी निर्माता या ऐसे उत्पादों को बाजार में लाने वाले ब्रांड स्वामी अपशिष्ट प्रबंधन प्रणाली की स्थापना के लिए स्थानीय निकायों को आवश्यक वित्तीय सहायता उपलब्ध कराएंगे।

(2) गैर जैव-निम्नीकरणीय पैकेजिंग सामग्री में अपने उत्पादों की बिक्री या विपणन करने वाले ऐसे सभी ब्रांड स्वामी उनके उत्पाद के कारण उत्पन्न हुए पैकेजिंग अपशिष्ट को वापस ग्रहण करने के लिए प्रणाली की व्यवस्था करेंगे।

(3) स्वास्थ्यकर नैपकिनों तथा डायपरों के विनिर्माताओं या ब्रांड स्वामियों या विपणन कंपनियों द्वारा अपने उत्पादों में सभी पुनर्चक्रणयोग्य सामग्रियों के प्रयोग की संभाव्यता का पता लगाएंगे या अपने स्वास्थ्यकर उत्पादों के पैकेट के साथ प्रत्येक नैपकिन या डायपर के निस्तारण के लिए एक पाउच या रैपर उपलब्ध कराएंगे।

(4) ऐसे सभी विनिर्माताओं, ब्रांड स्वामियों या विपणन कंपनियों द्वारा अपने उत्पादों को लपेटने और उनका निस्तारण करने के संबंध में लोगों को जानकारी दी जाएगी।

**18. कचरा व्युत्पन्न ईंधन से सौ कि.मी. के अंदर अवस्थित औद्योगिक इकाइयों और ठोस अपशिष्ट आधारित ऊर्जा संयंत्रों के कर्तव्य.-** ईंधन का प्रयोग करने वाली और ठोस अपशिष्ट आधारित कचरा व्युत्पन्न ईंधन संयंत्र से सौ कि.मी. के भीतर अवस्थित सभी औद्योगिक इकाइयां इस प्रकार उत्पन्न कचरा व्युत्पन्न ईंधन द्वारा अपनी ईंधन अपेक्षा के कम से कम 5 प्रतिशत का प्रतिस्थापन करने के लिए इन नियमों की अधिसूचना की तारीख से छह मास के भीतर व्यवस्था करेंगे।

**19. ठोस अपशिष्ट प्रसंस्करण और शोधन सुविधा की स्थापना के लिए मानदंड.-** (1) भूमि समनुदेशन कार्य आबंटन विभाग ठोस अपशिष्ट प्रसंस्करण और शोधन सुविधाओं की स्थापना के लिए उपयुक्त भूमि उपलब्ध कराने और राज्य सरकार या संघ राज्य क्षेत्र प्रशासन से ऐसे स्थलों को अधिसूचित करने के लिए उत्तरदायी होंगे।

(2) सुविधा का प्रचालक समय-समय पर इस संबंध में केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी तकनीकी मार्गदर्शी सिद्धांतों और शहरी विकास मंत्रालय द्वारा तैयार किए गए ठोस अपशिष्ट प्रबंधन संबंधी मैनुअल के अनुसार सुविधा का डिजाइन करेगा और इसकी स्थापना करेगा।

(3) सुविधा के प्रचालक द्वारा राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति से आवश्यक अनुमोदन प्राप्त किया जाएगा।

(4) राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति द्वारा ठोस अपशिष्ट प्रसंस्करण और शोधन सुविधाओं के प्रचालन के पर्यावरण मानकों की मॉनीटरिंग की जाएगी।

(5) सुविधा के प्रचालक का उत्तरदायित्व समय-समय पर केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी मार्गदर्शी सिद्धांतों और समय-समय पर शहरी विकास मंत्रालय द्वारा प्रकाशित नगरीय ठोस अपशिष्ट प्रबंधन संबंधी मैनुअल के अनुसार ठोस अपशिष्ट प्रसंस्करण और शोधन सुविधाओं के पर्यावरण के दृष्टि से अनुकूल प्रचालन की होगी।

(6) ठोस अपशिष्ट प्रसंस्करण और शोधन सुविधा के प्रचालक द्वारा राज्य प्रदूषण नियंत्रण बोर्ड/प्रदूषण नियंत्रण समिति और स्थानीय प्राधिकरण को प्रत्येक वर्ष 30 अप्रैल तक प्ररूप 3 में वार्षिक रिपोर्ट प्रस्तुत करेगा।

**20. पर्वतीय क्षेत्रों में ठोस अपशिष्ट प्रबंधन के मानदंड और की जाने वाली कार्रवाईयां.-** पर्वतीय क्षेत्रों में स्थानीय प्राधिकरणों के कर्तव्य और दायित्व निम्नलिखित अतिरिक्त खंडों के सहित नियम 15 में उल्लिखित के समान होंगे :

(क) पर्वत पर भरण स्थल के संनिर्माण से बचना होगा। प्रसंस्करण सुविधा से अवशिष्ट अपशिष्ट और निष्क्रिय अपशिष्ट का संग्रहण करने के लिए एक उपयुक्त निकटतम अवस्थान पर एक अंतरण स्थान स्थापित किया जाएगा। स्वास्थ्यकर भरण की स्थापना करने के लिए 25 किलोमीटर के भीतर पहाड़ी के नीचे समतल भूमि क्षेत्र में योग्य भूमि का पहचान की जाएगी। अंतरण स्थान से अवशिष्ट अपशिष्ट का निपटान इस स्वास्थ्यकर भरण स्थल पर किया जाएगा।

(ख) ऐसी भूमि उपलब्ध न होने पर की दशा में निष्क्रिय और अवशिष्ट अपशिष्ट के लिए क्षेत्रीय स्वास्थ्यकर भरण स्थल स्थापित करने के प्रयास किए जाएंगे।

(ग) स्थानीय निकाय उपविधि बनाएगा और नागरिकों को गलियों में अपशिष्ट फैकने से प्रतिषिद्ध करने तथा पर्यटकों को गलियों में या पहाड़ियों से नीचे न फैकने किसी अपशिष्ट जैसे कागज, पानी की बोतल, शराब की बोतल, सॉफ्ट ड्रिंक के केन, टेट्रा पैक, अन्य कोई प्लास्टिक या कागज अपशिष्ट के स्थान पर सभी पर्यटक स्थलों पर स्थानीय निकाय द्वारा रखे गए कूड़ेदान में फैकने के निर्देश देना।

(घ) स्थानीय निकाय द्वारा, पर्वतीय क्षेत्रों का भ्रमण करने वाले सभी पर्यटकों को उपविधियों के अधीन ठोस अपशिष्ट प्रबंधन के उपबंधों को नगर में प्रवेश बिंदु के साथ-साथ होटलों तथा अतिथि गृहों इत्यादि के माध्यम से, जहां वे ठहरते हैं और पर्यटन स्थलों पर उपयुक्त विज्ञापन बोर्ड लगाकर, व्यवस्था करेगा।

(ङ.) स्थानीय निकाय ठोस अपशिष्ट प्रबंधन सेवाएं संवहनीय बनाने को प्रवेश द्वार पर पर्यटक से ठोस प्रबंधन प्रभार उदगृहीत कर सकेगा।

(च) भूमि समनुदेशन का प्रभारी विभाग विकेन्द्रीकृत अपशिष्ट प्रसंस्करण सुविधाओं की स्थापना के लिए पर्वतों पर उपयुक्त स्थल की पहचान और आबंटन करेगा। स्थानीय निकाय द्वारा ऐसी सुविधाएं स्थापित की जाएंगी। पर्वतीय स्थान का अनुकूलतम उपयोग करने के लिए सीढ़ी उद्यान प्रणाली को अपनाया जा सकेगा।

**21. अपशिष्ट से उर्जा प्रसंस्करण के लिए मानदंड -** (1) 1500 कि./कैल./कि.ग्रा. या अधिक के कैलोरिफिक मान रखने वाले गैर पुनःचक्रण अपशिष्टों को भरण स्थलों में निस्तारित नहीं किया जाएगा और उनका उपयोग या तो केवल व्युत्पन्न ईंधन

अवशेष के माध्यम से या अवशेष व्युत्पन्न ईंधन तैयार करने के लिए फीड स्टॉक के रूप में देकर या ऊर्जा का उत्पादन करने के लिए ही किया जाएगा।

- (2) उच्च कैलोरिफिक अपशिष्टों का उपयोग सीमेंट या ताप विद्युत संयंत्रों में सह-प्रसंस्करण के लिए किया जाएगा।
- (3) स्थानीय निकाय या सुविधा का प्रचालक या उनके द्वारा नामनिर्दिष्ट अभिकरण जो पांच टन प्रतिदिन से अधिक प्रसंस्करण क्षमता वाली सुविधा के अपशिष्ट के ऊर्जा संयंत्र की स्थापना करना चाहते हों, वे यथास्थिति, राज्य प्रदूषण नियंत्रक बोर्ड या प्रदूषण नियंत्रण समिति को प्राधिकार के लिए प्ररूप-1 में आवेदन प्रस्तुत करेंगे।
- (4) अपशिष्ट से ऊर्जा सुविधा की स्थापना करने के लिए ऐसे आवेदनों की प्राप्ति पर राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति उसका परीक्षण करेगा और साठ दिनों के अंदर अनुमति प्रदान करेगा।

**22. क्रियान्वयन की समय-सीमा** - इन नियमों के क्रियान्वयन के लिए आवश्यक अवसंरचना यथास्थिति, स्थानीय निकायों और अन्य संबंधित प्राधिकरणों द्वारा प्रत्यक्ष तथा स्वयं या नियोजित अभिकरणों द्वारा निम्नलिखित विनिर्दिष्ट समय-सीमा में सृजित की जाएंगी :

क्रम सं.	क्रियाकलाप	नियमों की अधिसूचना की तारीख से समय-सीमा
(1)	ठोस अपशिष्ट प्रसंस्करण सुविधा को स्थापित करने के लिए उपयुक्त स्थलों की पहचान करना	1 वर्ष
(2)	0.5 करोड़ जनसंख्या से कम के स्थानीय निकायों के योग्य उपयुक्त समूह के लिए साझा क्षेत्रीय स्वास्थ्यकर भरण सुविधा को स्थापित करने के लिए और 0.5 करोड़ या अधिक की जनसंख्या वाले सभी स्थानीय प्राधिकरणों द्वारा साझा क्षेत्रीय स्वास्थ्यकर भरण स्थल सुविधाओं या एकल भरण सुविधाओं की स्थापना करने के लिए उपयुक्त स्थलों की पहचान।	1 वर्ष
(3)	ठोस अपशिष्ट प्रसंस्करण सुविधा और स्वास्थ्यकर भरण स्थल सुविधाओं के लिए उपयुक्त स्थलों का उपापन।	2 वर्ष
(4)	जैव निम्नीकरणीय, पुनःचक्रण योग्य, दहन योग्य, स्वास्थ्यकर अपशिष्ट, घरेलू परिसंकटमय तथा निष्क्रिय ठोस अपशिष्टों का स्रोत पर पृथक्करण के लिए चलन के लिए अपशिष्ट उत्पन्नकर्ताओं को बाध्य करना।	2 वर्ष
(5)	पृथक्कृत अपशिष्ट घर-घर से एकत्र करके और प्रसंस्करण या निपटान सुविधाओं का परिवहन आच्छादित वाहनों में सुनिश्चित करना।	2 वर्ष
(6)	संनिर्माण तथा विध्वंस अपशिष्टों का अलग-अलग भंडारण, संग्रहण और परिवहन सुनिश्चित करना।	2 वर्ष
(7)	100000 से अधिक जनसंख्या वाले सभी स्थानीय निकायों द्वारा ठोस अपशिष्ट प्रसंस्करण सुविधाओं की स्थापना करना।	2 वर्ष
(8)	100000 से कम जनसंख्या वाले स्थानीय निकायों और नगरों द्वारा ठोस अपशिष्ट प्रसंस्करण सुविधाओं की स्थापना करना।	3 वर्ष
(9)	इन नियमों के अधीन यथा अनुज्ञात प्रसंस्करण सुविधाओं से केवल ऐसे अपशिष्ट अपशिष्टों के साथ-साथ अशोधित निष्क्रिय अपशिष्ट के निपटान के	3 वर्ष

	लिए 0.5 करोड़ या उससे अधिक की जनसंख्या वाले सभी स्थानीय निकायों द्वारा या के लिए सम्मिलित या एकल भरण की स्थापना।	
(10)	इन नियमों के अधीन अनुज्ञात अपशिष्ट के निपटान के लिए 0.5 करोड़ से कम के अधीन सभी स्थानीय निकायों और जनसंख्या नगरों द्वारा सम्मिलित या क्षेत्रीय भरण स्थलों की स्थापना।	3 वर्ष
(11)	पुराने या परित्यक्त कूड़ा स्थलों का जैविक उपचार करना या उन्हें ढकना।	5 वर्ष

**23. राज्य स्तरीय सलाहकार निकाय.-** (1) संबंधित राज्य सरकार या संघ राज्य क्षेत्र प्रशासन के स्थानीय निकायों का प्रत्येक विभाग प्रभारी इन नियमों की अधिसूचना की तारीख से छह मास के भीतर एक राज्य स्तरीय सलाहकार समिति का गठन करेगा जिसमें निम्नलिखित सदस्य शामिल होंगे:-

क्रम संख्या	पदनाम	सदस्य
(1)	(2)	(3)
1.	राज्य के शहरी विकास विभाग/स्थानीय स्वशासन विभाग के सचिव	अध्यक्ष, पदेन
2.	राज्य सरकार के पंचायत या ग्रामीण विकास विभाग का संयुक्त सचिव से अन्यून पंक्ति का एक प्रतिनिधि	सदस्य, पदेन
3.	राज्य सरकार के राजस्व विभाग का एक प्रतिनिधि	सदस्य, पदेन
4.	पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार का एक प्रतिनिधि	सदस्य, पदेन
5.	शहरी विकास मंत्रालय, भारत सरकार का एक प्रतिनिधि	सदस्य, पदेन
6.	ग्रामीण विकास मंत्रालय, भारत सरकार का एक प्रतिनिधि	सदस्य, पदेन
7.	केंद्रीय प्रदूषण नियंत्रण बोर्ड का एक प्रतिनिधि	सदस्य, पदेन
8.	राज्य प्रदूषण नियंत्रण बोर्ड .या प्रदूषण नियंत्रण समिति का एक प्रतिनिधि	सदस्य, पदेन
9.	भारतीय प्रौद्योगिकी संस्थान या राष्ट्रीय प्रौद्योगिकी संस्थान का एक प्रतिनिधि	सदस्य, पदेन
10.	राज्य का मुख्य नगर नियोजक	सदस्य
11.	स्थानीय निकायों के चक्रानुक्रम द्वारा तीन प्रतिनिधि,	सदस्य
12.	जनगणना नगरों/शहरी समुदायों के दो प्रतिनिधि	सदस्य
13.	अपशिष्ट चुनने वालों/अनौपचारिक पुनर्चक्रणकर्ता या ठोस अपशिष्ट प्रबंधन के लिए काम करने वाले विख्यात गैर सरकारी संगठन या सिविल सोसायटी का एक प्रतिनिधि	सदस्य

14.	राज्य या केन्द्रीय स्तर पर उद्योगों का प्रतिनिधित्व करने वाले निकाय का एक प्रतिनिधि	सदस्य
15.	अपशिष्ट पुनर्चक्रण उद्योग का एक प्रतिनिधि	सदस्य
16.	दो विषय विशेषज्ञ	सदस्य
17.	राज्य सरकार के राजस्व विभाग, कृषि विभाग और श्रम विभाग का सहयोजित एक प्रतिनिधि	सदस्य

(2) इन नियमों के क्रियान्वयन से संबंधित सभी विषयों, ठोस अपशिष्ट प्रबंध संबंधी राज्य की नीति तथा कार्यनीति की समीक्षा करने और इन नियमों के त्वरित और समुचित क्रियान्वयन के लिए आवश्यक उपाय करने के लिए राज्य सरकार को सलाह देने के लिए राज्य स्तरीय सलाहकार निकाय प्रत्येक छह माह में कम से कम एक बैठक करेगी।

(3) समीक्षा रिपोर्ट की प्रतियां आवश्यक कार्रवाई हेतु राज्य प्रदूषण नियंत्रण बोर्ड/प्रदूषण नियंत्रण समिति को अग्रेषित की जाएंगी।

**24. वार्षिक रिपोर्ट-** (1) सुविधा के प्रचालक द्वारा प्रत्येक वर्ष 30 अप्रैल को या इससे पूर्व प्ररूप III में स्थानीय निकाय को वार्षिक रिपोर्ट प्रस्तुत की जाएगी।

(2) स्थानीय नगरीय निकाय प्ररूप IV में अपनी वार्षिक रिपोर्ट राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण समिति और संबंधित राज्य या संघ राज्य क्षेत्र के शहरी विकास विभाग के प्रभारी सचिव या मेट्रोपालिटिन नगर की दशा में नगर पालिका प्रशासन के निदेशक या नगरपालिका प्रशासन के आयुक्त या राज्य के अन्य सभी स्थानीय निकायों के मामले में राज्य के स्थानीय निकायों प्रभारी अधिकारी को प्रत्येक वर्ष के 30 जून या उससे पहले अग्रेषित करेगी।

(3) यथास्थिति, प्रत्येक राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समिति, इन नियमों के क्रियान्वयन और अनुपालन न करने वाले स्थानीय निकायों पर की गई कार्रवाई की समेकित वार्षिक रिपोर्ट प्ररूप V में तैयार करेगी और प्रत्येक वर्ष के 31 जुलाई तक केन्द्रीय प्रदूषण नियंत्रण बोर्ड और शहरी विकास मंत्रालय को प्रस्तुत करेगी।

(4) केन्द्रीय प्रदूषण नियंत्रण बोर्ड, देश में स्थानीय निकायों द्वारा इन नियमों के क्रियान्वयन की स्थिति पर एक समेकित समीक्षा रिपोर्ट तैयार की जाएगी और शहरी विकास मंत्रालय और पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को अपनी सिफारिशों के साथ प्रत्येक वर्ष 31 अगस्त से पहले अग्रेषित की जाएगी।

(5) पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय द्वारा केन्द्रीय निगरानी समिति की बैठक के दौरान वार्षिक रिपोर्ट का पुनर्विलोकन किया जाएगा।

**25. दुर्घटना की रिपोर्ट देना** - किसी ठोस अपशिष्ट प्रसंस्करण या सुविधा केंद्र या भराव भूमि स्थल पर कोई दुर्घटना होने की दशा में, तब सुविधा का प्रभारी अधिकारी प्ररूप VI में घटना की रिपोर्ट स्थानीय निकाय को भेजेगा। स्थानीय निकाय द्वारा समीक्षा की जाएगी और सुविधा के प्रभारी अधिकारी को अनुदेश, यदि कोई हो, जारी किया जाएगा।

## अनुसूची I

## [नियम 15 (ब), (यद्म), 16(1)(ख)(ड.), 16(4) देखें]

## स्वास्थ्यकर भरण स्थलों के लिए विनिर्देश

## क. स्थल चयन के लिए मानदंड. -

- (i) भूमि निर्धारण के कार्य आबंटन में विभाग द्वारा ठोस अपशिष्ट प्रसंस्करण और शोधन सुविधाओं की स्थापना करने के लिए उपयुक्त स्थल उपलब्ध कराया जाएगा और ऐसे स्थलों को अधिसूचित किया जाएगा।
- (ii) भूमि भरण स्थल योजनाबद्ध, तथा निर्माण योजना के साथ-साथ चरणबद्ध रीति से बंदी योजना के उचित प्रलेखन के साथ अभिकल्पित और विकसित किए जाएंगे। किसी विद्यमान भूमि भरण स्थल से लगी हुई कोई नई भूमि भरण सुविधा तैयार किए जाने की दशा में विद्यमान भूमि भरण स्थल की बंदी योजना, ऐसे नए भूमि भरण स्थल के प्रस्ताव का भाग होगी।
- (iii) भरण स्थलों का चयन आसपास की अपशिष्ट प्रसंस्करण सुविधाओं का प्रयोग करने के लिए किया जाएगा। अन्यथा अपशिष्ट प्रसंस्करण सुविधा की योजना भरण स्थल के अभिन्न भाग के रूप में बनाई जाएगी।
- (iv) भूमि भरण स्थल शहरी विकास मंत्रालय, भारत सरकार और केन्द्रीय प्रदूषण नियंत्रण बोर्ड के मार्गदर्शी सिद्धांतों के अनुसार स्थापित किए जाएंगे।
- (v) विद्यमान भूमि भरण स्थल, जो पांच वर्षों से अधिक से उपयोग में हैं, इस अनुसूची में दिए गए विनिर्देशों के अनुसरण में उन्नत किए जाएंगे।
- (vi) भूमि भरण स्थल कम से कम 20-25 वर्षों तक चलने के लिए पर्याप्त रूप से बड़े होंगे तथा जल जमाव और दुरुपयोग को रोकने के लिए चरणबद्ध रीति से "भूमि भरण सेल" विकसित किए जाएंगे।
- (vii) भूमि भरण स्थल नदी से 100 मीटर, तालाब से 200 मीटर, राजमार्गों, आवास स्थलों, सार्वजनिक उद्यानों और जल आपूर्ति कुंओं से 200 मीटर तथा विमानपत्तनों या हवाई अड्डे से 20 किमी की दूरी पर होंगे। तथापि, विशेष मामले में, भूमि भरण स्थल को नागर विमानन प्राधिकरण/वायु सेना, जैसा भी मामला हो, से अनापत्ति प्रमाण पत्र प्राप्त कर लेने के बाद विमानपत्तन/हवाईअड्डे से 10 और 20 किमी की दूरी के अंदर स्थापित किया जा सकता है। तटीय विनियम जोन, नमभूमि, महत्वपूर्ण आवासीय क्षेत्रों, संवेदनशील पारि-भंगुर क्षेत्रों और गत 100 वर्षों से यथा दर्ज बाढ़ के मैदानों के अंदर भूमि भरण स्थल के लिए अनुमति नहीं दी जाएगी।
- (viii) भरण स्थल और ठोस अपशिष्ट के शोधन तथा निस्तारण के लिए स्थलों को नगर आयोजना विभाग की भूमि उपयोग योजनाओं में शामिल किया जाएगा।
- (ix) पांच टन प्रतिदिन से अधिक की संस्थापित क्षमता वाली ठोस अपशिष्ट प्रसंस्करण तथा निस्तारण सुविधा के आसपास गैर विकास का बफर जोन बनाए रखा जाएगा। इसका अनुरक्षण ठोस अपशिष्ट प्रसंस्करण तथा निस्तारण सुविधा के कुल क्षेत्र के अंदर किया जाएगा। बफर जोन का निर्धारण स्थानीय प्राधिकरण द्वारा संबंधित राज्य प्रदूषण नियंत्रण बोर्ड के परामर्श से मामला दर मामला आधार पर किया जाएगा।
- (x) जैव-चिकित्सीय अपशिष्ट का निपटान समय-समय पर यथा संशोधित जैव-चिकित्सीय अपशिष्ट प्रबंधन नियम, 2016 के अनुसार किया जाएगा। परिसंकटमय अपशिष्टों का प्रबंधन समय-समय पर यथासंशोधित परिसंकटमय और अन्य अपशिष्ट (प्रबंधन और सीमा-पारीय संचलन) नियम, 2016 के अनुसार किया जाएगा। ई-अपशिष्टों का प्रबंधन समय-समय पर यथासंशोधित ई-अपशिष्ट (प्रबंधन) नियम, 2016 के अनुसार किया जाएगा।

- (xi) अपशिष्ट प्रसंस्करण का कार्य न हो पाने और आपातकाल या प्राकृतिक आपदाओं के दौरान अपशिष्ट को रखने के लिए प्रत्येक भरण स्थल पर ठोस अपशिष्ट के लिए अस्थाई भंडारण सुविधा स्थापित की जाएगी।

**ख. स्वास्थ्यकर भरण स्थलों पर सुविधाओं के विकास के लिए मानदंड :-**

- (i) भूमि भरण स्थल पर चार-दीवारी या बाड़ होगी और अंदर आने वाले वाहनों की निगरानी करने, अनधिकृत व्यक्तियों तथा आवारा पशुओं के प्रवेश को रोकने के लिए उचित उपयुक्त दरवाजा लगाया जाएगा।
- (ii) वाहनों और अन्य मशीनरी का मुक्त संचलन सुनिश्चित करने के लिए पट्टुच और/आंतरिक सड़कें ठोस या पक्की बनाई जाएगी ताकि वाहनीय संचलन के कारण धूल कणों को उड़ने से रोका जा सके।
- (iii) भूमि भरण स्थल पर भूमि भरण के लिए लाए जाने वाले अपशिष्ट की मॉनीटरी करने के लिए अपशिष्ट निरीक्षण सुविधा, अभिलेख रखने के लिए कार्यालय सुविधा तथा प्रदूषण मॉनीटरी उपस्कर सहित उपस्कर और मशीनरी रखने के लिए आश्रय स्थल होंगे। सुविधा का प्रचालक अपशिष्ट प्राप्ति, प्रसंस्करण और निपटान का लेखा-जोखा रखेगा।
- (iv) भूमि भरण स्थल पर लाए जाने वाले अपशिष्ट की मात्रा को मापने के लिए धर्मकांटा, अग्नि सुरक्षा उपस्कर और अन्य सुविधाएं, जो भी अपेक्षित हों, जैसे प्रावधान किए जाएंगे।

- (v) पेयजल और स्वास्थ्य सुविधाओं (अधिमानतः कर्मचारों के लिए धोने/नहाने की सुविधाओं) जैसी उपयोगिताओं और सहज भूमि भरण प्रचालनों, जब रात्रि के समय किए जाते हैं, के लिए प्रकाश व्यवस्था का प्रावधान होगा।

- (vi) भूमि भरण स्थलों पर कार्मिकों के स्वास्थ्य की जांच सहित सुरक्षा प्रावधान किए जाएंगे।

- (vii) परिवहन वाहनों की पार्किंग और सफाई या धुलाई के लिए प्रावधान किए जाएंगे। इस प्रकार उत्पन्न मल जल का शोधन विनिर्दिष्ट मानकों को पूरा करने के लिए किया जाएगा।

**ग. भूमि भरण प्रचालनों और भूमि भरण पूर्ण होने पर उनको बंद करने के विनिर्देशों के लिए मानदण्ड:-**

- (i) अपशिष्ट का उच्च घनत्व प्राप्त करने के लिए भूमि भरण किए जाने वाले अपशिष्ट को भारी कम्पेक्टरों का प्रयोग करते हुए पतली परतों में संहत किया जाएगा। अधिक वर्षा वाले क्षेत्रों, जहां भारी कम्पेक्टरों का प्रयोग नहीं किया जा सकता, में वैकल्पिक उपाय अपनाए जाएंगे।

- (ii) अपशिष्टों को तत्काल या प्रत्येक कार्य दिवस के अंत में कम से कम 10 सेमी मिट्टी, अक्रिय मलबे या निर्माण सामग्री से उस समय तक ढक दिया जाएगा जब तक कि कम्पोस्टिंग या पुनर्चक्रण या ऊर्जा पुनर्प्राप्ति के लिए अपशिष्ट प्रसंस्करण सुविधाएं स्थापित न कर दी जाएं।

- (iii) मानसून ऋतु के आरंभ होने से पूर्व भूमि भरण स्थल पर मानसून के दौरान पानी के रिसाव को रोकने के लिए उचित संहनन और श्रेणीकरण के साथ 40-65 सेमी मोटी मिट्टी का मध्यवर्ती आवरण बिछा दिया जाएगा। भूमि भरण स्थल के प्रभावी क्षेत्र से पानी के बहाव को विपथित करने के लिए उचित निकास नालियों का निर्माण किया जाएगा।

- (iv) भूमि भरण स्थल के पूरा हो जाने के पश्चात उसके रिसाव और अपरदन को न्यूनतम करने के लिए अंतिम आवरण डिजाइन किया जाएगा। अंतिम आवरण निम्नलिखित विनिर्देशों के अनुसार होगा, अर्थात् -

- (क) अंतिम आवरण में  $1 \times 10^{-7}$  सेमी/सेकंड से कम के पारगम्यता गुणांक सहित 60 सेमी की चिकनी मिट्टी या शोधित मिट्टी से युक्त अवरोधक मिट्टी की परत होगी।

- (ख) अवरोधक मिट्टी की परत के ऊपर 15 सेमी की एक निकास परत होगी।
- (ग) निकास परत के ऊपर प्रकृतिजन्य पादपों की वृद्धि में सहायता करने और अपरदन को कम करने के लिए 45 सेमी की एक वनस्पतिक परत होगी।

**घ. प्रदूषण निवारण के मानदंड.-** भूमि भरण प्रचालनों से प्रदूषण समस्याओं को रोकने के क्रम में निम्नलिखित प्रावधान किए जाएंगे, अर्थात्-

- (i) तूफान जल नाले को इस तरीके से डिजाइन और निर्मित किया जाए कि सतही जल बहाव, भूमि भरण स्थल से विपथित हो जाए और ठोस अपशिष्ट स्थानों से निक्षालक, सतही जल बहाव में मिश्रित न हो। निक्षालक उत्पत्ति को कम करने और सतही जल के प्रदूषण को रोकने तथा बाढ़ और दलदली स्थितियों से बचने के लिए भी तूफान जल प्रवाह नालियों के विपथन का प्रावधान किया जाएगा।
- (ii) अपशिष्ट निपटान क्षेत्र के आधार और दीवारों पर गैर-पारगम्य लाइनिंग प्रणाली का निर्माण। ऐसी अपशिष्ट प्रसंस्करण सुविधाओं के अवशिष्ट अथवा मिश्रित अपशिष्ट या खतरनाक सामग्रियों (जैसे कि ऐरोसोल, ब्लीच, पालिश, बैटरी, अपशिष्ट तेल, पेंट उत्पाद और कीटनाशक) के संदूषण वाले अपशिष्ट को भरने के लिए प्रयुक्त होने वाले भरण स्थलों के लिए न्यूनतम लाइनर विनिर्देश, एक ऐसा मिश्र अवरोधक होगा जो 1.5 मिमी मोटी उच्च घनत्व वाली पॉलीईथाइलीन (एचडीपीई) जियो-मेम्ब्रेन या जियो-सिंथेटिक लाइनर या उसके समतुल्य होगा तथा मिट्टी (चिकनी अथवा शोधित मिट्टी) के 90 सेमी के ऊपर होगी तथा इसका पारगम्यता गुणांक  $1 \times 10^{-7}$  सेमी/सेकंड से अधिक नहीं होगा। जल सारणी का अधिकतम स्तर, भूमि भरण स्थलों के निचले भाग पर उपलब्ध कराई गई चिकनी अथवा शोधित मिट्टी के अवरोधक परत के आधार से कम से कम दो मीटर नीचे होगा।
- (iii) निक्षालकों के संग्रहण और शोधन सहित इनके प्रबंधन के लिए प्रावधान किए जाएंगे। शोधित निक्षालक, अनुसूची-II में निर्दिष्ट मानकों को पूरा करने के पश्चात् पुनर्चक्रित या उपयोग में लाए जाएंगे। अन्यथा इन्हें मलनिर्यास लाइन में विमुक्त कर दिया जाएगा। किसी भी हाल में निक्षालक को खुले वातावरण में विमुक्त नहीं किया जाएगा।
- (iv) भूमि भरण क्षेत्र से बहने वाले जल को किसी नाले, धारा, नदी, झील या तालाब में प्रवेश करने से रोकने की व्यवस्था की जाएगी। जल बहाव के निक्षालक या ठोस अपशिष्ट के साथ मिश्रित होने के मामले में, समस्त मिश्रित जल को संबंधित प्राधिकरण द्वारा शोधित किया जाएगा।

**ड. जल गुणवत्ता मॉनीटरि के लिए मानदंड.-**

- (i) किसी भूमि भरण स्थल को स्थापित करने से पूर्व, क्षेत्र में भूमि जल गुणवत्ता के मूलाधार आंकड़े एकत्रित किए जाएंगे और उन्हें भविष्य में संदर्भ के लिए रिकार्ड में रखा जाएगा। भूमि भरण स्थल की परिधि के 50 मीटर के अंदर भूमि जल गुणवत्ता को वर्ष में विभिन्न ऋतुओं अर्थात् ग्रीष्म, मानसून और मानसून-पश्च अवधि के दौरान आवधिक रूप से मॉनीटर किया जाएगा ताकि यह सुनिश्चित हो सके कि भू-जल, स्वीकार्य सीमा से अधिक संदूषित न हो।
- (ii) किसी भी प्रयोजन (पेय जल और सिंचाई सहित) के लिए भूमि भरण स्थलों में और उनके आस-पास भूमि जल के उपयोग पर उसकी गुणवत्ता को सुनिश्चित करने के बाद विचार किया जाएगा। मॉनीटरि प्रयोजन के लिए पेयजल गुणवत्ता हेतु निम्नलिखित विनिर्देश लागू होंगे, अर्थात् :-

क्र.सं.	पैरामीटर	आईएस 10500:2012, संस्करण 2.2 (2003-09) वांछनीय सीमा (मिग्रा/ली., पीएच को छोड़कर)
(1)	(2)	(3)
(1)	आर्सेनिक	0.01
(2)	कैडमियम	0.01
(3)	क्रोमियम (Cr <sup>6+</sup> के रूप में)	0.05
(4)	तांबा	0.05
(5)	साइनाइड	0.05
(6)	सीसा	0.05
(7)	पारा	0.001
(8)	निकल	-
(9)	नाइट्रेट, एनओ <sub>3</sub> के रूप में	45.0
(10)	पीएच (pH)	6.5-8.5
(11)	लोहा	0.3
(12)	कुल कठोरता (सीएसीओ <sub>3</sub> के रूप में)	300.0
(13)	क्लोराइड	250
(14)	विलीन ठोस	500
(15)	फेनोलिक यौगिक (सी <sub>6</sub> एच <sub>5</sub> ओएच के रूप में)	0.001
(16)	जस्ता	5.0
(17)	सल्फेट (एसओ <sub>4</sub> के रूप में)	200

**च. परिवेशी वायु गुणवत्ता की मानीटरी के लिए मानदंड. -**

- (i) भूमि भरण स्थल पर दुर्गंध को कम करने, गैसों को अपस्थलीय फैलने से रोकने, पुनर्वासित भूमि भरण स्थल सतह पर उगाई गई वनस्पति को बचाने के लिए गैस संग्रहण प्रणाली सहित भूमि भरण गैस नियंत्रण प्रणाली संस्थापित की जाएगी। भूमि भरण गैस पुनर्प्राप्ति को बढ़ाने के लिए गैस संग्रहण कुओं के साथ आच्छादन प्रणालियों में जियो मेम्ब्रेन के प्रयोग पर विचार किया जाएगा।

- (ii) भूमि भरण स्थल पर निकलने वाली मीथेन गैस का सान्द्रण, निम्न विस्फोटक सीमा (एलईएल) के 25 प्रतिशत से अधिक नहीं होगा।
- (iii) किसी भूमि भरण स्थल पर संग्रहण सुविधा से प्राप्त भूमि भरण गैस का उपयोग व्यवहार्यता के अनुसार या तो सीधे तापीय अनुप्रयोगों या विद्युत उत्पादन में किया जाएगा। अन्यथा, भूमि भरण गैस को जला (प्रदीप्त) दिया जाएगा और सीधे वायुमंडल में या अवैध रूप से निकासी के लिए नहीं छोड़ा जाएगा। यदि इसका उपयोग या प्रदीप्त संभव न हो तो निष्क्रिय निकास की अनुमति दी जाएगी।
- (iv) भूमि भरण स्थल पर और इसके आसपास परिवेशी वायु गुणवत्ता के नियमित रूप से माँनीटरी की जाएगी। परिवेशी वायु गुणवत्ता औद्योगिक क्षेत्र के लिए केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा विहित मानकों के अनुसार होगी।

**छ. भूमि भरण स्थल पर पौधरोपण के लिए मानदंड.-** तैयार स्थल के ऊपर निम्नलिखित विनिर्देशों के अनुसार वनस्पतिक आवरण बनाया जाएगा, अर्थात् :

- (क) स्थानीय रूप से अंगीकृत अखाद्य बारहमासी पौधों, जो सूखे तथा अत्यधिक तापमान के प्रतिरोधी हैं, को उगाया जाएगा;
- (ख) पौधे ऐसे प्रजाति के होंगे कि उनकी जड़ें 30 सेमी से अधिक गहरी न हों। यह शर्त, भूमि भरण स्थल के स्थिर होने तक लागू रहेगी;
- (ग) चयनित पौधों में न्यूनतम पोषक वृद्धि के साथ न्यून-पोषक मिट्टी में पनपने की क्षमता होगी;
- (घ) मिट्टी के अपरदन को कम करने के लिए पर्याप्त घनत्व में पौधरोपण किया जाएगा;
- (ङ.) राज्य प्रदूषण नियंत्रण बोर्डों या प्रदूषण नियंत्रण समितियों के परामर्श से भूमि भरण स्थल की सीमा के चारों ओर हरित क्षेत्र विकसित किए जाएंगे।

**ज. भूमि भरण स्थल पर पश्चात्कर्ती देखरेख के लिए मानदंड. -** (1) भूमि भरण स्थल की बंदी-पश्च देखरेख कम से कम पंद्रह वर्षों के लिए की जाएगी और दीर्घकालिक माँनीटरी या देखरेख योजना निम्नलिखित से युक्त होगी, अर्थात् :-

- (क) सबसे ऊपरी परत की अखंडता और प्रभाविता को बनाए रखना, मरम्मत करते रहना तथा सबसे ऊपरी परत को अपरदन या अन्य प्रकार के नुकसान के जारी रहने और बहने को रोकना;
- (ख) अपेक्षानुसार निक्षालक संग्रहण प्रणाली की माँनीटरी करना;
- (ग) भरण स्थल में और इसके आसपास भू-जल की माँनीटरी करना;
- (घ) मानकों के अनुरूप भूमि भरण गैस संग्रहण प्रणाली का अनुरक्षण और प्रचालन करना।

(2) पंद्रह वर्ष की बंदी-पश्च माँनीटरी के बाद बंद पड़े भूमि भरण स्थलों के उपयोग पर मानव बस्ती या अन्यथा प्रयोग किए जाने के बारे में यह सुनिश्चित करने के बाद ही विचार किया जाएगा कि गैसीय उत्सर्जन और निक्षालक गुणवत्ता विश्लेषण, विनिर्दिष्ट मानकों के अनुपालन में हैं और मृदा स्थिरता सुनिश्चित की गई है।

**झ. पहाड़ी क्षेत्रों के लिए विशेष प्रावधानों हेतु मानदंड -** पहाड़ों पर बसे नगरों और शहरों में स्थानीय प्राधिकरण द्वारा संबंधित राज्य बोर्ड या प्रदूषण नियंत्रण समिति के अनुमोदन से ठोस अपशिष्ट के अंतिम निपटान के लिए विकसित की गई स्थान-विशिष्ट पद्धतियां अपनाई जाएंगी। नगरपालिका प्राधिकरण जैवअवक्रमणीय जैविक अपशिष्ट को उपयोगी बनाने के लिए प्रसंस्करण सुविधाएं स्थापित करेगा। गैर-जैवअवक्रमणीय पुनर्चक्रण योग्य सामग्रियों का भण्डारण किया जाएगा और

इन्हें पुनर्चक्रण के लिए आवधिक रूप से भेजा जाएगा। अक्रिय और गैर-जैवअवक्रमणीय अपशिष्ट का उपयोग, सड़कें बनाने या पहाड़ों पर उपयुक्त क्षेत्रों की भराई करने के लिए किया जाएगा। पहाड़ी क्षेत्रों में पर्याप्त भूमि प्राप्त करने में आ रही कठिनाईयों के कारण सड़क पर बिछाने या भराई के लिए उपयुक्त न पाए गए अपशिष्ट का निपटान मैदानी क्षेत्रों में क्षेत्रीय भरण स्थलों में किया जाएगा।

**घ. पुराने मलबा स्थलों को बंद और बहाल करना** - ठोस अपशिष्ट के मलबा स्थल जिन्होंने अपनी क्षमता पूरी कर ली है या नए और उपयुक्त रूप से डिजाइन किए गए भरण स्थलों की स्थापना के बाद जिनमें अतिरिक्त अपशिष्ट नहीं डाले जाते हैं, उन्हें बंद कर दिया जाना चाहिए और निम्नलिखित विकल्पों की जांच करने के बाद बहाली की जानी चाहिए :

- (i) जैव खनन और अपशिष्ट प्रसंस्करण द्वारा अपशिष्ट को कम करना जिसके बाद नए भरण स्थलों या नीचे (ii) के अनुसार आच्छादन में अवशिष्टों को रखा जाएगा।
- (ii) ग्रीन हाऊस गैसों के संग्रहण और चमकाने/उपयोग में समर्थ बनाने के लिए ठोस अपशिष्ट आवरण या जियो मेम्ब्रेन से संवर्धित ठोस अपशिष्ट आवरण से आच्छादित किया जाना।
- (iii) ऊपर (ii) के अनुसार अतिरिक्त उपायों (जलोद्भू और अन्य खुरदरी दानेदार मिट्टियों में) जैसे संदूषित भू-जल को निकालने और शोधित करने के लिए कट-ऑफ वॉल और निष्कर्षण कुओं में आच्छादन।
- (iv) स्वीकार्य स्तर तक पर्यावरणीय प्रभाव को कम करने के लिए उपयुक्त कोई अन्य पद्धति।

### अनुसूची II

#### [नियम 16(1), (ख), (ड.), 16(4) देखें]

#### ठोस अपशिष्ट के प्रसंस्करण और शोधन के मानक

**क. खाद के मानक.**- अपशिष्ट प्रसंस्करण सुविधाओं में जैव अवक्रमणीय अपशिष्ट के प्रसंस्करण हेतु प्रौद्योगिकियों में से एक के रूप में कंपोस्टिंग शामिल होगा। कंपोस्ट संयंत्र से होने वाले प्रदूषण को रोकने के उद्देश्य से निम्नलिखित का पालन किया जाएगा अर्थात् :

- (क) स्थल पर पहुंचने वाले जैविक अपशिष्ट का आगे के प्रसंस्करण से पूर्व समुचित रखरखाव किया जाएगा। जहां तक संभव हो, अपशिष्ट भण्डारण क्षेत्र ढका हुआ होना चाहिए। यदि ऐसा भण्डारण खुले में किया गया हो तो निक्षालक शोधन और निपटान सुविधा तक पहुंचने वाले पंक्तिबद्ध तालों में निक्षालक और सतही जल बहाव को एकत्रित करने की सुविधा के साथ अपारगम्य आधार उपलब्ध कराया जाना चाहिए;
- (ख) गंध, मक्खियों, कृंतकों, पक्षी के खतरे और आग के जोखिम की बाधा को कम करने के लिए आवश्यक सावधानियां बरती जाएंगी;
- (ग) संयंत्र के ब्रेकडाउन या रखरखाव के मामले में, अपशिष्ट अंतर्ग्राही को बंद कर दिया जाएगा और अपशिष्ट को अस्थायी प्रसंस्करण स्थल या अस्थायी भूमि भरण स्थलों की दिशा में विपथित करने की व्यवस्था की जाएगी, जिनका संयंत्र के ठीक-ठाक हो जाने पर पुनः प्रसंस्करण किया जाएगा;
- (घ) प्रसंस्करण सुविधा से प्रक्रिया पूर्व और प्रक्रिया-पश्च अवशिष्टों को नियमित आधार पर हटा दिया जाएगा और स्थल पर इकट्ठा नहीं होने दिया जाएगा। पुनर्चक्रण योग्य सामग्री, उपयुक्त विक्रेताओं के माध्यम से भेजी जाएगी। गैर-पुनर्चक्रण योग्य उच्च तापजनक अंशों को पृथक किया जाएगा और सीमेंट संयंत्रों में या विद्युत संयंत्रों को आरडीएफ उत्पादन, सह-प्रसंस्करण के लिए भेजा जाएगा। भूमि भरण स्थलों में केवल सभी प्रक्रियाओं के अवशिष्ट भेजे जाएंगे।

- (ड.) अपारगम्य आधार के साथ विंड्रो क्षेत्र उपलब्ध कराया जाएगा। ऐसा आधार बजरी या ठोस चिकनी मिट्टी, 50 सेमी मोटी, जिसका पारगम्यता गुणांक  $10^{-7}$  सेमी/सेकंड से कम हो, का बनाया जाएगा। आधार में 1 से 2 प्रतिशत ढाल होगी और निक्षालक या सतही बहाव का संग्रहण करने के लिए इसकी चारों तरफ नालियों का घेरा होगा।
- (च) परिवेशी वायु गुणवत्ता की नियमित रूप से मॉनीटरी की जाएगी। प्रसंस्करण संयंत्र की बाहरी दीवार पर या नीचे की हवा की दिशा में गंध की समस्या की भी नियमित रूप से जांच की जाएगी।
- (छ) नमी बनाए रखने के लिए खाद संयंत्र में निक्षालक को पुनःपरिचालित किया जाएगा।
- (ज) अंतिम उत्पाद खाद, समय-समय पर अधिसूचित उर्वरक नियंत्रण आदेश के अंतर्गत विनिर्दिष्ट मानकों के अनुसार होगा।
- (झ) खाद का सुरक्षित अनुप्रयोग सुनिश्चित करने हेतु खाद गुणवत्ता के लिए निम्नलिखित विनिर्देशों को पूरा किया जाएगा, अर्थात् :-

पैरामीटर	जैविक खाद (एफसीओ 2009)	फॉस्फेट संपन्न जैविक खाद (एफसीओ 2013)
(1)	(2)	(3)
आर्सेनिक (मिग्रा/किग्रा)	10.00	10.00
कैडमियम (मिग्रा/किग्रा)	5.00	5.00
क्रोमियम (मिग्रा/किग्रा)	50.00	50.00
तांबा (मिग्रा/किग्रा)	300.00	300.00
सीसा (मिग्रा/किग्रा)	100.00	100.00
पारा (मिग्रा/किग्रा)	0.15	0.15
निकल (मिग्रा/किग्रा)	50.00	50.00
जस्ता (मिग्रा/किग्रा)	1000.00	1000.00
सी/एन अनुपात	<20	20:1 से कम
पीएच (pH)	6.5-7.5	(1:5 घोल) अधिकतम 6.7
नमी, भार का प्रतिशत, अधिकतम	15.0-25.0	25.0
थोक घनत्व (ग्राम/सेमी <sup>3</sup> )	<1.0	1.6 से कम
कुल जैविक कार्बन, भार द्वारा प्रतिशत, न्यूनतम	12.0	7.9
कुल नाइट्रोजन (एन के रूप में), भार द्वारा प्रतिशत, न्यूनतम	0.8	0.4

कुल फॉस्फेट (पी2ओ5 के रूप में) भार द्वारा प्रतिशत, न्यूनतम	0.4	10.4
कुल पोटेशियम (के2ओ के रूप में), भार द्वारा प्रतिशत, न्यूनतम	0.4	-
रंग	गहरे भूरे से काले तक	-
गंध	बदबू की अनुपस्थिति	-
कण आकार	कम से कम 90% सामग्री, 4.0 मिमी आईएस छलनी से होकर गुजरनी चाहिए	कम से कम 90% सामग्री, 4.0 मिमी आईएस छलनी से होकर गुजरनी चाहिए
प्रवाहकत्व (डीएसएम-1 के रूप में), से कम	4.0	8.2

\*उपरोक्त कथित संकेन्द्रण सीमाओं से अधिक वाली खाद (अंतिम उत्पाद) का उपयोग खाद्य फसलों के लिए नहीं किया जाएगा। तथापि, इसका उपयोग खाद्य फसलों को उगाने से भिन्न प्रयोजनों के लिए किया जा सकता है।

**ख. शोधित निक्षालकों के लिए मानक.** - शोधित निक्षालकों के निपटान में निम्नलिखित मानकों का पालन किया जाएगा, अर्थात्:-

क्र.सं.	मापदंड	मानक (निपटान का तरीका)		
		अंतर्देशीय सतही जल	सार्वजनिक सीवर	भूमि निपटान
(1)	(2)	(3)	(4)	(5)
1.	निलंबित ठोस, मिग्रा/ली, अधिकतम	100	600	200
2.	विलीन ठोस (अजैविक), मिग्रा/ली, अधिकतम	2100	2100	2100
3.	पीएच (ph) मान	5.5 से 9.0	5.5 से 9.0	5.5 से 9.0
4.	अमोनिकल नाइट्रोजन (एन के रूप में) मिग्रा/ली., अधिकतम	50	50	--
5.	कुल केलडाल नाइट्रोजन (एन के रूप में) मिग्रा/ली, अधिकतम	100	--	--

6.	जैव रासायनिक ऑक्सीजन मांग (27 <sup>0</sup> से. पर 3 दिन) अधिकतम (मिग्रा/ली)	30	350	100
7.	रासायनिक ऑक्सीजन मांग, मिग्रा/ली, अधिकतम	250	--	--
8.	आर्सेनिक (एएस के रूप में), मिग्रा/ ली, अधिकतम	0.2	0.2	0.2
9.	पारा (एचजी के रूप में), मिग्रा/ली, अधिकतम	0.01	0.01	--
10.	सीसा (पीबी के रूप में), मिग्रा/ली, अधिकतम	0.1	1.0	--
11.	कैडमियम (सीडी के रूप में), मिग्रा/ली, अधिकतम	2.0	1.0	--
12.	कुल क्रोमियम (सीआर के रूप में), मिग्रा/ली, अधिकतम	2.0	2.0	--
13.	तांबा (सीयू के रूप में), मिग्रा/ली, अधिकतम	3.0	3.0	--
14.	जस्ता ((जेडएन के रूप में), मिग्रा/ली, अधिकतम	5.0	15	--
15.	निकल (एनआई के रूप में), मिग्रा/ली, अधिकतम	3.0	3.0	--
16.	साइनाइड (सीएन के रूप में), मिग्रा/ली, अधिकतम	0.2	2.0	0.2
17.	क्लोराइड (सीएल के रूप में), मिग्रा/ली, अधिकतम	1000	1000	600
18.	फ्लोराइड (एफ के रूप में), मिग्रा/ली, अधिकतम	2.0	1.5	--
19.	फेनोलिक यौगिक (सी <sub>6</sub> एच <sub>5</sub> ओएच के रूप में), मिग्रा/ली, अधिकतम	1.0	5.0	--

नोट : आंतरिक सतही जल-निकायों में शोधित निक्षालकों को बहाते समय, बहाए जाने वाले निक्षालकों की मात्रा और प्राप्त करने वाले जल निकाय में उपलब्ध मिश्रित जल की मात्रा पर उचित रूप से ध्यान दिया जाएगा।

ग. **भस्मीकरण के मानक :** ठोस अपशिष्ट शोधन/निपटान सुविधा में भस्मकों/ताप प्रौद्योगिकियों से होने वाले उत्सर्जन में निम्नलिखित मानकों का अनुपालन किया जाएगा, अर्थात् :

मानदण्ड	उत्सर्जन मानक	
	(1)	(2)
विविक्त-कण	50 मिग्रा/एनएम <sup>3</sup>	मानक का अर्थ आधे घंटे के औसत मान से है
एचसीएल	50 मिग्रा/एनएम <sup>3</sup>	मानक का अर्थ आधे घंटे के औसत मान से है
एसओ2	200 मिग्रा/एनएम <sup>3</sup>	मानक का अर्थ आधे घंटे के औसत मान से है
सीओ	100 मिग्रा/एनएम <sup>3</sup>	मानक का अर्थ आधे घंटे के औसत मान से है
	50 मिग्रा/एनएम <sup>3</sup>	मानक का अर्थ दैनिक औसत मान से है
कुल जैविक कार्बन	20 मिग्रा/एनएम <sup>3</sup>	मानक का अर्थ आधे घंटे के औसत मान से है
एचएफ	4 मिग्रा/एनएम <sup>3</sup>	मानक का अर्थ आधे घंटे के औसत मान से है
एनओएक्स (एनओ2 के रूप में व्यक्त एनओ और एनओ2)	400 मिग्रा/एनएम <sup>3</sup>	मानक का अर्थ आधे घंटे के औसत मान से है
कुल डाइऑक्साइड और फ्यूरन	0.1 एनजी टीईक्यू/एनएम <sup>3</sup>	मानक का अर्थ 6-8 घंटे के नमूने से है। कृपया कुल विषाक्त समतुल्यता प्राप्त करने के लिए विषाक्त समतुल्यता मानों हेतु 17 संबंधित समप्रकारी वस्तु के दिशानिर्देशों का संदर्भ लें।
सीडी+टीएच+उनके यौगिक	0.05 एमजी/एनएम <sup>3</sup>	मानक का अर्थ 30 मिनट और 8 घंटे के बीच कहीं भी नमूना लिए गए समय से है।
एचजी और इसके यौगिक	0.05 एमजी/एनएम <sup>3</sup>	मानक का अर्थ 30 मिनट और 8 घंटे के बीच कहीं भी नमूना लिए गए समय से है।
एसबी+एस+पीबी+सीआर+ सीओ+सीयू+एमएन+एनआई+वी+ उनके यौगिक	0.5 एमजी/एनएम <sup>3</sup>	मानक का अर्थ 30 मिनट और 8 घंटे के बीच कहीं भी नमूना लिए गए समय से है।
<b>नोट :</b> सभी मानों में शुष्क आधार पर 11% ऑक्सीजन तक शुद्धि की गई है।		

**टिप्पणी :**

- (क) उपरोक्त उत्सर्जन सीमाओं को प्राप्त करने के लिए भस्मीकरण यंत्र के साथ उपयुक्त प्रकार के डिजाइन किए गए प्रदूषण नियंत्रण उपकरण संस्थापित या पुनःसंयोजित किए जाएंगे।
- (ख) भस्मीकृत किए जाने वाले अपशिष्ट को किसी क्लोरीनयुक्त कीटाणुनाशक के साथ रासायनिक तरीके से शोधित नहीं किया जाएगा।

- (ग) क्लोरीनयुक्त प्लास्टिक के भस्मीकरण को दो वर्षों के अंदर क्रमबद्ध रूप से समाप्त किया जाएगा।
- (घ) यदि भस्मीकरण राख में विषाक्त धातुओं की सांद्रता समय-समय पर यथासंशोधित परिसंकटमय अपशिष्ट (प्रबंधन, हथालन और सीमा-पारीय संचलन) नियम, 2008 में यथाविनिर्दिष्ट सीमाओं से अधिक हो तो ऐसे राख को परिसंकटमय अपशिष्ट शोधन, भंडारण और निपटान सुविधा को भेजा जाएगा।
- (ङ.) भस्मीकरण-यंत्र में ईंधन के रूप में केवल एलडीओ, एलएसएचएस, डीजल, बायोमास, कोयला, एलएनजी, सीएनजी, आरडीएफ और बायोगैस जैसे निम्न सल्फर ईंधन का ही प्रयोग किया जाएगा।
- (च) अधोवायु गैस में सीओ<sub>2</sub> संकेन्द्रण 7% से अधिक नहीं होगा।
- (छ) ट्विन चैम्बर भस्मीकरण-यंत्रों में सभी सुविधाएं इस प्रकार से डिजाइन की जाएंगी कि द्वितीय ज्वलन चैम्बर में 950° से. के न्यूनतम तापमान को प्राप्त करने के लिए और 2 (दो) सेकंड से अधिक के द्वितीय ज्वलन चैम्बर में गैस रह सके।
- (ज) भस्मीकरण संयंत्र (दहन चैम्बर) ऐसे तापमान, अवधारण समय और विक्षोभ के साथ परिचालित किए जाएंगे ताकि लावा और तलहटी राखों में कुल जैविक कार्बन (टीओसी) तत्व को 3% से कम किया जा सके या प्रज्वलन पर उनकी क्षति सूखे वजन के 5% से कम हो।
- (झ) स्थलों से निकलने वाली गंध का प्रबंधन केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा समय-समय पर जारी मार्गदर्शी सिद्धांतों के साथ किया जाएगा।

**प्ररूप -I**

**[नियम 15 (म), 16(1)(ग), 21(3) देखें]**

**ठोस अपशिष्ट के प्रसंस्करण/पुनर्चक्रण/शोधन और निपटान के लिए  
ठोस अपशिष्ट प्रबंधन नियमों के अंतर्गत प्राधिकार प्राप्त करने के लिए आवेदन**

सेवा में,

..... के

सदस्य सचिव

राज्य प्रदूषण नियंत्रण बोर्ड/प्रदूषण नियंत्रण समिति

महोदय,

मैं/हम ठोस अपशिष्ट के प्रसंस्करण, पुनर्चक्रण, शोधन और निपटान के लिए ठोस अपशिष्ट नियम, 2016 के अंतर्गत प्राधिकार के लिए एतद्वारा आवेदन करता हूँ/करते हैं।

1.	उनके/सुविधा के प्रचालक द्वारा नियुक्त स्थानीय निकाय/अभिकरण का नाम	
2.	पत्राचार का पता दूरभाष सं. फैक्स सं.	

	ई-मेल	
3.	नोडल अधिकारी और पदनाम (प्रसंस्करण/शोधन या निपटान सुविधा के प्रचालन के लिए उत्तरदायी स्थानीय निकाय या अभिकरण द्वारा प्राधिकृत अधिकारी)	
4.	सुविधा की स्थापना करने और प्रचालन के लिए अपेक्षित प्राधिकार (कृपया निशान लगाएं)	i. अपशिष्ट प्रसंस्करण ii. पुनर्चक्रण iii. शोधन iv. भूमि भरण स्थल पर निपटान
5.	इन दस्तावेजों की प्रतियां संलग्न करें	i. स्थल स्वीकृति (स्थानीय प्राधिकरण) ii. पर्यावरणीय स्वीकृति का प्रमाण iii. स्थापना के लिए अनुमति iv. नगरपालिका प्राधिकरण और प्रचालन अभिकरण के बीच करार v. परियोजना में निवेश और अपेक्षित आय
6.	<b>ठोस अपशिष्ट का प्रसंस्करण/पुनर्चक्रण/शोधन</b> i. प्रतिदिन प्रसंस्करित अपशिष्ट की कुल मात्रा क) पुनर्चक्रित किए जाने वाले अपशिष्ट की मात्रा ख) शोधित किए जाने वाले अपशिष्ट की मात्रा ग) भूमिभरण स्थल में निपटाए जाने वाले अपशिष्ट की मात्रा ii. प्रसंस्करित अपशिष्ट के लिए उपयोगिता कार्यक्रम (उत्पाद उपयोग) iii. निपटान के लिए कार्य-पद्धति (ब्यौरा संलग्न करें) क) निक्षालक की मात्रा ख) निक्षालक के लिए शोधन प्रौद्योगिकी iv. पर्यावरणीय प्रदूषण के निवारण और नियंत्रण के लिए किए जाने वाले उपाय v. संयंत्र में कार्यरत कर्मकारों की सुरक्षा के लिए किए जाने वाले उपाय vi. ठोस अपशिष्ट प्रसंस्करण/पुनर्चक्रण/शोधन/	

	निपटान सुविधा संबंधी ब्यौरा (संलग्न किया जाए)	
7.	<b>ठोस अपशिष्ट का निपटान</b> अभिज्ञात स्थलों की संख्या प्रतिदिन निपटाए जाने वाले अपशिष्ट की मात्रा स्थल चयन के लिए अपनाई गई कार्य-पद्धति या मानदण्ड का ब्यौरा (संलग्न करें) प्रचालन के अंतर्गत विद्यमान स्थल का ब्यौरा भूमि भरण की कार्य-पद्धति और प्रचालनात्क ब्यौरा पर्यावरणीय प्रदूषण को रोकने के लिए किए गए उपाय	
8.	कोई अन्य सूचना	

हस्ताक्षर :.....

पदनाम .....

तारीख :

स्थान :

प्ररूप-II

[नियम 16(1)(ड.) देखें]

प्राधिकार जारी करने के लिए प्रपत्र

फाइल सं. : \_\_\_\_\_

दिनांक : \_\_\_\_\_

**प्राधिकार सं. :** \_\_\_\_\_

सेवा में,

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

संदर्भ : आपका आवेदन सं. \_\_\_\_\_ दिनांक \_\_\_\_\_

\_\_\_\_\_ राज्य प्रदूषण नियंत्रण बोर्ड/प्रदूषण नियंत्रण समिति द्वारा प्रस्ताव का परीक्षण करने के पश्चात \_\_\_\_\_ को जिनका प्रशासनिक कार्यालय \_\_\_\_\_ में है, पर अपशिष्ट प्रसंस्करण/पुनर्चक्रण/शोधन/ निपटान सुविधा स्थापित और प्रचालित करने के लिए प्राधिकृत किया जाता है।

यह प्राधिकार ठोस अपशिष्ट के प्रसंस्करण, पुनर्चक्रण, शोधन और निपटान के लिए सुविधा के प्रचालन हेतु प्रदान किया जाता है।

यह प्राधिकार नीचे उल्लिखित निबंधन एवं शर्तों और इन नियमों में अन्यथा यथानिर्दिष्ट ऐसी शर्तों और इन नियमों के अंतर्गत अनुसूचियों I और II में विनिर्धारित मानकों के अध्वधीन है।

\_\_\_\_\_ राज्य प्रदूषण नियंत्रण बोर्ड/संघ राज्य क्षेत्र प्रदूषण नियंत्रण समिति द्वारा किसी भी समय, प्राधिकार के अंतर्गत लागू किसी शर्त को रद्द किया जा सकता है और इसकी लिखित सूचना दी जाएगी।

ठोस अपशिष्ट प्रबंधन नियम, 2016 के उपबंध का उल्लंघन होने पर पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) के दंडात्मक उपबंध लागू होंगे।

दिनांक :

(सदस्य सचिव)

स्थान :

राज्य प्रदूषण नियंत्रण बोर्ड/संघ राज्य क्षेत्र

प्रदूषण नियंत्रण समिति

(हस्ताक्षर और पदनाम)

### प्ररूप-III

[नियम 19(6), 24(1) देखें]

सुविधा के प्रचालक द्वारा स्थानीय निकाय को प्रस्तुत किए जाने के लिए वार्षिक रिपोर्ट का प्रपत्र

1.	शहर/नगर का नाम	
2.	जनसंख्या	
3.	क्षेत्रफल वर्ग किलो मीटर में	
4.	स्थानीय निकाय का नाम और पता दूरभाष सं. फैक्स ई-मेल :	
5.	सुविधा के प्रचालक का नाम और पता	
6.	सुविधा के प्रभारी अधिकारी का नाम दूरभाष सं. फैक्स ई-मेल :	

7.	शहर/नगर में परिवारों की संख्या शहर में गैर आवासीय परिसरों की संख्या शहर/नगर में चुनाव/प्रशासनिक वार्डों की संख्या	
8.	ठोस अपशिष्ट की मात्रा	
	प्रति दिन स्थानीय निकाय के क्षेत्र में उत्पन्न ठोस अपशिष्ट की अनुमानित मात्रा मीट्रिक टन में	/टीपीडी
	प्रतिदिन संग्रहित ठोस अपशिष्ट की मात्रा	/टीपीडी
	प्रतिदिन संग्रहित प्रति व्यक्ति अपशिष्ट	/ग्रा./दिन
	प्रसंसकृत ठोस अपशिष्ट की मात्रा	/टीपीडी
	भरण स्थल पर निपटान किए गए ठोस अपशिष्ट की मात्रा	/टीपीडी
9.	ठोस अपशिष्ट प्रबंधन सेवा की स्थिति	
	स्रोत पर अपशिष्ट का पृथक्करण और भंडारण	हां/नहीं
	क्या घरेलू/वाणिज्यिक/संस्थागत बिनों में स्रोत पर ठोस अपशिष्ट का भंडारण किया जाता है, यदि हां	%
	घरेलू बिनों में स्रोत पर अपशिष्ट के भंडारण की घरेलू रीति की प्रतिशतता	%
	वाणिज्यिक/संस्थागत बिनों में स्रोत पर अपशिष्ट का गैर आवासीय परिसरों में भंडारण करने की प्रतिशतता	%
	गलियों में घरों के ठोस अपशिष्ट का निपटान करने या फेंकने की प्रतिशतता	%
	गलियों में गैर आवासीय परिसरों के ठोस अपशिष्ट का निपटान करने या फेंकने की प्रतिशतता	%
	क्या ठोस अपशिष्ट को स्रोत पर पृथक्कृत स्वरूप में भंडारित किया जाता है	हां/नहीं
	यदि हां, तो स्रोत पर अपशिष्ट का पृथक्करण करने वाले परिसरों की प्रतिशतता	%
	ठोस अपशिष्ट का घर-घर जाकर संग्रहण	
	क्या शहर/नगर में ठोस अपशिष्ट का घर-घर जाकर संग्रहण किया जाता है	हां/नहीं
	यदि हां, तो अपशिष्ट के घर-घर जाकर संग्रहण किए जाने में शामिल वार्डों की संख्या	
	शामिल किए गए घरों की संख्या	
	शामिल किए गए वाणिज्यिक संस्थापनाओं, होटलों, रेस्तराओं, शैक्षिक संस्थाओं/कार्यालय इत्यादि सहित गैर आवासीय परिसरों की संख्या	
	निम्न के माध्यम से घर-घर जाकर संग्रहण किए जाने में शामिल आवासीय और गैर आवासीय परिसरों की प्रतिशतता : मोटरकृत वाहन कंटेनरकृत तिपहिया साइकिल/हैंड कार्ट अन्य साधन	

						%
						%
						%
	यदि नहीं, तो संग्रहण में अपनाई गई प्राथमिक पद्धति					
	गलियों में झाड़ू लगाया जाना					
	शहर में सड़कों, गलियों, लेनों, बाइलेनों की लम्बाई जिनकी सफाई किए जाने की आवश्यकता है					कि.मी.
	गली में झाड़ू लगाए जाने की बारंबारता और लाभान्वित जनसंख्या की प्रतिशतता					
		बारंबारता	रोजाना	एकांतर दिवस पर	सप्ताह में दो बार	कभी-कभी
		लाभान्वित जनसंख्या की प्रतिशतता				
	प्रयुक्त साधन					%
	हाथ से झाड़ू लगाया जाना					%
	यांत्रिक रूप से झाड़ू लगाया जाना					
	क्या सफाई कर्मचारियों द्वारा लंबी हैंडल वाले झाड़ू का प्रयोग किया जाता है					हां/नहीं
	क्या प्रत्येक सफाई कर्मचारी को अपशिष्ट का संग्रहण करने के लिए हैंडकार्ट/तिपहिया साइकिल दी जाती है					हां/नहीं
	क्या हैंडकार्ट/तिपहिया साइकिल में कंटेनर लगा है					हां/नहीं
	क्या संग्रहण का साधन प्रयोग किए गए संग्रहण/अपशिष्ट भंडारण के कंटेनरों समकालिक है					हां/नहीं
	द्वितीयक अपशिष्ट भंडारण सुविधाएं					
	शहर/नगर में अपशिष्ट भंडारण डिपो की संख्या और प्रकार खुले अपशिष्ट भंडारण स्थल चिनाई किए गए बिन					संख्या क्षमता घन मीटर में

<p>सीमेंट कंक्रीट सिलिंडर के बिन ढलाव/ढके हुए कक्ष/स्थान ढके हुए धातु/प्लास्टिक के कंटेनर 1.1 घन मीटर तक के बिन 2 से 5 घन मीटर के बिन 5 घन मीटर से बड़े कंटेनर बिन रहित शहर</p>		
बिन/जनसंख्या अनुपात		
<p>अपशिष्ट भंडारण डिपो का वार्डवार विवरण (संलग्न करें) :</p> <p>वार्ड सं. :</p> <p>क्षेत्रफल :</p> <p>जनसंख्या :</p> <p>रखे हुए बिनों की संख्या</p> <p>रखे गए बिनों का कुल आयतन</p>		
अपशिष्ट भंडारण सुविधाओं की कुल भंडारण क्षमता घन मीटर में		
अपशिष्ट भंडारण डिपो में प्रतिदिन वास्तविक रूप से भंडारित कुल अपशिष्ट		
डिपो से अपशिष्ट के संग्रहण की बारंबारता बताएं साफ किए गए बिनों की संख्या	बारंबारता	बिनों की संख्या
	प्रतिदिन	
	एकांतर दिवस	
	सप्ताह में दो बार	
	सप्ताह में एक बार	
	कभी-कभी	
क्या भंडारण डिपो में पृथक्कृत अपशिष्ट को हरे, नीले और काले बिनों में भंडार करके रखने की सुविधा है	हां/नहीं (यदि हां तो विवरण दें) हरे बिनों की संख्या : नीले बिनों की संख्या : काले बिनों की संख्या :	
भंडारण डिपो से ठोस अपशिष्ट उठाने का कार्य हाथ से किया जाता है		

या यांत्रिक तरीके से? प्रतिशत बताएं ठोस अपशिष्ट को हाथ से उठाए जाने की प्रतिशतता यांत्रिक तरीके से उठाने की प्रतिशतता	% %
यदि यांत्रिक है तो प्रयुक्त पद्धति का स्पष्ट उल्लेख करें	फ्रंट-एंड लोडर/टॉप लोडर
क्या ठोस अपशिष्ट को घर-घर से उठाया जाता है और पृथक्कृत स्वरूप में सीधे शोधन संयंत्र तक भेजा जाता है	हां/नहीं (यदि हां तो स्पष्ट उल्लेख करें)
प्रतिदिन अपशिष्ट का परिवहन प्रयोग किए गए वाहनों का प्रकार और संख्या (कृपया टिक करें या जोड़ें) पशु गाड़ी ट्रैक्टर नॉन टीपिंग ट्रक टीपिंग ट्रक डम्पर प्लेसर अवशिष्ट संग्राहक कम्पैक्टर अन्य जेसीबी - लोडर	अपशिष्ट का परिवहन करने में लगाए गए फेरों की संख्या
अपशिष्ट के परिवहन की बारंबारता	बारंबारता परिवहन किए गए अपशिष्ट का प्रतिशत  प्रतिदिन एकांतर दिवस पर सप्ताह में दो बार सप्ताह में एक बार कभी-कभी
प्रत्येक दिन परिवहन किए गए अपशिष्ट की मात्रा	/टीपीडी
प्रतिदिन परिवहन किए गए कुल अपशिष्ट की प्रतिशतता	%
प्रयोग की गई अपशिष्ट शोधन प्रौद्योगिकियां	
क्या ठोस अपशिष्ट का प्रसंस्करण किया जाता है	हां/नहीं

यदि हां, तो प्रतिदिन प्रसंस्करण किए गए अपशिष्ट की मात्रा	/टीपीडी
अपशिष्ट प्रसंस्करण के लिए स्थानीय निकाय के पास उपलब्ध भूमि (हेक्टेयर में)	
अपशिष्ट प्रसंस्करण के लिए वर्तमान में प्रयुक्त भूमि	
प्रचालनरत ठोस अपशिष्ट प्रसंस्करण सुविधाएं	
निर्माणाधीन ठोस अपशिष्ट प्रसंस्करण सुविधाएं	
शहर/नगर की सीमा से प्रसंस्करण सुविधाओं की दूरी	
अपनाई गई प्रौद्योगिकियों का विवरण	
कंपोस्टिंग	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
वर्मी कंपोस्टिंग	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
बायो-मिथेनेशन	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
अवशिष्ट जनित ईंधन	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
अपशिष्ट से ऊर्जा प्रौद्योगिकी जैसे कि भष्मीकरण, गैसीकरण, पाइरोलेसिस या कोई अन्य प्रौद्योगिकी (विवरण दें)	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
सह-प्रसंस्करण	प्रसंस्करण की गई कच्ची सामग्री
सीमेंट संयंत्र को आपूर्तित दहनशील अपशिष्ट	

	ठोस अपशिष्ट आधारित विद्युत संयंत्रों को आपूर्ति दहनशील अपशिष्ट	
	अन्य	मात्रा
	ठोस अपशिष्ट निपटान सुविधाएं	
	स्थानीय निकाय के पास उपलब्ध मलबा स्थलों की संख्या	
	स्थानीय निकाय के पास उपलब्ध स्वास्थ्यकर भरण स्थलों की संख्या	
	अपशिष्ट के निपटान हेतु उपलब्ध ऐसे प्रत्येक स्थल का क्षेत्रफल	
	अपशिष्ट के निपटान के लिए वर्तमान में प्रयुक्त भूमि का क्षेत्रफल	
	शहर/नगर से मलबा स्थल/भरण सुविधा की दूरी	कि.मी.
	निकटतम वसावट से दूरी	कि.मी.
	जल निकाय से दूरी	कि.मी.
	राज्य/राष्ट्रीय राजमार्ग से दूरी	कि.मी.
	विमानपत्तन से दूरी	कि.मी.
	महत्वपूर्ण धार्मिक स्थलों या ऐतिहासिक स्मारक से दूरी	कि.मी.
	क्या यह बाढ़ संभावित क्षेत्र में पड़ता है	हां/नहीं
	क्या यह भूकंप संभावित क्षेत्र में पड़ता है	हां/नहीं
	प्रत्येक दिन भरण में डाले गए अपशिष्ट की मात्रा	टीपीडी
	क्या भरण स्थल को घेरा गया है	हां/नहीं
	क्या स्थल पर रोशनी की सुविधा उपलब्ध है	हां/नहीं
	क्या धर्मकांटा सुविधा उपलब्ध है	हां/नहीं
	भरण स्थल पर प्रयुक्त वाहन और उपकरण (स्पष्ट करें)	उपलब्ध बुलडोजर, कम्पैक्टर इत्यादि
	भरण स्थल पर नियोजित जनशक्ति	हां/नहीं (यदि हां तो विवरण संलग्न करें)
	क्या ढकने का काम दैनिक आधार पर किया जाता है	हां/नहीं
	यदि नहीं, तो भरण स्थल पर जमा अपशिष्ट को ढकने की बारंबारता	
	ढकने के लिए प्रयुक्त सामग्री	
	क्या ढकने की पर्याप्त सामग्री उपलब्ध है	हां/नहीं
	क्या गैस निकलने की व्यवस्था की गई है	हां/नहीं (यदि हां, तो तकनीकी डाटा शीट संलग्न करें)
	निक्षालन संग्रहण का प्रावधान	हां/नहीं (यदि हां, तो तकनीकी डाटा शीट संलग्न करें)
10.	क्या शहर में ठोस अपशिष्ट प्रबंधन पद्धतियों में सुधार लाने के लिए	हां/नहीं

	कार्ययोजना बनाई गई है	(यदि हां, तो तकनीकी डाटा शीट संलग्न करें)
11.	निम्न के लिए कौन से पृथक प्रावधान किए गए हैं :  डेयरी से संबंधित कार्यकलाप : बूचड़खाने के अपशिष्ट : निर्माण एवं विध्वंस अपशिष्ट (निर्माण मलबा) :	प्रस्तावों, उठाए गए कदमों के संबंध में विवरण संलग्न करें  हां/नहीं हां/नहीं हां/नहीं
12.	पश्च संवृत्ति योजना का विवरण	योजना संलग्न करें
13.	कितनी मलिन बस्तियों का निर्धारण किया गया है और क्या इनमें ठोस अपशिष्ट प्रबंधन सुविधाएं उपलब्ध कराई गई हैं :	हां/नहीं (यदि हां, तो विवरण संलग्न करें)
14.	गली में झाड़ू लगाने, अपशिष्ट के द्वितीयक भंडारण, परिवहन, प्रसंस्करण और निपटान सहित संग्रहण के लिए ठेकेदार/रियायतग्राही की नियोजित जनशक्ति का विवरण दें	
15.	इन नियमों के प्रावधानों का अनुपालन करने में स्थानीय निकाय द्वारा महसूस की जा रही कठिनाइयों का संक्षेप में उल्लेख करें	
16.	ठोस अपशिष्ट से संबंधित समस्या से निपटने के लिए किसी अभिनव विचार का संक्षेप में उल्लेख करें जिसे अन्य स्थानीय निकायों द्वारा अपनाया जा सके	

प्रचालक के हस्ताक्षर

तारीख :

स्थान :

## प्ररूप-IV

[नियम 15 (यक), 24(2) देखें]

स्थानीय निकाय द्वारा प्रस्तुत किए जाने के लिए ठोस अपशिष्ट प्रबंधन संबंधी  
वार्षिक रिपोर्ट का प्रारूप

कैलेंडर वर्ष	रिपोर्ट प्रस्तुत करने की तारीख

1.	शहर/नगर का नाम	
2.	जनसंख्या	
3.	क्षेत्रफल वर्ग किलो मीटर में	
4.	स्थानीय निकाय का नाम और पता दूरभाष सं. फैक्स ई-मेल :	
5.	ठोस अपशिष्ट प्रबंधन (वेस्टेम) से संबंधित प्रभारी अधिकारी का नाम दूरभाष सं. फैक्स ई-मेल :	
6.	शहर/नगर में परिवारों की संख्या शहर में गैर आवासीय परिसरों की संख्या शहर/नगर में चुनाव/प्रशासनिक वार्डों की संख्या	
7.	ठोस अपशिष्ट की मात्रा	
	प्रति दिन स्थानीय निकाय के क्षेत्र में उत्पन्न ठोस अपशिष्ट की अनुमानित मात्रा मीट्रिक टन में	/टीपीडी
	प्रतिदिन संग्रहित ठोस अपशिष्ट की मात्रा	/टीपीडी
	प्रतिदिन संग्रहित प्रति व्यक्ति अपशिष्ट	/ग्रा./दिन
	प्रसंसकृत ठोस अपशिष्ट की मात्रा	/टीपीडी
	मलबा स्थल/भरण स्थल पर निपटान किए गए ठोस अपशिष्ट की मात्रा	/टीपीडी
8.	ठोस अपशिष्ट प्रबंधन सेवा की स्थिति	
	स्रोत पर अपशिष्ट का पृथक्करण और भंडारण	
	क्या घरेलू/वाणिज्यिक/संस्थागत बिनों में स्रोत पर ठोस अपशिष्ट का भंडारण किया जाता है, यदि हां	हां/नहीं

घरेलू बिनों में स्रोत पर अपशिष्ट के भंडारण की घरेलू रीति की प्रतिशतता						%
वाणिज्यिक/संस्थागत बिनों में स्रोत पर अपशिष्ट का गैर आवासीय परिसरों में भंडारण करने की प्रतिशतता						%
गलियों में घरों के ठोस अपशिष्ट का निपटान करने या फेंकने की प्रतिशतता						%
गलियों में गैर आवासीय परिसरों के ठोस अपशिष्ट का निपटान करने या फेंकने की प्रतिशतता						%
ठोस अपशिष्ट का घर-घर जाकर संग्रहण						
क्या शहर/नगर में ठोस अपशिष्ट का घर-घर जाकर संग्रहण किया जाता है						हां/नहीं
यदि हां, तो अपशिष्ट के घर-घर जाकर संग्रहण किए जाने में शामिल वार्डों की संख्या						
शामिल किए गए घरों की संख्या						
शामिल किए गए वाणिज्यिक संस्थापनाओं, होटलों, रेस्तराओं, शैक्षिक संस्थाओं/कार्यालय इत्यादि सहित गैर आवासीय परिसरों की संख्या						
निम्न के माध्यम से घर-घर जाकर संग्रहण किए जाने में शामिल आवासीय और गैर आवासीय परिसरों की प्रतिशतता :						
मोटरकृत वाहन						%
कंटेनरकृत तिपहिया साइकिल/हैंड कार्ट						%
अन्य साधन						%
यदि नहीं, तो संग्रहण में अपनाई गई प्राथमिक पद्धति						
गलियों में झाड़ू लगाया जाना						
शहर में सड़कों, गलियों, लेनों, बाइलेनों की लम्बाई जिनकी सफाई किए जाने की आवश्यकता है						कि.मी.
गली में झाड़ू लगाए जाने की बारंबारता और लाभान्वित जनसंख्या की प्रतिशतता	बारंबारता	रोजाना	एकांतर दिवस पर	सप्ताह में दो बार	कभी-कभी	
	लाभान्वित जनसंख्या की प्रतिशतता					
प्रयुक्त साधन						%
हाथ से झाड़ू लगाया जाना						%
यांत्रिक रूप से झाड़ू लगाया जाना						%

	क्या सफाई कर्मचारियों द्वारा लंबी हैंडल वाले झाड़ू का प्रयोग किया जाता है	हां/नहीं
	क्या प्रत्येक सफाई कर्मचारी को अपशिष्ट का संग्रहण करने के लिए हैंडकार्ट/तिपहिया साइकिल दी जाती है	हां/नहीं
	क्या हैंडकार्ट/तिपहिया साइकिल में कंटेनर लगा है	हां/नहीं
	क्या संग्रहण का साधन प्रयोग किए गए संग्रहण/अपशिष्ट भंडारण के कंटेनरों समकालिक है	हां/नहीं
	द्वितीयक अपशिष्ट भंडारण सुविधाएं	
	शहर/नगर में अपशिष्ट भंडारण डिपो की संख्या और प्रकार खुले अपशिष्ट भंडारण स्थल चिनाई किए गए बिन सीमेंट कंक्रीट सिलिंडर के बिन ढलाव/ढके हुए कक्ष/स्थान ढके हुए धातु/प्लास्टिक के कंटेनर 1.1 घन मीटर तक के बिन 2 से 5 घन मीटर के बिन 5 घन मीटर से बड़े कंटेनर बिन रहित शहर	संख्या क्षमता घन मीटर में
	बिन/जनसंख्या अनुपात	
	अपशिष्ट भंडारण डिपो का वार्डवार विवरण (संलग्न करें) : वार्ड सं. : क्षेत्रफल : जनसंख्या : रखे हुए बिनों की संख्या रखे गए बिनों का कुल आयतन	
	अपशिष्ट भंडारण सुविधाओं की कुल भंडारण क्षमता घन मीटर में	
	अपशिष्ट भंडारण डिपो में प्रतिदिन वास्तविक रूप से भंडारित कुल अपशिष्ट	

	डिपो से अपशिष्ट के संग्रहण की बारंबारता बताएं साफ किए गए बिनो की संख्या	बारंबारता	बिनो की संख्या
		प्रतिदिन	
		एकांतर दिवस	
		सप्ताह में दो बार	
		सप्ताह में एक बार	
		कभी-कभी	
	क्या भंडारण डिपो में पृथककृत अपशिष्ट को हरे, नीले और काले बिनो में भंडार करके रखने की सुविधा है	हां/नहीं (यदि हां तो विवरण दें) हरे बिनो की संख्या : नीले बिनो की संख्या : काले बिनो की संख्या :	
	भंडारण डिपो से ठोस अपशिष्ट उठाने का कार्य हाथ से किया जाता है या यांत्रिक तरीके से? प्रतिशत बताएं ठोस अपशिष्ट को हाथ से उठाए जाने की प्रतिशतता यांत्रिक तरीके से उठाने की प्रतिशतता	% %	
	यदि यांत्रिक है तो प्रयुक्त पद्धति का स्पष्ट उल्लेख करें	फ्रंट-एंड लोडर/टॉप लोडर	
	क्या ठोस अपशिष्ट को घर-घर से उठाया जाता है और पृथककृत स्वरूप में सीधे शोधन संयंत्र तक भेजा जाता है	हां/नहीं (यदि हां तो स्पष्ट उल्लेख करें)	
	प्रतिदिन अपशिष्ट का परिवहन प्रयोग किए गए वाहनों का प्रकार और संख्या	अपशिष्ट का परिवहन करने में लगाए गए फेरों की संख्या	

<p>पशु गाड़ी ट्रैक्टर नॉन टीपिंग ट्रक टीपिंग ट्रक डम्पर प्लेसर अवशिष्ट संग्राहक कम्पैक्टर अन्य जेसीबी - लोडर</p>	
अपशिष्ट के परिवहन की बारंबारता	<p>बारंबारता      परिवहन किए गए अपशिष्ट का प्रतिशत</p> <p>प्रतिदिन एकांतर दिवस पर सप्ताह में दो बार सप्ताह में एक बार कभी-कभी</p>
प्रत्येक दिन परिवहन किए गए अपशिष्ट की मात्रा	/टीपीडी
प्रतिदिन परिवहन किए गए कुल अपशिष्ट की प्रतिशतता	%
प्रयोग की गई अपशिष्ट शोधन प्रौद्योगिकियां	
क्या ठोस अपशिष्ट का प्रसंस्करण किया गया है	हां/नहीं
यदि हां, तो प्रतिदिन प्रसंस्करण किए गए अपशिष्ट की मात्रा	/टीपीडी
क्या शोधन का कार्य स्थानीय निकाय या किसी अभिकरण के माध्यम से किया जाता है	
अपशिष्ट प्रसंस्करण के लिए स्थानीय निकाय के पास उपलब्ध भूमि (हेक्टेयर में)	
अपशिष्ट प्रसंस्करण के लिए वर्तमान में प्रयुक्त भूमि	
प्रचालनरत ठोस अपशिष्ट प्रसंस्करण सुविधाएं	
निर्माणाधीन ठोस अपशिष्ट प्रसंस्करण सुविधाएं	
शहर/नगर की सीमा से प्रसंस्करण सुविधाओं की दूरी	

	अपनाई गई प्रौद्योगिकियों का विवरण	
	कंपोस्टिंग	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
	वर्मी कंपोस्टिंग	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
	बायो-मिथेनेशन	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
	अवशिष्ट जनित ईंधन	प्रसंस्करण की गई कच्ची सामग्री की मात्रा उत्पन्न किए गए अंतिम उत्पाद की मात्रा बेची गई मात्रा भरण स्थल में डाले गए शेष अपशिष्ट की मात्रा
	सह-प्रसंस्करण	प्रसंस्करण की गई कच्ची सामग्री
	सीमेंट संयंत्र को आपूर्ति दहनशील अपशिष्ट	
	ठोस अपशिष्ट आधारित विद्युत संयंत्रों को आपूर्ति दहनशील अपशिष्ट	
	अन्य	मात्रा
	ठोस अपशिष्ट निपटान सुविधाएं	
	स्थानीय निकाय के पास उपलब्ध मलबा स्थलों की संख्या	
	स्थानीय निकाय के पास उपलब्ध स्वास्थ्यकर भरण स्थलों की संख्या	

	अपशिष्ट के निपटान हेतु उपलब्ध ऐसे प्रत्येक स्थल का क्षेत्रफल	
	अपशिष्ट के निपटान के लिए वर्तमान में प्रयुक्त भूमि का क्षेत्रफल	
	शहर/नगर से मलबा स्थल/भरण सुविधा की दूरी	कि.मी.
	निकटतम वसावट से दूरी	कि.मी.
	जल निकाय से दूरी	कि.मी.
	राज्य/राष्ट्रीय राजमार्ग से दूरी	कि.मी.
	विमानपत्तन से दूरी	कि.मी.
	महत्वपूर्ण धार्मिक स्थलों या ऐतिहासिक स्मारक से दूरी	कि.मी.
	क्या यह बाढ़ संभावित क्षेत्र में पड़ता है	हां/नहीं
	क्या यह भूकंप संभावित क्षेत्र में पड़ता है	हां/नहीं
	प्रत्येक दिन भरण में डाले गए अपशिष्ट की मात्रा	टीपीडी
	क्या भरण स्थल को घेरा गया है	हां/नहीं
	क्या स्थल पर रोशनी की सुविधा उपलब्ध है	हां/नहीं
	क्या धर्मकांटा सुविधा उपलब्ध है	हां/नहीं
	भरण स्थल पर प्रयुक्त वाहन और उपकरण (स्पष्ट करें)	उपलब्ध बुलडोजर, कम्पैक्टर इत्यादि
	भरण स्थल पर नियोजित जनशक्ति	हां/नहीं (यदि हां तो विवरण संलग्न करें)
	क्या ढकने का काम दैनिक आधार पर किया जाता है	हां/नहीं
	यदि नहीं, तो भरण स्थल पर जमा अपशिष्ट को ढकने की बारंबारता	
	ढकने के लिए प्रयुक्त सामग्री	
	क्या ढकने की पर्याप्त सामग्री उपलब्ध है	हां/नहीं
	क्या गैस निकलने की व्यवस्था की गई है	हां/नहीं (यदि हां, तो तकनीकी डाटा शीट संलग्न करें)
	निक्षालन संग्रहण का प्रावधान	हां/नहीं (यदि हां, तो तकनीकी डाटा शीट संलग्न करें)
9.	क्या शहर में ठोस अपशिष्ट प्रबंधन पद्धतियों में सुधार लाने के लिए कार्ययोजना बनाई गई है	हां/नहीं (यदि हां, तो तकनीकी डाटा शीट संलग्न करें)
10.	निम्न के लिए कौन से पृथक प्रावधान किए गए हैं : डेयरी से संबंधित कार्यकलाप : बूचड़खाने के अपशिष्ट : निर्माण एवं विध्वंस अपशिष्ट (निर्माण मलबा) :	प्रस्तावों, उठाए गए कदमों के संबंध में विवरण संलग्न करें   हां/नहीं

		हां/नहीं हां/नहीं
11.	पश्च संवृत्ति योजना का विवरण	योजना संलग्न करें
12.	कितनी मलिन बस्तियों का निर्धारण किया गया है और क्या इनमें ठोस अपशिष्ट प्रबंधन सुविधाएं उपलब्ध कराई गई हैं :	हां/नहीं (यदि हां, तो विवरण संलग्न करें)
13.	कृपया विवरण दें : गली में झाड़ू लगाने, अपशिष्ट के द्वितीयक भंडारण, परिवहन, प्रसंस्करण और निपटान सहित संग्रहण के लिए स्थानीय निकाय की स्वयं की जनशक्ति	
14.	कृपया विवरण दें : गली में झाड़ू लगाने, अपशिष्ट के द्वितीयक भंडारण, परिवहन, प्रसंस्करण और निपटान सहित संग्रहण के लिए ठेकेदार/रियायतग्राही की नियोजित जनशक्ति	
15.	इन नियमों के प्रावधानों का अनुपालन करने में स्थानीय निकाय द्वारा महसूस की जा रही कठिनाइयों का संक्षेप में उल्लेख करें	
16.	ठोस अपशिष्ट से संबंधित समस्या से निपटने के लिए किसी अभिनव विचार का संक्षेप में उल्लेख करें जिसे अन्य स्थानीय निकायों द्वारा अपनाया जा सके	

मुख्य कार्यकारी अधिकारी/  
नगरपालिका आयुक्त/कार्यकारी अधिकारी/  
मुख्य अधिकारी के हस्ताक्षर

तारीख :

स्थान :

### प्ररूप-V

#### [नियम 24(3) देखें]

राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समितियों द्वारा केन्द्रीय प्रदूषण नियंत्रण बोर्ड को प्रस्तुत की जाने वाली वार्षिक रिपोर्ट का प्रपत्र

भाग क

सेवा में,

अध्यक्ष,

केन्द्रीय प्रदूषण नियंत्रण बोर्ड,  
परिवेश भवन, पूर्वी अर्जुन नगर,

दिल्ली-110032

1.	राज्य/संघ राज्य क्षेत्र का नाम	:	
2.	राज्य प्रदूषण नियंत्रण बोर्ड का नाम और पता	:	
3.	इन नियमों के अंतर्गत राज्य/संघ राज्य क्षेत्र में ठोस अपशिष्टों के प्रबंधन के लिए उत्तरदायी स्थानीय निकायों की संख्या	:	
4.	प्राप्त हुए प्राधिकार आवेदनों की संख्या	:	
5.	ठोस अपशिष्ट प्रबंधन के संबंध में स्थानीय निकाय द्वारा की गई प्रगति के संबंध में सारांश विवरण	:	कृपया अनुबंध- I के रूप में संलग्न करें
6.	अपशिष्ट संग्रहण, पृथक्करण, परिवहन और निपटान के संबंध में स्थानीय निकायों द्वारा की गई प्रगति के संबंध में सारांश विवरण	:	कृपया अनुबंध- II के रूप में संलग्न करें
7.	अनुसूची II के कार्यान्वयन के संबंध में स्थानीय निकायों द्वारा की गई प्रगति के संबंध में सारांश विवरण	:	कृपया अनुबंध- III के रूप में संलग्न करें
तारीख :		अध्यक्ष या सदस्य सचिव	
स्थान :		राज्य प्रदूषण नियंत्रण बोर्ड/ प्रदूषण नियंत्रण समिति	

**भाग ख****नगर/शहर**

नगरों/शहरों की कुल संख्या

शहरी स्थानीय निकायों की कुल संख्या

श्रेणी-I तथा श्रेणी-II नगरों/शहरों की संख्या

**प्राधिकार की स्थिति (नाम/संख्या)**

प्राप्त हुए आवेदनों की संख्या

प्रदान किए गए प्राधिकारों की संख्या

जांच के अधीन प्राधिकार

**ठोस अपशिष्ट उत्पादन की स्थिति**

राज्य में ठोस अपशिष्ट उत्पादन (टीपीडी)

संग्रहित

शोधित

खत्ते में डाले गए

**ठोस अपशिष्ट नियम की अनुसूची I का अनुपालन (नगरों की संख्या/नाम/क्षमता)**

शहरों/नगरों में अच्छी रीतियां

घर-घर से संग्रहण

पृथक्करण

भंडारण

आवृत्त परिवहन

**ठोस अपशिष्ट का प्रसंस्करण (नगरों की संख्या/नाम/क्षमता)**

ठोस अपशिष्ट प्रसंस्करण सुविधाओं की स्थापना :

क्रम सं.	कम्पोस्टिंग	वर्मी-कम्पोस्टिंग	वायो गैस	आरडीएफ/गुटिकाकरण

**प्रचालनरत प्रसंस्करण सुविधा**

क्रम सं.	कम्पोस्टिंग	वर्मी-कम्पोस्टिंग	वायो गैस	आरडीएफ/गुटिकाकरण

**संस्थापनाधीन/योजनाकृत प्रसंस्करण सुविधा**

क्रम सं.	कम्पोस्टिंग	वर्मी-कम्पोस्टिंग	वायो गैस	आरडीएफ/गुटिकाकरण

**अपशिष्ट से ऊर्जा संयंत्र : (नगरों की संख्या/नाम/क्षमता)**

क्रम सं.	संयंत्र का स्थान	प्रचालन की स्थिति	विद्युत उत्पादन (मेगा वाट)	अभ्युक्ति

**ठोस अपशिष्ट का निपटान (नगरों की संख्या/नाम/क्षमता)**

अभिनिर्धारित भरण स्थल

निर्मित भरण स्थल

निर्माणाधीन भरण स्थल

प्रचालनरत भरण स्थल

निश्शेषित भरण स्थल

आच्छादित भरण स्थल

**ठोस अपशिष्ट मलबा स्थल (नगरों की संख्या/नाम/क्षमता)**

विद्यमान मलबा स्थलों की कुल संख्या

पुनर्निर्मित/आच्छादित भरण स्थल

स्वास्थ्यकर भरण स्थल में परिवर्तित मलबा स्थल

**अपशिष्ट प्रसंस्करण/भरण स्थलों पर निगरानी**

क्रम सं.	सुविधाओं का नाम	परिवेशी वायु	भू जल	निक्षालन की गुणवत्ता	कंपोस्ट की गुणवत्ता	वीओसी
1.						
2.						
3.						

नगरपालिकाओं द्वारा तैयार की गई कार्य योजनाओं की स्थिति

नगरपालिकाओं की कुल संख्या:

प्रस्तुत की गई कार्य योजना की संख्या:

**प्ररूप-VI**

**[नियम 25 देखें]**

**दुर्घटना का प्रतिवेदन**

1.	दुर्घटना की तारीख और समय	:	
2.	दुर्घटना के लिए कारकों का अनुक्रम	:	
3.	दुर्घटना में शामिल अपशिष्ट	:	
4.	मानव स्वास्थ्य और पर्यावरण पर दुर्घटनाओं के प्रभावों का मूल्यांकन	:	
5.	किए गए आपातकालीन उपाय	:	
6.	दुर्घटनाओं के प्रभावों को कम करने के लिए उठाए गए कदम	:	
7.	ऐसी किसी दुर्घटना की पुनरावृत्ति को रोकने के लिए उठाए गए कदम	:	
तारीख .....		हस्ताक्षर .....	
स्थान .....		पदनाम .....	

[फा. सं.18-3/2004-एचएसएमडी]

विश्वनाथ सिन्हा, संयुक्त सचिव

**MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE**

**NOTIFICATION**

New Delhi, the 8th April, 2016

**S.O. 1357(E).**—Whereas the draft of the Solid Waste Management Rules, 2015 were published under the notification of the Government of India in the Ministry of Environment, Forest and Climate Change number G.S.R. 451 (E), dated the 3<sup>rd</sup> June, 2015 in the Gazette of India, part II, Section 3, sub-section (i) of the same date inviting objections or suggestions from the persons likely to be affected thereby, before the expiry of the period of sixty days from the publication of the said notification on the Solid Waste Management Rules, 2015 in supersession of the Municipal Solid Waste (Management and Handling) Rules, 2000;

And whereas, copies of the said Gazette were made available to the public on the 3<sup>rd</sup> June, 2015;

And whereas, the objections or comments received within the stipulated period were duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sections 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) and in supersession of the Municipal Solid Waste (Management and Handling) Rules, 2000, except as respect things done or omitted to be done before such supersession, the Central Government hereby makes the following rules for management of Solid Waste, namely:-

1. **Short title and commencement.-**

- (1) These rules may be called the Solid Waste Management Rules, 2016.
- (2) They shall come into force on the date of their publication in the Official Gazette.

2. **Application.-** These rules shall apply to every urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India, notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, Ports and harbours, defence establishments, special economic zones, State and Central government organisations, places of pilgrims, religious and historical importance as may be notified by respective State government from time to time and to every domestic, institutional, commercial and any other non residential solid waste generator situated in the areas except industrial waste, hazardous waste, hazardous chemicals, bio medical wastes, e-waste, lead acid batteries and radio-active waste, that are covered under separate rules framed under the Environment (Protection) Act, 1986.

3. **Definitions** –(1) In these rules, unless the context otherwise requires,- (1) **“aerobic composting”** means a controlled process involving microbial decomposition of organic matter in the presence of oxygen;

2. **“anaerobic digestion”** means a controlled process involving microbial decomposition of organic matter in absence of oxygen;
3. **“authorisation”** means the permission given by the State Pollution Control Board or Pollution Control Committee, as the case may be, to the operator of a facility or urban local authority, or any other agency responsible for processing and disposal of solid waste;
4. **“biodegradable waste ”** means any organic material that can be degraded by micro-organisms into simpler stable compounds;
5. **“bio-methanation”** means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;
6. **“brand owner”** means a person or company who sells any commodity under a registered brand label.
7. **“buffer zone”** means zone of no development to be maintained around solid waste processing and disposal facility, exceeding 5 TPD of installed capacity. This will be maintained within total and area allotted for the solid waste processing and disposal facility.
8. **“bulk waste generator”** means and includes buildings occupied by the Central government departments or undertakings, State government departments or undertakings, local bodies, public sector undertakings or private companies, hospitals, nursing homes, schools, colleges, universities, other educational institutions, hostels, hotels, commercial establishments, markets, places of worship, stadia and sports complexes having an average waste generation rate exceeding 100kg per day;
9. **“bye-laws”** means regulatory framework notified by local body, census town and notified area townships for facilitating the implementation of these rules effectively in their jurisdiction.
10. **“census town”** means an urban area as defined by the Registrar General and Census Commissioner of India;
11. **“combustible waste”** means non-biodegradable, non-recyclable, non-reusable, non hazardous solid waste having minimum calorific value exceeding 1500 kcal/kg and excluding chlorinated materials like plastic, wood pulp, etc;
12. **“composting”** means a controlled process involving microbial decomposition of organic matter;
13. **“contractor”** means a person or firm that undertakes a contract to provide materials or labour to perform a service or do a job for service providing authority;
14. **“co-processing”** means use of non-biodegradable and non recyclable solid waste having calorific value exceeding 1500k/cal as raw material or as a source of energy or both to replace or supplement the natural mineral resources and fossil fuels in industrial processes;
15. **“decentralised processing”** means establishment of dispersed facilities for maximizing the processing of bio-degradable waste and recovery of recyclables closest to the source of generation so as to minimize transportation of waste for processing or disposal;
16. **“disposal”** means the final and safe disposal of post processed residual solid waste and inert street sweepings and silt from surface drains on land as specified in Schedule I to prevent contamination of ground water, surface water, ambient air and attraction of animals or birds;
17. **“domestic hazardous waste”** means discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge, etc., generated at the household level;

18. **"door to door collection"** means collection of solid waste from the door step of households, shops, commercial establishments, offices, institutional or any other non residential premises and includes collection of such waste from entry gate or a designated location on the ground floor in a housing society, multi storied building or apartments, large residential, commercial or institutional complex or premises;
19. **"dry waste"** means waste other than bio-degradable waste and inert street sweepings and includes recyclable and non recyclable waste, combustible waste and sanitary napkin and diapers, etc;
20. **"dump sites"** means a land utilised by local body for disposal of solid waste without following the principles of sanitary land filling;
21. **"extended producer responsibility" (EPR)** means responsibility of any producer of packaging products such as plastic, tin, glass and corrugated boxes, etc., for environmentally sound management, till end-of-life of the packaging products;
22. **"facility"** means any establishment wherein the solid waste management processes namely segregation, recovery, storage, collection, recycling, processing, treatment or safe disposal are carried out;
23. **"fine"** means penalty imposed on waste generators or operators of waste processing and disposal facilities under the bye-laws for non-compliance of the directions contained in these rules and/or bye- laws
24. **"Form"** means a Form appended to these rules;
25. **"handling"** includes all activities relating to sorting, segregation, material recovery, collection, secondary storage, shredding, baling, crushing, loading, unloading, transportation, processing and disposal of solid wastes;
26. **"inerts"** means wastes which are not bio-degradable, recyclable or combustible street sweeping or dust and silt removed from the surface drains;
27. **"incineration"** means an engineered process involving burning or combustion of solid waste to thermally degrade waste materials at high temperatures;
28. **"informal waste collector"** includes individuals, associations or waste traders who are involved in sorting, sale and purchase of recyclable materials;
29. **"leachate"** means the liquid that seeps through solid waste or other medium and has extracts of dissolved or suspended material from it;
30. **"local body"** for the purpose of these rules means and includes the municipal corporation, nagar nigam, municipal council, nagarpalika, nagar Palikaparishad, municipal board, nagar panchayat and town panchayat, census towns, notified areas and notified industrial townships with whatever name they are called in different States and union territories in India;
31. **"materials recovery facility" (MRF)** means a facility where non-compostable solid waste can be temporarily stored by the local body or any other entity mentioned in rule 2 or any person or agency authorised by any of them to facilitate segregation, sorting and recovery of recyclables from various components of waste by authorised informal sector of waste pickers, informal recyclers or any other work force engaged by the local body or entity mentioned in rule 2 for the purpose before the waste is delivered or taken up for its processing or disposal;
32. **"non-biodegradable waste"** means any waste that cannot be degraded by micro organisms into simpler stable compounds;
33. **"operator of a facility"** means a person or entity, who owns or operates a facility for handling solid waste which includes the local body and any other entity or agency appointed by the local body;
34. **primary collection"** means collecting, lifting and removal of segregated solid waste from source of its generation including households, shops, offices and any other non-residential premises or from any collection points or any other location specified by the local body;
35. **"processing"** means any scientific process by which segregated solid waste is handled for the purpose of reuse, recycling or transformation into new products;
36. **"recycling"** means the process of transforming segregated non-biodegradable solid waste into new material or product or as raw material for producing new products which may or may not be similar to the original products;
37. **"redevelopment"** means rebuilding of old residential or commercial buildings at the same site, where the existing buildings and other infrastructures have become dilapidated;

38. "**refused derived fuel**"(RDF) means fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste ;
39. "**residual solid waste**" means and includes the waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing;
40. "**sanitary land filling** " means the final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, wind-blown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion;
41. "**sanitary waste**" means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste;
42. "**Schedule**" means the Schedule appended to these rules;
43. "**secondary storage**" means the temporary containment of solid waste after collection at secondary waste storage depots or MRFs or bins for onward transportation of the waste to the processing or disposal facility;
44. "**segregation**" means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture and dairy waste, non biodegradable wastes including recyclable waste, non-recyclable combustible waste, sanitary waste and non recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes;
45. "**service provider**" means an authority providing public utility services like water, sewerage, electricity, telephone, roads, drainage, etc;
46. "**solid waste**" means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities mentioned in rule 2;
47. "**sorting**" means separating various components and categories of recyclables such as paper, plastic, cardboards, metal, glass, etc., from mixed waste as may be appropriate to facilitate recycling;
48. "**stabilising**" means the biological decomposition of biodegradable wastes to a stable state where it generates no leachate or offensive odours and is fit for application to farm land ,soil erosion control and soil remediation;
49. "**street vendor**" means any person engaged in vending of articles, goods, wares, food items or merchandise of everyday use or offering services to the general public, in a street, lane, side walk, footpath, pavement, public park or any other public place or private area, from a temporary built up structure or by moving from place to place and includes hawker, peddler, squatter and all other synonymous terms which may be local or region specific; and the words "street vending" with their grammatical variations and cognate expressions, shall be construed accordingly;
50. "**tipping fee**" means a fee or support price determined by the local authorities or any state agency authorised by the State government to be paid to the concessionaire or operator of waste processing facility or for disposal of residual solid waste at the landfill;
51. "**transfer station**" means a facility created to receive solid waste from collection areas and transport in bulk in covered vehicles or containers to waste processing and, or, disposal facilities;
52. "**transportation**" means conveyance of solid waste, either treated, partly treated or untreated from a location to another location in an environmentally sound manner through specially designed and covered transport system so as to prevent the foul odour, littering and unsightly conditions;
53. "**treatment**" means the method, technique or process designed to modify physical, chemical or biological characteristics or composition of any waste so as to reduce its volume and potential to cause harm;
54. "**user fee**" means a fee imposed by the local body and any entity mentioned in rule 2 on the waste generator to cover full or part cost of providing solid waste collection, transportation, processing and disposal services.
55. "**vermi composting**" means the process of conversion of bio-degradable waste into compost using earth worms;
56. "**waste generator**" means and includes every person or group of persons, every residential premises and non residential establishments including Indian Railways, defense establishments, which generate solid waste;
57. "**waste hierarchy**" means the priority order in which the solid waste is to should be managed by giving

emphasis to prevention, reduction, reuse, recycling, recovery and disposal, with prevention being the most preferred option and the disposal at the landfill being the least;

58. **“waste picker”** means a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation the streets, bins, material recovery facilities, processing and waste disposal facilities for sale to recyclers directly or through intermediaries to earn their livelihood.

(2) Words and expressions used herein but not defined, but defined in the Environment (Protection) Act, 1986, the Water (Prevention and Control of Pollution) Act, 1974, Water (Prevention and Control of Pollution) Cess Act, 1977 and the Air (prevention and Control of Pollution) Act, 1981 shall have the same meaning as assigned to them in the respective Acts.

**4 Duties of waste generators.-** (1) Every waste generator shall,-

(a) segregate and store the waste generated by them in three separate streams namely bio-degradable, non bio-degradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorised waste pickers or waste collectors as per the direction or notification by the local authorities from time to time;

(b) wrap securely the used sanitary waste like diapers, sanitary pads etc., in the pouches provided by the manufacturers or brand owners of these products or in a suitable wrapping material as instructed by the local authorities and shall place the same in the bin meant for dry waste or non- bio-degradable waste;

(c) store separately construction and demolition waste, as and when generated, in his own premises and shall dispose off as per the Construction and Demolition Waste Management Rules, 2016; and

(d) store horticulture waste and garden waste generated from his premises separately in his own premises and dispose of as per the directions of the local body from time to time.

(2) No waste generator shall throw, burn or bury the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.

(3) All waste generators shall pay such user fee for solid waste management, as specified in the bye-laws of the local bodies.

(4) No person shall organise an event or gathering of more than one hundred persons at any unlicensed place without intimating the local body, at least three working days in advance and such person or the organiser of such event shall ensure segregation of waste at source and handing over of segregated waste to waste collector or agency as specified by the local body.

(5) Every street vendor shall keep suitable containers for storage of waste generated during the course of his activity such as food waste, disposable plates, cups, cans, wrappers, coconut shells, leftover food, vegetables, fruits, etc., and shall deposit such waste at waste storage depot or container or vehicle as notified by the local body.

(6) All resident welfare and market associations shall, within one year from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

(7) All gated communities and institutions with more than 5,000 sqm area shall, within one year from the date of notification of these rules and in partnership with the local body, ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorized recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

(8) All hotels and restaurants shall, within one year from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

**5. Duties of Ministry of Environment, Forest and Climate Change.-** (1) The Ministry of Environment, Forest and Climate Change shall be responsible for over all monitoring the implementation of these rules in the country. It shall constitute a Central Monitoring Committee under the Chairmanship of Secretary, Ministry of Environment, Forest and Climate Change comprising officer not below the rank of Joint Secretary or Advisor from the following namely,-

- 1) Ministry of Urban Development
- 2) Ministry of Rural Development
- 3) Ministry of Chemicals and Fertilizers
- 4) Ministry of Agriculture
- 5) Central Pollution Control Board
- 6) Three State Pollution Control Boards or Pollution Control Committees by rotation
- 7) Urban Development Departments of three State Governments by rotation
- 8) Rural Development Departments from two State Governments by rotation
- 9) Three Urban Local bodies by rotation
- 10) Two census towns by rotation
- 11) FICCI, CII
- 12) Two subject experts

2. This Central Monitoring Committee shall meet at least once in a year to monitor and review the implementation of these rules. The Ministry of Environment, Forest and Climate Change may co-opt other experts, if needed. The Committee shall be renewed every three years.

**6. Duties of Ministry of Urban Development.-** (1) The Ministry of Urban Development shall coordinate with State Governments and Union territory Administrations to,-

- (a) take periodic review of the measures taken by the states and local bodies for improving solid waste management practices and execution of solid waste management projects funded by the Ministry and external agencies at least once in a year and give advice on taking corrective measures;
- (b) formulate national policy and strategy on solid waste management including policy on waste to energy in consultation with stakeholders within six months from the date of notification of these rules;
- (c) facilitate States and Union Territories in formulation of state policy and strategy on solid management based on national solid waste management policy and national urban sanitation policy;
- (d) promote research and development in solid waste management sector and disseminate information to States and local bodies;
- (e) undertake training and capacity building of local bodies and other stakeholders;and
- (f) provide technical guidelines and project finance to states, Union territories and local bodies on solid waste management to facilitate meeting timelines and standards.

**7. Duties of Department of Fertilisers, Ministry of Chemicals and Fertilisers.-** (1) The Department of Fertilisers through appropriate mechanisms shall,-

- (a) provide market development assistance on city compost; and
- (b) ensure promotion of co-marketing of compost with chemical fertilisers in the ratio of 3 to 4 bags: 6 to 7 bags by the fertiliser companies to the extent compost is made availablefor marketing to the companies.

**8. Duties of Ministry of Agriculture, Government of India.-** The Ministry of Agriculture through appropriate mechanisms shall,-

- (a) provide flexibility in Fertiliser Control Order for manufacturing and sale of compost;
- (b) propagate utilisation of compost on farm land;
- (c) set up laboratories to test quality of compost produced by local authorities or their authorised agencies; and
- (d) issue suitable guidelines for maintaining the quality of compost and ratio of use of compost visa-a-vis chemical fertilizers while applying compost to farmland.

**9. Duties of the Ministry of Power.-**The Ministry of Power through appropriate mechanisms shall,-

- (a) decide tariff or charges for the power generated from the waste to energy plants based on solid waste.
- (b) compulsory purchase power generated from such waste to energy plants by distribution company.

**10. Duties of Ministry of New and Renewable Energy Sources-** The Ministry of New and Renewable Energy Sources through appropriate mechanisms shall,-

- (a) facilitate infrastructure creation for waste to energy plants; and
- (b) provide appropriate subsidy or incentives for such waste to energy plants.

**11. Duties of the Secretary-in-charge, Urban Development in the States and Union territories.-** (1) The Secretary, Urban Development Department in the State or Union territory through the Commissioner or Director of Municipal Administration or Director of local bodies shall,-

- (a) prepare a state policy and solid waste management strategy for the state or the union territory in consultation with stakeholders including representative of waste pickers, self help group and similar groups working in the field of waste management consistent with these rules, national policy on solid waste management and national urban sanitation policy of the ministry of urban development, in a period not later than one year from the date of notification of these rules;
- (b) while preparing State policy and strategy on solid waste management, lay emphasis on waste reduction, reuse, recycling, recovery and optimum utilisation of various components of solid waste to ensure minimisation of waste going to the landfill and minimise impact of solid waste on human health and environment;
- (c) state policies and strategies should acknowledge the primary role played by the informal sector of waste pickers, waste collectors and recycling industry in reducing waste and provide broad guidelines regarding integration of waste picker or informal waste collectors in the waste management system.
- (d) ensure implementation of provisions of these rules by all local authorities;
- (e) direct the town planning department of the State to ensure that master plan of every city in the State or Union territory provisions for setting up of solid waste processing and disposal facilities except for the cities who are members of common waste processing facility or regional sanitary landfill for a group of cities; and
- (f) ensure identification and allocation of suitable land to the local bodies within one year for setting up of processing and disposal facilities for solid wastes and incorporate them in the master plans (land use plan) of the State or as the case may be, cities through metropolitan and district planning committees or town and country planning department;
- (h) direct the town planning department of the State and local bodies to ensure that a separate space for segregation, storage, decentralised processing of solid waste is demarcated in the development plan for group housing or commercial, institutional or any other non-residential complex exceeding 200 dwelling or having a plot area exceeding 5,000 square meters;
- (i) direct the developers of Special Economic Zone, Industrial Estate, Industrial Park to earmark at least five percent of the total area of the plot or minimum five plots or sheds for recovery and recycling facility.
- (j) facilitate establishment of common regional sanitary land fill for a group of cities and towns falling within a distance of 50 km (or more) from the regional facility on a cost sharing basis and ensure professional management of such sanitary landfills;
- (k) arrange for capacity building of local bodies in managing solid waste, segregation and transportation or processing of such waste at source;
- (l) notify buffer zone for the solid waste processing and disposal facilities of more than five tons per day in consultation with the State Pollution Control Board; and
- (m) start a scheme on registration of waste pickers and waste dealers.

**12. Duties of District Magistrate or District Collector or Deputy Commissioner.-** The District Magistrate or District Collector or as the case may be, the Deputy Commissioner shall, -

- (a) facilitate identification and allocation of suitable land as per clause (f) of rules 11 for setting up solid waste processing and disposal facilities to local authorities in his district in close coordination with the Secretary-in-charge of State Urban Development Department within one year from the date of notification of these rules;
- (b) review the performance of local bodies, at least once in a quarter on waste segregation, processing, treatment and disposal and take corrective measures in consultation with the Commissioner or Director of Municipal Administration or Director of local bodies and secretary-in-charge of the State Urban Development.

**13. Duties of the Secretary-in-charge of Village Panchayats or Rural Development Department in the State and Union territory.-** (1) The Secretary-in-charge of Village Panchayats or Rural Development Department in the State and Union territory shall have the same duties as the Secretary-in-charge, Urban Development in the States and Union territories, for the areas which are covered under these rules and are under their jurisdictions.

**14. Duties of Central Pollution Control Board.-**The Central Pollution Control Board shall, -

- (a) co-ordinate with the State Pollution Control Boards and the Pollution Control Committees for implementation of these rules and adherence to the prescribed standards by local authorities;
- (b) formulate the standards for ground water, ambient air, noise pollution, leachate in respect of all solid waste processing and disposal facilities;
- (c) review environmental standards and norms prescribed for solid waste processing facilities or treatment technologies and update them as and when required;
- (d) review through State Pollution Control Boards or Pollution Control Committees, at least once in a year, the implementation of prescribed environmental standards for solid waste processing facilities or treatment technologies and compile the data monitored by them;
- (e) review the proposals of State Pollution Control Boards or Pollution Control Committees on use of any new technologies for processing, recycling and treatment of solid waste and prescribe performance standards, emission norms for the same within 6 months;
- (f) monitor through State Pollution Control Boards or Pollution Control Committees the implementation of these rules by local bodies;
- (g) prepare an annual report on implementation of these rules on the basis of reports received from State Pollution Control Boards and Committees and submit to the Ministry of Environment, Forest and Climate Change and the report shall also be put in public domain;
- (h) publish guidelines for maintaining buffer zone restricting any residential, commercial or any other construction activity from the outer boundary of the waste processing and disposal facilities for different sizes of facilities handling more than five tons per day of solid waste;
- (i) publish guidelines, from time to time, on environmental aspects of processing and disposal of solid waste to enable local bodies to comply with the provisions of these rules; and
- (j) provide guidance to States or Union territories on inter-state movement of waste.

**15. Duties and responsibilities of local authorities and village Panchayats of census towns and urban agglomerations.-** The local authorities and Panchayats shall,-

- (a) prepare a solid waste management plan as per state policy and strategy on solid waste management within six months from the date of notification of state policy and strategy and submit a copy to respective departments of State Government or Union territory Administration or agency authorised by the State Government or Union territory Administration;
- (b) arrange for door to door collection of segregated solid waste from all households including slums and informal settlements, commercial, institutional and other non residential premises. From multi-storage buildings, large commercial complexes, malls, housing complexes, etc., this may be collected from the entry gate or any other designated location;
- (c) establish a system to recognise organisations of waste pickers or informal waste collectors and promote and establish a system for integration of these authorised waste-pickers and waste collectors to facilitate their participation in solid waste management including door to door collection of waste;
- (d) facilitate formation of Self Help Groups, provide identity cards and thereafter encourage integration in solid waste management including door to door collection of waste;
- (e) frame bye-laws incorporating the provisions of these rules within one year from the date of notification of these rules and ensure timely implementation;
- (f) prescribe from time to time user fee as deemed appropriate and collect the fee from the waste generators on its own or through authorised agency;
- (g) direct waste generators not to litter i.e throw or dispose of any waste such as paper, water bottles, liquor bottles, soft drink cans, tetra packs, fruit peel, wrappers, etc., or burn or bury waste on streets, open public spaces, drains, waste bodies and to segregate the waste at source as prescribed under these rules and hand over the segregated waste to authorised the waste pickers or waste collectors authorised by the local body;
- (h) setup material recovery facilities or secondary storage facilities with sufficient space for sorting of recyclable materials to enable informal or authorised waste pickers and waste collectors to separate recyclables from the waste and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, textile from the source of generation or from material recovery facilities; Bins for storage of bio-degradable wastes shall be painted green, those for storage of recyclable wastes shall be printed white and those for storage of other wastes shall be printed black;

- (i) establish waste deposition centres for domestic hazardous waste and give direction for waste generators to deposit domestic hazardous wastes at this centre for its safe disposal. Such facility shall be established in a city or town in a manner that one centre is set up for the area of twenty square kilometers or part thereof and notify the timings of receiving domestic hazardous waste at such centres;
- (j) ensure safe storage and transportation of the domestic hazardous waste to the hazardous waste disposal facility or as may be directed by the State Pollution Control Board or the Pollution Control Committee;
- (k) direct street sweepers not to burn tree leaves collected from street sweeping and store them separately and handover to the waste collectors or agency authorised by local body;
- (l) provide training on solid waste management to waste-pickers and waste collectors;
- (m) collect waste from vegetable, fruit, flower, meat, poultry and fish market on day to day basis and promote setting up of decentralised compost plant or bio-methanation plant at suitable locations in the markets or in the vicinity of markets ensuring hygienic conditions;
- (n) collect separately waste from sweeping of streets, lanes and by-lanes daily, or on alternate days or twice a week depending on the density of population, commercial activity and local situation;
- (o) set up covered secondary storage facility for temporary storage of street sweepings and silt removed from surface drains in cases where direct collection of such waste into transport vehicles is not convenient. Waste so collected shall be collected and disposed of at regular intervals as decided by the local body;
- (p) collect horticulture, parks and garden waste separately and process in the parks and gardens, as far as possible;
- (q) transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference shall be given for on site processing of such waste;
- (r) transport non-bio-degradable waste to the respective processing facility or material recovery facilities or secondary storage facility;
- (s) transport construction and demolition waste as per the provisions of the Construction and Demolition Waste management Rules, 2016;
- (t) involve communities in waste management and promotion of home composting, bio-gas generation, decentralised processing of waste at community level subject to control of odour and maintenance of hygienic conditions around the facility;
- (u) phase out the use of chemical fertilizer in two years and use compost in all parks, gardens maintained by the local body and wherever possible in other places under its jurisdiction. Incentives may be provided to recycling initiatives by informal waste recycling sector.
- (v) facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own or with private sector participation or through any agency for optimum utilisation of various components of solid waste adopting suitable technology including the following technologies and adhering to the guidelines issued by the Ministry of Urban Development from time to time and standards prescribed by the Central Pollution Control Board. Preference shall be given to decentralised processing to minimize transportation cost and environmental impacts such as-
- a) bio-methanation, microbial composting, vermi-composting, anaerobic digestion or any other appropriate processing for bio-stabilisation of biodegradable wastes;
  - b) waste to energy processes including refused derived fuel for combustible fraction of waste or supply as feedstock to solid waste based power plants or cement kilns;
- (w) undertake on their own or through any other agency construction, operation and maintenance of sanitary landfill and associated infrastructure as per Schedule I for disposal of residual wastes in a manner prescribed under these rules;
- (x) make adequate provision of funds for capital investments as well as operation and maintenance of solid waste management services in the annual budget ensuring that funds for discretionary functions of the local body have been allocated only after meeting the requirement of necessary funds for solid waste management and other obligatory functions of the local body as per these rules;
- (y) make an application in Form-I for grant of authorisation for setting up waste processing, treatment or disposal facility, if the volume of waste is exceeding five metric tones per day including sanitary landfills from the State Pollution Control Board or the Pollution Control Committee, as the case may be;
- (z) submit application for renewal of authorisation at least sixty days before the expiry of the validity of authorisation;

- (za) prepare and submit annual report in Form IV on or before the 30<sup>th</sup> April of the succeeding year to the Commissioner or Director, Municipal Administration or designated Officer;
- (zb) the annual report shall then be sent to the Secretary -in-Charge of the State Urban Development Department or village panchayat or rural development department and to the respective State Pollution Control Board or Pollution Control Committee by the 31<sup>st</sup> May of every year;
- (zc) educate workers including contract workers and supervisors for door to door collection of segregated waste and transporting the unmixed waste during primary and secondary transportation to processing or disposal facility;
- (zd) ensure that the operator of a facility provides personal protection equipment including uniform, fluorescent jacket, hand gloves, raincoats, appropriate foot wear and masks to all workers handling solid waste and the same are used by the workforce;
- (ze) ensure that provisions for setting up of centers for collection, segregation and storage of segregated wastes, are incorporated in building plan while granting approval of building plan of a group housing society or market complex; and
- (zf) frame bye-laws and prescribe criteria for levying of spot fine for persons who litters or fails to comply with the provisions of these rules and delegate powers to officers or local bodies to levy spot fines as per the bye laws framed; and
- (zg) create public awareness through information, education and communication campaign and educate the waste generators on the following; namely:-
- (i) not to litter;
  - (ii) minimise generation of waste;
  - (iii) reuse the waste to the extent possible;
  - (iv) practice segregation of waste into bio-degradable, non-biodegradable (recyclable and combustible), sanitary waste and domestic hazardous wastes at source;
  - (v) practice home composting, vermi-composting, bio-gas generation or community level composting;
  - (vi) wrap securely used sanitary waste as and when generated in the pouches provided by the brand owners or a suitable wrapping as prescribed by the local body and place the same in the bin meant for non-biodegradable waste;
  - (vii) storage of segregated waste at source in different bins;
  - (viii) handover segregated waste to waste pickers, waste collectors, recyclers or waste collection agencies; and
  - (ix) pay monthly user fee or charges to waste collectors or local bodies or any other person authorised by the local body for sustainability of solid waste management.
- (zh) stop land filling or dumping of mixed waste soon after the timeline as specified in rule 23 for setting up and operationalisation of sanitary landfill is over;
- (zi) allow only the non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive inert waste and pre-processing rejects and residues from waste processing facilities to go to sanitary landfill and the sanitary landfill sites shall meet the specifications as given in Schedule-I, however, every effort shall be made to recycle or reuse the rejects to achieve the desired objective of zero waste going to landfill;
- (zj) investigate and analyse all old open dumpsites and existing operational dumpsites for their potential of bio-mining and bio-remediation and wheresoever feasible, take necessary actions to bio-mine or bio-remediate the sites;
- (zk) in absence of the potential of bio-mining and bio-remediation of dumpsite, it shall be scientifically capped as per landfill capping norms to prevent further damage to the environment.

**16. Duties of State Pollution Control Board or Pollution Control Committee.-** (1) The State Pollution Control Board or Pollution Control Committee shall,-

- (a) enforce these rules in their State through local bodies in their respective jurisdiction and review implementation of these rules at least twice a year in close coordination with concerned Directorate of Municipal Administration or Secretary-in-charge of State Urban Development Department;
- (b) monitor environmental standards and adherence to conditions as specified under the Schedule I and Schedule II for waste processing and disposal sites;
- (c) examine the proposal for authorisation and make such inquiries as deemed fit, after the receipt of the application for the same in Form I from the local body or any other agency authorised by the local body;

- (d) while examining the proposal for authorisation, the requirement of consents under respective enactments and views of other agencies like the State Urban Development Department, the Town and Country Planning Department, District Planning Committee or Metropolitan Area Planning Committee, as may be applicable, Airport or Airbase Authority, the Ground Water Board, Railways, power distribution companies, highway department and other relevant agencies shall be taken into consideration and they shall be given four weeks time to give their views, if any;
- (e) issue authorisation within a period of sixty days in Form II to the local body or an operator of a facility or any other agency authorised by local body stipulating compliance criteria and environmental standards as specified in Schedules I and II including other conditions, as may be necessary;
- (f) synchronise the validity of said authorisation with the validity of the consents;
- (g) suspend or cancel the authorization issued under clause (a) any time, if the local body or operator of the facility fails to operate the facility as per the conditions stipulated:  
provided that no such authorization shall be suspended or cancelled without giving notice to the local body or operator, as the case may be; and
- (h) on receipt of application for renewal, renew the authorisation for next five years, after examining every application on merit and subject to the condition that the operator of the facility has fulfilled all the provisions of the rules, standards or conditions specified in the authorisation, consents or environment clearance.
- (2) The State Pollution Control Board or Pollution Control Committee shall, after giving reasonable opportunity of being heard to the applicant and for reasons thereof to be recorded in writing, refuse to grant or renew an authorisation.
- (3) In case of new technologies, where no standards have been prescribed by the Central Pollution Control Board, State Pollution Control Board or Pollution Control Committee, as the case may be, shall approach Central Pollution Control Board for getting standards specified.
- (4) The State Pollution Control Board or the Pollution Control Committee, as the case may be, shall monitor the compliance of the standards as prescribed or laid down and treatment technology as approved and the conditions stipulated in the authorisation and the standards specified in Schedules I and II under these rules as and when deemed appropriate but not less than once in a year.
- (5) The State Pollution Control Board or the Pollution Control Committee may give directions to local bodies for safe handling and disposal of domestic hazardous waste deposited by the waste generators at hazardous waste deposition facilities.
- (6) The State Pollution Control Board or the Pollution Control Committee shall regulate Inter-State movement of waste.

**17. Duty of manufacturers or brand owners of disposable products and sanitary napkins and diapers.-** (1) All manufacturers of disposable products such as tin, glass, plastics packaging, etc., or brand owners who introduce such products in the market shall provide necessary financial assistance to local authorities for establishment of waste management system.

- (2) All such brand owners who sell or market their products in such packaging material which are non-biodegradable shall put in place a system to collect back the packaging waste generated due to their production.
- (3) Manufacturers or brand owners or marketing companies of sanitary napkins and diapers shall explore the possibility of using all recyclable materials in their products or they shall provide a pouch or wrapper for disposal of each napkin or diapers along with the packet of their sanitary products.
- (4) All such manufacturers, brand owners or marketing companies shall educate the masses for wrapping and disposal of their products.

**18. Duties of the industrial units located within one hundred km from the refused derived fuel and waste to energy plants based on solid waste-** All industrial units using fuel and located within one hundred km from a solid waste based refused derived fuel plant shall make arrangements within six months from the date of notification of these rules to replace at least five percent of their fuel requirement by refused derived fuel so produced.

**19. Criteria for Duties regarding setting-up solid waste processing and treatment facility.-** (1) The department in-charge of the allocation of land assignment shall be responsible for providing suitable land for setting up of the solid waste processing and treatment facilities and notify such sites by the State Government or Union territory Administration.

- (2) The operator of the facility shall design and set up the facility as per the technical guidelines issued by the Central Pollution Control Board in this regard from time to time and the manual on solid waste management prepared by the Ministry of Urban Development.

- (3) The operator of the facility shall obtain necessary approvals from the State Pollution Control Board or Pollution Control Committee.
- (4) The State Pollution Control Board or Pollution Control Committee shall monitor the environment standards of the operation of the solid waste processing and treatment facilities.
- (5) The operator of the facility shall be responsible for the safe and environmentally sound operations of the solid waste processing and or treatment facilities as per the guidelines issued by the Central Pollution Control Board from time to time and the Manual on Municipal Solid Waste Management published by the Ministry of Urban Development and updated from time to time-
- (6) The operator of the solid waste processing and treatment facility shall submit annual report in Form III each year by 30<sup>th</sup> April to the State Pollution Control Board or Pollution Committee and concerned local body.

**20. Criteria and actions to be taken for solid waste management in hilly areas.-** In the hilly areas, the duties and responsibilities of the local authorities shall be the same as mentioned in rule 15 with additional clauses as under:

- (a) Construction of landfill on the hill shall be avoided. A transfer station at a suitable enclosed location shall be setup to collect residual waste from the processing facility and inert waste. A suitable land shall be identified in the plain areas down the hill within 25 kilometers for setting up sanitary landfill. The residual waste from the transfer station shall be disposed of at this sanitary landfill.
- (b) In case of non-availability of such land, efforts shall be made to set up regional sanitary landfill for the inert and residual waste.
- (c) Local body shall frame Bye-laws and prohibit citizen from littering wastes on the streets and give strict direction to the tourists not to dispose any waste such as paper, water bottles, liquor bottles, soft drink canes, tetra packs, any other plastic or paper waste on the streets or down the hills and instead direct to deposit such waste in the litter bins that shall be placed by the local body at all tourist destinations.
- (d) Local body shall arrange to convey the provisions of solid waste management under the bye-laws to all tourists visiting the hilly areas at the entry point in the town as well as through the hotels, guest houses or like where they stay and by putting suitable hoardings at tourist destinations.
- (e) Local body may levy solid waste management charge from the tourist at the entry point to make the solid waste management services sustainable.
- (f) The department in- charge of the allocation of land assignment shall identify and allot suitable space on the hills for setting up decentralised waste processing facilities. Local body shall set up such facilities. Step garden system may be adopted for optimum utilisation of hill space.

**21. Criteria for waste to energy process.-** (1) Non recyclable waste having calorific value of 1500 K/cal/kg or more shall not be disposed of on landfills and shall only be utilised for generating energy either or through refuse derived fuel or by giving away as feed stock for preparing refuse derived fuel.

- (2) High calorific wastes shall be used for co-processing in cement or thermal power plants.
- (3) The local body or an operator of facility or an agency designated by them proposing to set up waste to energy plant of more than five tones per day processing capacity shall submit an application in Form-I to the State Pollution Control Board or Pollution Control Committee, as the case may be, for authorisation.
- (4) The State Pollution Control Board or Pollution Control Committee, on receiving such application for setting up waste to energy facility, shall examine the same and grant permission within sixty days.

**22. Time frame for implementation.-** Necessary infrastructure for implementation of these rules shall be created by the local bodies and other concerned authorities, as the case may be, on their own, by directly or engaging agencies within the time frame specified below:

Sl. No.	Activity	Time limit from the date of notification of rules
(1)	(2)	(3)
1.	identification of suitable sites for setting up solid waste processing facilities	1 year

2.	identification of suitable sites for setting up common regional sanitary landfill facilities for suitable clusters of local authorities under 0.5 million population and for setting up common regional sanitary landfill facilities or stand alone sanitary landfill facilities by all local authorities having a population of 0.5 million or more .	1 year
3.	procurement of suitable sites for setting up solid waste processing facility and sanitary landfill facilities	2 years
4.	enforcing waste generators to practice segregation of bio degradable, recyclable, combustible, sanitary waste domestic hazardous and inert solid wastes at source ,	2 years
5.	Ensure door to door collection of segregated waste and its transportation in covered vehicles to processing or disposal facilities.	2 years
6.	ensure separate storage, collection and transportation of construction and demolition wastes	2 years
7.	setting up solid waste processing facilities by all local bodies having 100000 or more population	2 years
8.	Setting up solid waste processing facilities by local bodies and census towns below 100000 population.	3 years
9	setting up common or stand alone sanitary landfills by or for all local bodies having 0.5 million or more population for the disposal of only such residual wastes from the processing facilities as well as untreatable inert wastes as permitted under the Rules	3 years
10.	setting up common or regional sanitary landfills by all local bodies and census towns under 0.5 million population for the disposal of permitted waste under the rules	3years
11.	bio-remediation or capping of old and abandoned dump sites	5years

**23. State Level Advisory Body.** – (1) Every Department in-charge of local bodies of the concerned State Government or Union territory administration shall constitute a State Level Advisory Body within six months from the date of notification of these rules comprising the following members, namely:-

Sl. No	Designation	Member
(1)	(2)	(3)
1.	Secretary, Department of Urban Development or Local self government department of the State	Chairperson, ex-officio
2.	One representative of Panchayats or Rural development Department not below the rank of Joint Secretary to State Government	Member, ex-officio
3.	one representative of Revenue Department of State Government	Member, ex-officio
4.	One representative from Ministry of Environment, Forest and Climate Change Government of India	Member, ex-officio

5.	One representative from Ministry of Urban Development, Government of India	Member, ex-officio
6.	One representative from Ministry of Rural Development, Government of India	Member, ex-officio
7.	One representative from the Central Pollution Control Board	Member, ex-officio
8.	One representative from the State Pollution Control Board or Pollution Control Committee	Member, ex-officio
9.	One representative from Indian Institute of Technology or National Institute of Technology	Member, Ex-officio
10.	Chief town planner of the state	Member
11.	Three representatives from the local bodies by rotation	Member
12.	Two representatives from census towns or urban agglomerations by rotation.	Member
13.	One representative from reputed Non-Governmental Organisation or Civil Society working for the waste pickers or informal recycler or solid waste management	Member
14.	One representative from a body representing Industries at the State or Central level	Member
15.	one representative from waste recycling industry	member
16.	Two subject experts	Member
17.	Co-opt one representative each from agriculture department, and labour department of State Government.	Member

(2) The State Level Advisory Body shall meet at least one in every six months to review the matters related to implementation of these rules, state policy and strategy on solid waste management and give advice to state government for taking measures that are necessary for expeditious and appropriate implementation of these rules.

(3) The copies of the review report shall be forwarded to the State Pollution Control Board or Pollution Control Committee for necessary action.

**24. Annual report.-** (1) The operator of facility shall submit the annual report to the local body in Form-III on or before the 30<sup>th</sup> day of April every year.

(2) The local body shall submit its annual report in Form-IV to State P Control Board or P Committee and the Secretary-in-Charge of the Department of Urban Development of the concerned State or Union Territory in case of metropolitan city and to the Director of Municipal Administration or Commissioner of Municipal Administration or Officer in -Charge of Urban local bodies in the state in case of all other local bodies of state on or before the 30<sup>th</sup> day of June every year

(3) Each State Pollution Control Board or Pollution Control Committee as the case may be, shall prepare and submit the consolidated annual report to the Central Pollution Control Board and Ministry of Urban Development on the implementation of these rules and action taken against non complying local body by the 31<sup>st</sup> day of July of each year in Form-V.

(4) The Central Pollution Control Board shall prepare a consolidated annual review report on the status of implementation of these rules by local bodies in the country and forward the same to the Ministry of Urban Development

and Ministry of Environment, Forest and Climate Change, along with its recommendations before the 31<sup>st</sup> day of August each year.

(5) The annual report shall be reviewed by the Ministry of Environment, Forest and Climate Change during the meeting of Central Monitoring Committee.

**25. Accident reporting-** In case of an accident at any solid waste processing or treatment or disposal facility or landfill site, the Officer- in- charge of the facility shall report to the local body in Form-VI and the local body shall review and issue instructions if any, to the in- charge of the facility.

#### SCHEDULE I

[see rule 15 (w),(zi), 16 (1) (b) (e), 16 (4)]

##### Specifications for Sanitary Landfills

###### (A) Criteria for site selection.-

- (i) The department in the business allocation of land assignment shall provide suitable site for setting up of the solid waste processing and treatment facilities and notify such sites.
- (ii) The sanitary landfill site shall be planned, designed and developed with proper documentation of construction plan as well as a closure plan in a phased manner. In case a new landfill facility is being established adjoining an existing landfill site, the closure plan of existing landfill should form a part of the proposal of such new landfill.
- (iii) The landfill sites shall be selected to make use of nearby wastes processing facilities. Otherwise, wastes processing facility shall be planned as an integral part of the landfill site.
- (iv) Landfill sites shall be set up as per the guidelines of the Ministry of Urban Development, Government of India and Central Pollution Control Board.
- (v) The existing landfill sites which are in use for more than five years shall be improved in accordance with the specifications given in this Schedule.
- (vi) The landfill site shall be large enough to last for at least 20-25 years and shall develop 'landfill cells' in a phased manner to avoid water logging and misuse.
- (vii) The landfill site shall be 100 meter away from river, 200 meter from a pond, 200 meter from Highways, Habitations, Public Parks and water supply wells and 20 km away from Airports or Airbase. However in a special case, landfill site may be set up within a distance of 10 and 20 km away from the Airport/Airbase after obtaining no objection certificate from the civil aviation authority/ Air force as the case may be. The Landfill site shall not be permitted within the flood plains as recorded for the last 100 years, zone of coastal regulation, wetland, Critical habitat areas, sensitive eco-fragile areas..
- (viii) The sites for landfill and processing and disposal of solid waste shall be incorporated in the Town Planning Department's land-use plans.
- (ix) A buffer zone of no development shall be maintained around solid waste processing and disposal facility, exceeding five Tonnes per day of installed capacity. This will be maintained within the total area of the solid waste processing and disposal facility. The buffer zone shall be prescribed on case to case basis by the local body in consultation with concerned State Pollution Control Board.
- (x) The biomedical waste shall be disposed of in accordance with the Bio-medical Waste Management Rules, 2016, as amended from time to time . The hazardous waste shall be managed in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended from time to time. The E-waste shall be managed in accordance with the e-Waste (Management ) Rules, 2016 as amended from time to time.
- (xi) Temporary storage facility for solid waste shall be established in each landfill site to accommodate the waste in case of non- operation of waste processing and during emergency or natural calamities.

###### (B) Criteria for development of facilities at the sanitary landfills.-

- (i) Landfill site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles, to prevent entry of unauthorised persons and stray animals
- (ii) The approach and / internal roads shall be concreted or paved so as to avoid generation of dust particles due to vehicular movement and shall be so designed to ensure free movement of vehicles and other machinery.
- (iii) The landfill site shall have waste inspection facility to monitor waste brought in for landfilling h, office facility for record keeping and shelter for keeping equipment and machinery including pollution monitoring equipment. The operator of the facility shall maintain record of waste received, processed and disposed.

- (iv) Provisions like weigh bridge to measure quantity of waste brought at landfill site, fire protection equipment and other facilities as may be required shall be provided.
- (v) Utilities such as drinking water and sanitary facilities (preferably washing/bathing facilities for workers) and lighting arrangements for easy landfill operations during night hours shall be provided.
- (vi) Safety provisions including health inspections of workers at landfill sites shall be carried out made.
- (vii) Provisions for parking, cleaning, washing of transport vehicles carrying solid waste shall be provided. The wastewater so generated shall be treated to meet the prescribed standards.

**(C) Criteria for specifications for land filling operations and closure on completion of land filling.-**

- (i) Waste for land filling shall be compacted in thin layers using heavy compactors to achieve high density of the waste. In high rainfall areas where heavy compactors cannot be used, alternative measures shall be adopted.
- (ii) Till the time waste processing facilities for composting or recycling or energy recovery are set up, the waste shall be sent to the sanitary landfill. The landfill cell shall be covered at the end of each working day with minimum 10 cm of soil, inert debris or construction material..
- (iii) Prior to the commencement of monsoon season, an intermediate cover of 40-65 cm thickness of soil shall be placed on the landfill with proper compaction and grading to prevent infiltration during monsoon. Proper drainage shall be constructed to divert run-off away from the active cell of the landfill.
- (iv) After completion of landfill, a final cover shall be designed to minimise infiltration and erosion. The final cover shall meet the following specifications, namely :--
  - a) The final cover shall have a barrier soil layer comprising of 60 cm of clay or amended soil with permeability coefficient less than  $1 \times 10^{-7}$  cm/sec.
  - b) On top of the barrier soil layer, there shall be a 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 minimise erosion.

**(D) Criteria for pollution prevention.-**In order to prevent pollution from landfill operations, the following provisions shall be made, namely:-

- (i) The storm water drain shall be designed and constructed in such a way that the surface runoff water is diverted from the landfilling site and leachates from solid waste locations do not get mixed with the surface runoff water. Provisions for diversion of storm water discharge drains shall be made to minimise leachate generation and prevent pollution of surface water and also for avoiding flooding and creation of marshy conditions.
- (ii) 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) shall have liner of composite barrier of 1.5 mm thick high density polyethylene (HDPE) geo-membrane or geo-synthetic liners, 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 provided at the bottom of landfills.
- (iii) Provisions for management of leachates including its collection and treatment shall be made. The treated leachate shall be recycled or utilized as permitted, otherwise shall be released into the sewerage line, after meeting the standards specified in Schedule- II. In no case, leachate shall be released into open environment.
- (iv) Arrangement shall be made to prevent leachate runoff from landfill area entering any drain, stream, river, lake or pond. In case of mixing of runoff water with leachate or solid waste, the entire mixed water shall be treated by the concern authority.

**(E) Criteria for water quality monitoring.-**

- (i) Before establishing any 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 meter of the periphery of landfill site shall be periodically monitored covering different seasons in a year that is, summer, monsoon and post-monsoon period to ensure that the ground water is not contaminated.
- (ii) Usage of groundwater in and around landfill sites for any purpose (including drinking and irrigation) shall be considered only after ensuring its quality. The following specifications for drinking water quality shall apply for monitoring purpose, namely :-

S. No.	Parameters	IS 10500:2012, Edition 2.2(2003-09) Desirable limit (mg/l except for pH)
(1)	(2)	(3)
	Arsenic	0.01
	Cadmium	0.01
	Chromium(as Cr <sup>6+</sup> )	0.05
	Copper	0.05
	Cyanide	0.05
	Lead	0.05
	Mercury	0.001
	Nickel	-
	Nitrate as NO <sub>3</sub>	45.0
	pH	6.5-8.5
	Iron	0.3
	Total hardness (as CaCO <sub>3</sub> )	300.0
	Chlorides	250
	Dissolved solids	500
	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	0.001
	Zinc	5.0
	Sulphate (as SO <sub>4</sub> )	200

**(F) Criteria for ambient air quality monitoring.-**

- (i) Landfill gas control system including gas collection system shall be installed at landfill site to minimize odour, prevent off-site migration of gases, to protect vegetation planted on the rehabilitated landfill surface. For enhancing landfill gas recovery, use of geomembranes in cover systems along with gas collection wells should be considered.
- (ii) The concentration of methane gas generated at landfill site shall not exceed 25 per cent of the lower explosive limit (LEL).
- (iii) The landfill gas from the collection facility at a landfill site shall be utilized for either direct thermal applications or power generation, as per viability. Otherwise, landfill gas shall be burnt (flared) and shall not be allowed to escape directly to the atmosphere or for illegal tapping. Passive venting shall be allowed in case if its utilisation or flaring is not possible.
- (iv) Ambient air quality at the landfill site and at the vicinity shall be regularly monitored. Ambient air quality shall

meet the standards prescribed by the Central Pollution Control Board for Industrial area.

**G. Criteria for plantation at landfill Site.-** A vegetative cover shall be provided over the completed site in accordance with the following specifications, namely:-

- (a) Locally adopted non-edible perennial plants that are resistant to drought and extreme temperatures shall be planted;
- (b) The selection of plants should be of such variety that their roots do not penetrate more than 30 cms. This condition shall apply till the landfill is stabilized;
- (c) Selected plants shall have ability to thrive on low-nutrient soil with minimum nutrient addition;
- (d) Plantation to be made in sufficient density to minimise soil erosion.
- (e) Green belts shall be developed all around the boundary of the landfill in consultation with State Pollution Control Boards or Pollution Control Committees .

**H. Criteria for post-care of landfill site.- (1)** The post-closure care of landfill site shall be conducted for at least fifteen years and long term monitoring or care plan shall consist of the following, namely :-<sup>4</sup>

- (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 and around landfill;
  - (d) Maintaining and operating the landfill gas collection system to meet the standards.
- (2) Use of closed landfill sites after fifteen years of post-closure monitoring can be considered for human settlement or otherwise only after ensuring that gaseous emission and leachate quality analysis complies with the specified standards and the soil stability is ensured.

**I. Criteria for special provisions for hilly areas.-**Cities and towns located on hills shall have location-specific methods evolved for final disposal of solid waste by the local body with the approval of the concerned State Pollution Control Board or the Pollution Control Committee. The local body shall set up processing facilities for utilisation of biodegradable organic waste. The non-biodegradable recyclable materials shall be stored and sent for recycling periodically. The inert and non-biodegradable waste shall be used for building roads or filling-up of appropriate areas on hills. In case of constraints in finding adequate land in hilly areas, waste not suitable for road-laying or filling up shall be disposed of in regional landfills in plain areas.

**J. Closure and Rehabilitation of Old Dumps-** Solid waste dumps which have reached their full capacity or those which will not receive additional waste after setting up of new and properly designed landfills should be closed and rehabilitated by examining the following options:

- (i) Reduction of waste by bio mining and waste processing followed by placement of residues in new landfills or capping as in (ii) below.
- (ii) Capping with solid waste cover or solid waste cover enhanced with geomembrane to enable collection and flaring / utilisation of greenhouse gases.
- (iii) Capping as in (ii) above with additional measures (in alluvial and other coarse grained soils) such as cut-off walls and extraction wells for pumping and treating contaminated ground water.
- (iv) Any other method suitable for reducing environmental impact to acceptable level.

## SCHEDULE II

[see rule 16 (1), (b), (e), 16 (4) ]

### Standards of processing and treatment of solid waste

**A. Standards for composting.-** The waste processing facilities shall include composting as one of the technologies for processing of bio degradable waste. In order to prevent pollution from compost plant, the following shall be complied with namely :-

- (a) The incoming organic waste at site shall be stored properly 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 precaution shall be taken to minimise nuisance of odour, flies, rodents, bird menace and fire hazard;

- (c) In case of breakdown or maintenance of plant, waste intake shall be stopped and arrangements be worked out for diversion of waste to the temporary processing site or temporary landfill sites which will be again reprocessed when plant is in order;
- (d) 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-recyclable high calorific fractions to be segregated and sent to waste to energy or for RDF production, co-processing in cement plants or to thermal power plants. Only rejects from all processes shall be sent for sanitary landfill site(s).
- (e) The windrow area shall be provided with impermeable base. Such a base shall be made of concrete or compacted clay of 50 cm thick having permeability coefficient less than  $10^{-7}$  cm/sec. The base shall be provided with 1 to 2 per cent slope and circled by lined drains for collection of leachate or surface run-off;
- (f) Ambient air quality monitoring shall be regularly carried out. Odour nuisance at down-wind direction on the boundary of processing plant shall also be checked regularly.
- (g) Leachate shall be re-circulated in compost plant for moisture maintenance.
- (h) The end product compost shall meet the standards prescribed under Fertilizer Control Order notified from time to time.
- (i) In order to ensure safe application of compost, the following specifications for compost quality shall be met, namely:-

Parameters	Organic Compost (FCO 2009)	Phosphate Rich Organic Manure (FCO 2013)
(1)	(2)	(3)
Arsenic (mg/Kg)	10.00	10.00
Cadmium (mg/Kg)	5.00	5.00
Chromium (mg/Kg)	50.00	50.00
Copper (mg/Kg)	300.00	300.00
Lead (mg/Kg)	100.00	100.00
Mercury (mg/Kg)	0.15	0.15
Nickel (mg/Kg)	50.00	50.00
Zinc (mg/Kg)	1000.00	1000.00
C/N ratio	<20	Less than 20:1
pH	6.5-7.5	(1:5 solution) maximum 6.7
Moisture, percent by weight, maximum	15.0-25.0	25.0
Bulk density (g/cm <sup>3</sup> )	<1.0	Less than 1.6
Total Organic Carbon, per cent by weight, minimum	12.0	7.9

Total Nitrogen (as N), per cent by weight, minimum	0.8	0.4
Total Phosphate (as P <sub>2</sub> O <sub>5</sub> ) percent by weight, minimum	0.4	10.4
Total Potassium (as K <sub>2</sub> O), percent by weight, minimum	0.4	-
Colour	Dark brown to black	-
Odour	Absence of foul Odor	-
Particle size	Minimum 90% material should pass through 4.0 mm IS sieve	Minimum 90% material should pass through 4.0 mm IS sieve
Conductivity (as dsm-1), not more than	4.0	8.2

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

**B. Standards for treated leachates.**-The disposal of treated leachates shall meet the following standards, namely:-

S. No	Parameter	Standards ( Mode of Disposal )		
		Inland surface water	Public sewers	Land disposal
(1)	(2)	(3)	(4)	(5)
1.	Suspended solids, mg/l, max	100	600	200
2.	Dissolved solids (inorganic) mg/l, max.	2100	2100	2100
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 <sup>0</sup> 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	1.0	-
11	Cadmium (as Cd), mg/l, max	2.0	1.0	-

12	Total Chromium (as Cr), mg/l, max.	2.0	2.0	-
13	Copper (as Cu), mg/l, max.	3.0	3.0	-
14	Zinc (as Zn), mg/l, max.	5.0	15	-
15	Nickel (as Ni), mg/l, max	3.0	3.0	-
16	Cyanide (as CN), mg/l, max.	0.2	2.0	0.2
17	Chloride (as Cl), mg/l, max.	1000	1000	600
18	Fluoride (as F), mg/l, max	2.0	1.5	-
19	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, max.	1.0	5.0	-

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.

**C. Standards for incineration:** The Emission from incinerators /thermal technologies in Solid Waste treatment/disposal facility shall meet the following standards, namely:-

Parameter	Emission standard	
(1)	(2)	(3)
<b>Particulates</b>	50 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>HCl</b>	50 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>SO<sub>2</sub></b>	200 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>CO</b>	100 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
	50 mg/Nm <sup>3</sup>	Standard refers to daily average value
<b>Total Organic Carbon</b>	20 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>HF</b>	4 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>NO<sub>x</sub> (NO and NO<sub>2</sub> expressed as NO<sub>2</sub>)</b>	400 mg/Nm <sup>3</sup>	Standard refers to half hourly average value
<b>Total dioxins and furans</b>	0.1 ng TEQ/Nm <sup>3</sup>	Standard refers to 6-8 hours sampling. Please refer guidelines for 17 concerned congeners for toxic equivalence values to arrive at total toxic equivalence.
<b>Cd + Th + their compounds</b>	0.05 mg/Nm <sup>3</sup>	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
<b>Hg and its compounds</b>	0.05 mg/Nm <sup>3</sup>	Standard refers to sampling time anywhere between 30 minutes and 8 hours.

<b>Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V + their compounds</b>	0.5 mg/Nm <sup>3</sup>	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
<i>Note.- All values corrected to 11% oxygen on a dry basis.</i>		

**Note:**

- (a) Suitably designed pollution control devices shall be installed or retrofitted with the incinerator to achieve the above emission limits..
- (b) Waste to be incinerated shall not be chemically treated with any chlorinated disinfectants.
- (c) Incineration of chlorinated plastics shall be phased out within two years.
- (d) if the concentration of toxic metals in incineration ash exceeds the limits specified in the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008, as amended from time to time, the ash shall be sent to the hazardous waste treatment, storage and disposal facility.
- (e) Only low sulphur fuel like LDO, LSHS, Diesel, bio-mass, coal, LNG, CNG, RDF and bio-gas shall be used as fuel in the incinerator.
- (f) The CO<sub>2</sub> concentration in tail gas shall not be more than 7%.
- (g) All the facilities in twin chamber incinerators shall be designed to achieve a minimum temperature of 950<sup>o</sup>C in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 (two) seconds.
- (h) Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, as to achieve total Organic Carbon (TOC) content in the slag and bottom ash less than 3%, or the loss on ignition is less than 5% of the dry weight.
- (i) Odour from sites shall be managed as per guidelines of CPCB issued from time to time

**FORM – I****[see rule 15 (v) 16 (1) (c), 21(3) ]**

**Application for obtaining authorisation under solid waste management rules  
for processing/recycling/treatment and disposal of solid waste**

To,

The Member Secretary,

State Pollution Control Board or Pollution Control Committee,

of.....

Sir,

I/We hereby apply for authorisation under the Solid Waste Management Rules, 2016 for processing, recycling, treatment and disposal of solid waste.

1.	Name of the local body/agency appointed by them/ operator of facility	
2.	Correspondence address Telephone No. Fax No. ,e-mail:	

3.	Nodal Officer & designation (Officer authorised by the local body or agency responsible for operation of processing/ treatment or disposal facility)	
4.	Authorisation required for setting up and operation of the facility (Please tick mark)	waste processing recycling treatment disposal at landfill
5.	Attach copies of the Documents Site clearance (local body) Proof of Environmental Clearance Consent for establishment Agreement between municipal authority and operating agency Investment on the project and expected return	
6.	<b>Processing/recycling/treatment of solid waste</b> (i) Total Quantity of waste to be processed per day Quantity of waste to be recycled Quantity of waste to be treated Quantity of waste to be disposed into landfill (ii) Utilisation programme for waste processed (Product utilisation) (iii) Methodology for disposal (attach details) Quantity of leachate Treatment technology for leachate (iv) Measures to be taken for prevention and control of environmental pollution (v) Measures to be taken for safety of workers working in the plant (vi) Details on solid waste processing/recycling/ treatment/disposal facility (to be attached)	
7.	<b>Disposal of solid waste</b> Number of sites identified Quantity of waste to be disposed per day Details of methodology or criteria followed for site selection (attach) Details of existing site under operation Methodology and operational details of landfilling Measures taken to check environmental pollution	
8	Any other information.	

Date:

Signature:

Place:

Designation

**Form- II**

[see rule 16 (1) (e) ]

**Format for issue of authorisation**

File No.: \_\_\_\_\_

Dated: \_\_\_\_\_

**Authorisation No**

To \_\_\_\_\_

Ref: Your application number \_\_\_\_\_ dt. \_\_\_\_\_

The \_\_\_\_\_ State Pollution Control Board/Pollution Control Committee after examining the proposal hereby authorises \_\_\_\_\_ having administrative office at \_\_\_\_\_ to set up and operate waste processing/recycling/ treatment/disposal facility at \_\_\_\_\_

The authorisation is hereby granted to operate the facility for processing, recycling, treatment and disposal of solid waste.

The authorisation is subject to the terms and conditions stated below and such conditions as may be otherwise specified in these rules and the standards laid down in Schedules I and II under these rules.

The \_\_\_\_\_ State Pollution Control Board/Pollution Control Committees of the UT \_\_\_\_\_ may, at any time, revoke any of the conditions applicable under the authorisation and shall communicate the same in writing.

Any violation of the provision of the Solid Waste Management Rules, 2016 will attract the penal provision of the Environment (Protection) Act, 1986 (29 of 1986).

(Member Secretary)

State Pollution Control Board/Pollution Control Committee of the UT

(Signature and designation)

Date: \_\_\_\_\_

Place: \_\_\_\_\_

**Form – III**

[see rule 19 (6), 24 (1) ]

**Format of annual report to be submitted by the operator of facility to the local body**

1	Name of the City/Town and State	
2	Population	
3	Area in sq. kilometers	
4	Name & Address of the local body Telephone No. Fax No. E-mail:	
5	Name and address of operator of the facility	
6	Name of officer in-charge of the facility Phone No: Fax No: E-mail:	

7	Number of households in the city/town , Number of non-residential premises in the city Number of election/ administrative wards in the city/town	
8	Quantity of Solid waste	
	Estimated Quantity of solid waste generated in the local body area per day in metric tones	/tpd
	Quantity of solid waste collected per day	/tpd
	Per capita waste collected per day	/gm/day
	Quantity of solid waste processed	/tpd
	Quantity of solid waste disposed at landfill	/tpd
9	Status of Solid Waste Management (SWM) service	
	Segregation and storage of waste at source Whether solid waste is stored at source in domestic/commercial/institutional bins If yes, Percentage of households practice storage of waste at source in domestic bins Percentage of non-residential premises practice storage of waste at source in commercial /institutional bins Percentage of households dispose of throw solid waste on the streets Percentage of non-residential premises dispose of throw solid waste on the streets Whether solid waste is stored at source in a segregated form If yes, Percentage of premises segregating the waste at source	Yes/No  % % % %  Yes/No %
	Door to Door Collection of solid waste	
	Whether door to door collection (D2D) of solid waste is being done in the city/town	Yes/No
	if yes	
	Number of wards covered in D2D collection of waste	
	No. of households covered	
	No. of non-residential premises including commercial establishments ,hotels, restaurants educational institutions/offices etc covered	

	Percentage of residential and non-residential premises covered in door to door collection through : Motorized vehicle Containerized tricycle/handcart Other device	%				
	If not, method of primary collection adopted					
	Sweeping of streets					
	Length of roads, streets, lanes, bye-lanes in the city that need to be cleaned	km				
	Frequency of street sweepings and percentage of population covered	frequency	Daily	Alternate days	Twice a week	Occasionally
		% of population covered				
	Tools used Manual sweeping Mechanical sweeping Whether long handle broom used by sanitation workers Whether each sanitation worker is given handcart/tricycle for collection of waste Whether handcart / tricycle is containerized Whether the collection tool synchronizes with collection/ waste storage containers utilized	%				
	Secondary Waste Storage facilities					
	No. and type of waste storage depots in the city/town Open waste storage sites Masonry bins Cement concrete cylinder bins Dhalao/covered rooms/space Covered metal/plastic containers Upto 1.1 m <sup>3</sup> bins 2 to 5 m <sup>3</sup> bins Above 5m <sup>3</sup> containers Bin-less city	No.	Capacity in m <sup>3</sup>			
	Bin/ population ratio					



Waste Transportation per day Type and Number of vehicles used (pl tick or add)	No. Trips made waste transported
Animal cart Tractors Non tipping Truck Tipping Truck Dumper Placers Refuse collectors Compactors Others JCB/loader	
Frequency of transportation of waste	Frequency (%) of waste transported Daily Alternate day Twice a week Once a week Occasionally
Quantity of waste transported each day	/tpd
Percentage of total waste transported daily	%
Waste Treatment Technologies used Whether solid waste is processed	Yes/No
If yes, Quantity of waste processed daily Land(s) available with the local body for waste processing (in Hectares)	/tpd
Land currently utilized for waste processing	
Solid waste processing facilities in operation	
Solid waste processing facilities under construction Distance of processing facilities from city/town boundary	
Details of technologies adopted	

	Composting ,  vermi composting	Qty. raw material processed Qty. final product produced Qty. sold Qty. of residual waste landfilled  Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled
	Bio-methanation	Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled
	Refuse Derived Fuel	Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled
	Waste to Energy technology such as incineration, gasification, pyrolysis or any other technology ( give detail)  Co-processing	Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled  Qty. raw material processed
	Combustible waste supplied to cement plant	
	Combustible waste supplied to solid waste based power plants	
	Others	Qty.
	Solid waste disposal facilities	
	No. of dumpsites sites available with the local body	
	No. of sanitary landfill sites available with the local body  Area of each such sites available for waste disposal	
	Area of land currently used for waste disposal	
	Distance of dumpsite/landfill facility from city/town	kms
	Distance from the nearest habitation	kms
	Distance from water body	kms

	Distance from state/national highway	kms
	Distance from Airport	kms
	Distance from important religious places or historical monument	kms
	Whether it falls in flood prone area	Yes/No
	Whether it falls in earthquake fault line area	Yes/No
	Quantity of waste landfilled each day	tpd
	Whether landfill site is fenced	Yes / No
	Whether Lighting facility is available on site	Yes / No
	Whether Weigh bridge facility available	Yes / No
	Vehicles and equipments used at landfill (specify)	Bulldozer, Compacters etc. available
	Manpower deployed at landfill site	Yes/No (if yes, attach details)
	Whether covering is done on daily basis	Yes/No
	If not, Frequency of covering the waste deposited at the landfill	
	Cover material used	
	Whether adequate covering material is available	Yes/No
	Provisions for gas venting provided	Yes/No, (if yes, attach technical data sheet)
	Provision for leachate collection	Yes/No, (if yes, attach technical data sheet)
10	Whether an Action Plan has been prepared for improving solid waste management practices in the city	Yes/No (if Yes attach Action Plan details)
11	What separate provisions are made for : Dairy related activities : Slaughter houses waste : C&D waste (construction debris) :	Attach details on Proposals, Steps taken, Yes/No Yes/No Yes/No
12	Details of Post Closure Plan	Attach Plan
13	How many slums are identified and whether these are provided with Solid Waste Management facilities :	Yes/ No (if Yes, attach details)
14	Give details of manpower deployed for collection including street sweeping, secondary storage, transportation, processing and disposal of waste	

15	Mention briefly, the difficulties being experienced by the local body in complying with provisions of these rules	
16	Mention briefly, if any innovative idea is implemented to tackle a problem related to solid waste, which could be replicated by other local bodies.	

Signature of Operator

Dated :

Place:

**Form – IV**

[see rules 15(za), 24(2)]

**Format for annual report on solid waste management to be submitted by the local body**

<b>CALENDAR YEAR:</b>	<b>DATE OF SUBMISSION OF REPORT:</b>

1	Name of the City/Town and State	
2	Population	
3	Area in sq. kilometers	
4	Name & Address of local body Telephone No. Fax No. E-mail:	
5	Name of officer in-charge dealing with solid waste management (SOLID WASTEM)Phone No: Fax No: E-mail:	
6	Number of households in the city/town Number of non-residential premises in the city Number of election/ administrative wards in the city/town	
7	Quantity of Solid waste (solid waste)	
	Estimated Quantity of solid waste generated in the local body area per day in metric tones	/tpd
	Quantity of solid waste collected per day	/tpd

	Per capita waste collected per day	/gm/day
	Quantity of solid waste processed	/tpd
	Quantity of solid waste disposed at dumpsite/ landfill	/tpd
8	Status of Solid Waste Management service	
	Segregation and storage of waste at source Whether SOLID WASTE is stored at source in domestic/commercial/ institutional bins, If yes, Percentage of households practice storage of waste at source in domestic bins Percentage of non-residential premises practice storage of waste at source in commercial /institutional bins Percentage of households dispose or throw solid waste on the streets Percentage of non-residential premises dispose of throw solid waste on the streets Whether solid waste is stored at source in a segregated form, If yes, Percentage of premises segregating the waste at source	Yes/No  % % % % Yes/No %
	Door to Door Collection of solid waste	
	Whether door to door collection (D2D) of solid waste is being done in the city/town	Yes/No
	if yes	
	Number of wards covered in D2D collection of waste	
	No. of households covered	
	No. of non-residential premises including commercial establishments ,hotels, restaurants educational institutions/ offices etc covered	
	Percentage of residential and non-residential premises covered in door to door collection through : Motorized vehicle Containerized tricycle/handcart Other device	% % %
	If not, method of primary collection adopted	
	Sweeping of streets	
	Length of roads, streets, lanes, bye-lanes in the city that need to be cleaned	km

	Frequency of street sweepings and percentage of population covered	frequency	Daily	Alternate days	Twice a week	Occasionally
	% of population covered  Tools used Manual sweeping Mechanical sweeping Whether long handle broom used by sanitation workers Whether each sanitation worker is given handcart/tricycle for collection of waste Whether handcart / tricycle is containerized Whether the collection tool synchronizes with collection/ waste storage containers utilized			% % Yes/No Yes/No Yes/No Yes/No		
	Secondary Waste Storage facilities					
	No. and type of waste storage depots in the city/town Open waste storage sites Masonry bins Cement concrete cylinder bins Dhalao/covered rooms/space Covered metal/plastic containers Upto 1.1 m <sup>3</sup> bins 2 to 5 m <sup>3</sup> bins Above 5m <sup>3</sup> containers Bin-less city	No.	Capacity in m <sup>3</sup>			
	Bin/ population ratio  Ward wise details of waste storage depots (attach) : Ward No: Area: Population: No. of bins placed Total volume of bins placed					
	Total storage capacity of waste storage facilities in cubic meters					
	Total waste actually stored at the waste storage depots daily					

	Give frequency of collection of waste from the depots Number of bins cleared	Frequency	No. of bins
		Daily Alternate day Twice a week Once a week Occasionally	
	Whether storage depots have facility for storage of segregated waste in green, blue and black bins	Yes/ No (if yes, add details) No. of green bins: No. of blue bins: No. of black bins:	
	Whether lifting of solid waste from storage depots is manual or mechanical. Give percentage (%) of Manual Lifting of solid waste (%) of Mechanical lifting	% %	
	If mechanical – specify the method used	front-end loaders/ Top loaders	
	Whether solid waste is lifted from door to door and transported to treatment plant directly in a segregated form	Yes/ No (if yes, specify)	
	Waste transportation per day Type and Number of vehicles used	No. Trips made waste transported	
	Animal cart Tractors Non tipping Truck Tipping Truck Dumper Placers Refuse collectors Compactors Others JCB/loader		

Frequency of transportation of waste	Frequency (%) of waste transported Daily Alternate day Twice a week Once a week Occasionally
Quantity of waste transported each day	/tpd
Percentage of total waste transported daily	%
Waste Treatment Technologies used	
Whether solid waste is processed	Yes/No
If yes, Quantity of waste processed daily	/tpd
Whether treatment is done by local body or through an agency	
Land(s) available with the local body for waste processing (in Hectares)	
Land currently utilized for waste processing	
Solid waste processing facilities in operation	
Solid waste processing facilities under construction	
Distance of processing facilities from city/town boundary	
Details of technologies adopted	
Composting ,	Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled
Vermi composting	Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled
Bio-methanation	Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled

Refuse Derived Fuel	Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled
Waste to Energy technology such as incineration, gasification, pyrolysis or any other technology ( give detail)	Qty. raw material processed Qty. final product produced Qty. sold Quantity of residual waste landfilled
Co-processing	Qty. raw material processed
Combustible waste supplied to cement plant	
Combustible waste supplied to solid waste based power plants	
Others	Qty.
Solid waste disposal facilities	
No. of dumpsites sites available with the local body	
No. of sanitary landfill sites available with the local body	
Area of each such sites available for waste disposal	
Area of land currently used for waste disposal	
Distance of dumpsite/landfill facility from city/town	kms
Distance from the nearest habitation	kms
Distance from water body	kms
Distance from state/national highway	kms
Distance from Airport	kms
Distance from important religious places or historical monument	kms
Whether it falls in flood prone area	Yes/No
Whether it falls in earthquake fault line area	Yes/No
Quantity of waste landfilled each day	tpd
Whether landfill site is fenced	Yes / No
Whether Lighting facility is available on site	Yes / No

	Whether Weigh bridge facility available	Yes / No
	Vehicles and equipments used at landfill (specify)	Bulldozer, Compacters etc. available
	Manpower deployed at landfill site	Yes/No (if yes, attach details)
	Whether covering is done on daily basis	Yes/No
	If not, Frequency of covering the waste deposited at the landfill	
	Cover material used	
	Whether adequate covering material is available	Yes/No
	Provisions for gas venting provided	Yes/No (if yes, attach technical data sheet)
	Provision for leachate collection	Yes/No (if yes, attach technical data sheet)
9	Whether an Action Plan has been prepared for improving solid waste management practices in the city	Yes/No (if Yes attach Action Plan details)
10	What separate provisions are made for : Dairy related activities : Slaughter houses waste : C&D waste (construction debris) :	Attach details on Proposals, Steps taken, Yes/No Yes/No Yes/No
11	Details of Post Closure Plan	Attach Plan
12	How many slums are identified and whether these are provided with Solid Waste Management facilities :	Yes/ No (if Yes, attach details)
13	Give details of: Local body's own manpower deployed for collection including street sweeping, secondary storage, transportation, processing and disposal of waste	
14	Give details of: Contractor/ concessionaire's manpower deployed for collection including street sweeping, secondary storage, transportation, processing and disposal of waste	
15	Mention briefly, the difficulties being experienced by the local body in complying with provisions of these rules	

16	Mention briefly, if any innovative idea is implemented to tackle a problem related to solid waste, which could be replicated by other local bodies	
----	--	--

Signature of CEO/Municipal Commissioner/  
Executive Officer/Chief Officer

Date:

Place:

**Form – V**

[see rule 24(3)]

**Format of annual report to be submitted by the state pollution control board or pollution control committee committees to the central pollution control board**

**PART A**

To,

The Chairman  
Central Pollution Control Board  
Parivesh Bhawan, East Arjun Nagar  
DELHI- 110 0032

1.	Name of the State/Union territory	:	
2.	Name & address of the State Pollution Control	:	
3.	Number of local bodies responsible for management of solid waste in the State/Union territory under these rules	:	
4.	No. of authorisation application Received	:	
5.	A Summary Statement on progress made by local body in respect of solid waste management	:	Please attach as Annexure-I
6.	A Summary Statement on progress made by local bodies in respect of waste collection, segregation, transportation and disposal	:	Please attach as Annexure-II
7.	A summary statement on progress made by local bodies in respect of implementation of Schedule II	:	Please attach as Annexure-III

Date: .....	Chairman or the Member Secretary State Pollution Control Board/ Pollution Control Committee
Place: .....	

**PART B****Towns/cities**

Total number of towns/cities

Total number of ULBs

Number of class I &amp; class II cities/towns

**Authorisation status (names/number)**

Number of applications received

Number of authorisations granted

Authorisations under scrutiny

**SOLID WASTE Generation status**

Solid waste generation in the state (TPD)

collected

treated

landfilled

**Compliance to Schedule I of SW Rules (Number/names of towns/capacity)**

Good practices in cities/towns

House-to-house collection

Segregation

Storage

Covered transportation

**Processing of SW (Number/names of towns/capacity)**

Solid Waste processing facilities setup:

Sl. No.	Composting	Vermi-composting	Biogas	RDF/Pelletization

Processing facility operational:

Sl. No.	Composting	Vermi-composting	Biogas	RDF/Pelletization

Processing facility under installation/planned:

Sl. No.	Composting	Vermi-composting	Biogas	RDF/Pelletisation

**Waste-to-Energy Plants: (Number/names of towns/capacity)**

Sl. No.	Plant Location	Status of operation	Power generation (MW)	Remarks

**Disposal of solid waste (number/names of towns/capacity):**

Landfill sites identified

Landfill constructed

Landfill under construction

Landfill in operation

Landfill exhausted

Landfilled capped

**Solid Waste Dumpsites (number/names of towns/capacity):**

Total number of existing dumpsites

Dumpsites reclaimed/capped

Dumpsites converted to sanitary landfill

**Monitoring at Waste processing/Landfills sites**

Sl. No.	Name of facilities	Ambient air	Groundwater	Leachate quality	Compost quality	VOCs
1.						
2.						
3.						

**Status of Action Plan prepared by Municipalities**

Total number of municipalities:

Number of Action Plan submitted:

**Form – VI**

[see rule 25]

**Accident Reporting**

1.	Date and time of accident	:	
2.	Sequence of events leading to accident	:	
3.	The waste involved in accident	:	

4.	Assessment of the effects of the accidents on human health: and the environment	:	
5.	Emergency measures taken	:	
6.	Steps taken to alleviate the effects of accidents	:	
7.	Steps taken to prevent the recurrence of such an accident	:	
Date: .....		Signature:.....	
Place: .....		Designation: .....	

[F. No. 18-3/2004-HSMD]  
BISHWANATH SINHA, Jt. Secy.

Municipal Solid Wastes  
(Management and Handling)  
Rules, 2000

## Ministry of Environment and Forests

## Notification

New Delhi, the 25<sup>th</sup> September, 2000

S.O. 908(E).- Whereas the draft of the Municipal Solid Wastes (Management and Handling) Rules, 1999 were published under the notification of the Government of India in the Ministry of Environment and Forests number S.O. 783(E), dated, the 27<sup>th</sup> September, 1999 in the Gazette of India, Part II, Section 3, Sub-section (ii) of the same date inviting objections and suggestions from the persons likely to be affected thereby, before the expiry of the period of sixty days from the date on which the copies of the Gazette containing the said notification are made available to the public;

And whereas copies of the said Gazette were made available to the public on the 5<sup>th</sup> October, 1999;

And whereas the objections and suggestions received from the public in respect of the said draft rules have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by section 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules to regulate the management and handling of the municipal solid wastes, namely :-

1. Short title and commencement : --

1. These rules may be called the Municipal Solid Wastes (Management and Handling) Rules, 2000.
2. Save as otherwise provided in these rules, they shall come into force on the date of their publication in the Official Gazette.

2. Application .-- These rules shall apply to every municipal authority responsible for collection, segregation, storage, transportation,, processing and disposal of municipal solid wastes .

3. Definitions.-- In these rules, unless the context otherwise requires ,--

- i. "anaerobic digestion" means a controlled process involving microbial decomposition of organic matter in the absence of oxygen;
- ii. "authorization" means the consent given by the Board or Committee to the "operator of a facility" ;
- iii. "biodegradable substance" means a substance that can be degraded by micro-organisms;
- iv. "biomethanation" means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;

- v. "collection" means lifting and removal of solid wastes from collection points or any other location;
- vi. "composting" means a controlled process involving microbial decomposition of organic matter;
- vii. "demolition and construction waste" means wastes from building materials debris and rubble resulting from construction, re-modelling, repair and demolition operation;
- viii. "disposal" means final disposal of municipal solid wastes in terms of the specified measures to prevent contamination of ground-water, surface water and ambient air quality;
- ix. "Form" means a Form appended to these rules;
- x. "generator of wastes" means persons or establishments generating municipal solid wastes;
- xi. "land filling" means disposal of residual solid wastes on land in a facility designed with protective measures against pollution of ground water, surface water and air fugitive dust, wind-blown litter, bad odour, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion;
- xii. "leachate" means liquid that seeps through solid wastes or other medium and has extracts of dissolved or suspended material from it;
- xiii. "lysimeter" is a device used to measure rate of movement of water through or from a soil layer or is used to collect percolated water for quality analysis;
- xiv. "municipal authority" means Municipal Corporation, Municipality, Nagar Palika, Nagar Nigam, Nagar Panchayat, Municipal Council including notified area committee (NAC) or any other local body constituted under the relevant statutes and, where the management and handling of municipal solid waste is entrusted to such agency;
- xv. "municipal solid waste" includes commercial and residential wastes generated in a municipal or notified areas in either solid or semi-solid form excluding industrial hazardous wastes but including treated bio-medical wastes;
- xvi. "operator of a facility" means a person who owns or operates a facility for collection, segregation, storage, transportation, processing and disposal of municipal solid wastes and also includes any other agency appointed as such by the municipal authority for the management and handling of municipal solid wastes in the respective areas;
- xvii. "pelletisation" means a process whereby pellets are prepared which are small cubes or cylindrical pieces made out of solid wastes and includes fuel pellets which are also referred as refuse derived fuel;
- xviii. "processing" means the process by which solid wastes are transformed into new or recycled products;
- xix. "recycling" means the process of transforming segregated solid wastes into raw materials for producing new products, which may or may not be similar to the original products;
- xx. "schedule" means a Schedule appended to these rules;
- xxi. "segregation" means to separate the municipal solid wastes into the groups of organic, inorganic, recyclables and hazardous wastes;
- xxii. "State Board or the Committee" means the State Pollution Control Board of a State, or as the case may be, the Pollution Control Committee of a Union territory;

- xxiii. "storage" means the temporary containment of municipal solid wastes in a manner so as to prevent littering, attraction to vectors, stray animals and excessive foul odour;
- xxiv. "transportation " means conveyance of municipal solid wastes from place to place hygienically through specially designed transport system so as to prevent foul odour, littering, unsightly conditions and accessibility to vectors;
- xxv. "vadose water" water which occurs between the ground, surface and the water table that is the unsaturated zone;
- xxvi. "vermicomposting" is a process of using earthworms for conversion of bio-degradable wastes into compost.

#### 4. RESPONSIBILITY OF MUNICIPAL AUTHORITY: -

1. Every municipal authority shall, within the territorial area of the municipality, be responsible for the implementation of the provisions of these rules, and for any infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid wastes.
2. The municipal authority or an operator of a facility shall make an application in Form-I, for grant of authorization for setting up waste processing and disposal facility including landfills from the State Board or the Committee in order to comply with the implementation programme laid down in Schedule I.
3. The municipal authority shall comply with these rules as per the implementation schedule laid down in Schedule I.
4. The municipal authority shall furnish its annual report in Form-II, -
  - a. to the Secretary-in-charge of the Department of Urban Development of the concerned State or as the case may be of the Union territory, in case of a metropolitan city; or
  - b. to the District Magistrate or the Deputy Commissioner concerned in case of all other towns and cities, with a copy to the State Board or the Committee on or before the 30<sup>th</sup> day of June every year.

#### 5. RESPONSIBILITY OF THE STATE GOVERNMENT AND THE UNION TERRITORY ADMINISTRATIONS: --

- (1) The Secretary-in-charge of the Department of Urban Development of the concerned State or the Union territory, as the case may be, shall have the overall responsibility for the enforcement of the provisions of these rules in the metropolitan cities.
- (2) The District Magistrate or the Deputy Commissioner of the concerned district shall have the overall responsibility for the enforcement of the provisions of these rules within the territorial limits of their jurisdiction.

6. RESPONSIBILITY OF THE CENTRAL POLLUTION CONTROL BOARD AND THE STATE BOARD OR THE COMMITTEES: —

1. The State Board or the Committee shall monitor the compliance of the standards regarding ground water, ambient air, leachate quality and the compost quality including incineration standards as specified under Schedules II, III and IV.
2. The State Board or the Committee, after the receipt of application from the municipal authority or the operator of a facility in Form I, for grant of authorization for setting up waste processing and disposal facility including landfills, shall examine the proposal taking into consideration the views of other agencies like the State Urban Development Department, the Town and Country Planning Department, Air Port or Air Base Authority, the Ground Water Board or any such other agency prior to issuing the authorization.
3. The State Board or the Committee shall issue the authorization in Form-III to the municipal authority or an operator of a facility within forty-five days stipulating compliance criteria and standards as specified in Schedules II, III and IV including such other conditions, as may be necessary.
4. The authorization shall be valid for a given period and after the validity is over, a fresh authorization shall be required.
5. The Central Pollution Control Board shall co-ordinate with the State Boards and the Committees with particular reference to implementation and review of standards and guidelines and compilation of monitoring data.

7. MANAGEMENT OF MUNICIPAL SOLID WASTES. ss--

1. Any 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.
2. The waste processing and disposal facilities to be set up by the municipal authority on their own or through an operator of a facility shall meet the specifications and standards as specified in Schedules III and IV.

8. ANNUAL REPORTS: —

1. The State Boards and the Committees shall prepare and submit to the Central Pollution Control Board an annual report with regard to the implementation of these rules by the 15<sup>th</sup> of September every year in Form-IV.
2. The Central Pollution Control Board shall prepare the consolidated annual review report on management of municipal solid wastes and forward it to the Central Government along with its recommendations before the 15<sup>th</sup> of December every year.

9. ACCIDENT REPORTING. -- When an accident occurs at any municipal solid wastes collection, segregation, storage, processing, treatment and disposal facility or landfill site or during the transportation of such wastes, the municipal authority shall forthwith report the accident in Form-V to the Secretary in-charge of the Urban Development Department in metropolitan cities, and to District Collector or Deputy Commissioner in all other cases.

Schedule I  
[see rules4(2) and (3)]  
Implementation Schedule

Serial No.	Compliance Criteria	Schedule
1.	Setting up of waste processing and disposal facilities	By 31.12.2003 or earlier
2.	Monitoring the performance of waste processing and disposal facilities	Once in six months
3.	Improvement of existing landfill sites as per provisions of these rules	By 31.12.2001 or earlier
4.	Identification of landfill sites for future use and making site (s) ready for operation	By 31.12.2002 or earlier

## Schedule -II

[see rules 6(1) and (3), 7(1)]

## Management of Municipal Solid Wastes

S.No	Parameters	Compliance criteria
1.	Collection of municipal solid wastes	<p>1. Littering of municipal solid waste shall be prohibited in cities, towns and in urban areas notified by the State Governments. To prohibit littering and facilitate compliance, the following steps shall be taken by the municipal authority, namely: -</p> <ul style="list-style-type: none"> <li>i.Organising house-to-house collection of municipal solid wastes through any of the methods, like community bin collection (central bin), house-to-house collection, collection on regular pre-informed timings and scheduling by using bell ringing of musical vehicle (without exceeding permissible noise levels);</li> <li>ii.Devising collection of waste from slums and squatter areas or localities including hotels, restaurants, office complexes and commercial areas;</li> <li>iii.Wastes from slaughter houses, meat and fish markets, fruits and vegetable markets, which are biodegradable in nature, shall be managed to make use of such wastes;</li> <li>iv.Bio-medical wastes and industrial wastes shall not be mixed with municipal solid wastes and such wastes shall follow the rules separately specified for the purpose;</li> <li>v.Collected waste from residential and other areas shall be transferred to community bin by hand-driven containerised carts or other small vehicles;</li> <li>vi.Horticultural and construction or demolition wastes or debris shall be separately collected and disposed off following proper norms. Similarly, wastes generated at dairies shall be regulated in accordance with the State laws;</li> <li>vii.Waste (garbage, dry leaves) shall not be burnt;</li> <li>viii. Stray animals shall not be allowed to move around waste storage facilities or at any other place in the city or town and shall be managed in accordance with the State laws.</li> </ul> <p>2. The municipal authority shall notify waste collection schedule and the likely method to be adopted for public benefit in a city or town.</p>

		3. It shall be the responsibility of generator of wastes to avoid littering and ensure delivery of wastes in accordance with the collection and segregation system to be notified by the municipal authority as per para 1(2) of this Schedule.
2.	Segregation of municipal solid wastes	In order to encourage the citizens, municipal authority shall organise awareness programmes for segregation of wastes and shall promote recycling or reuse of segregated materials. The municipal authority shall undertake phased programme to ensure community participation in waste segregation. For this purpose, the municipal authorities shall arrange regular meetings at quarterly intervals with representatives of local resident welfare associations and non-governmental organizations.
3.	Storage of municipal solid wastes	<p>Municipal authorities shall establish and maintain storage facilities in such a manner as they do not create unhygienic and in sanitary conditions around it. Following criteria shall be taken into account while establishing and maintaining storage facilities, namely: -</p> <ul style="list-style-type: none"> <li>i.Storage facilities shall be created and established by taking into account quantities of waste generation in a given area and the population densities. A storage facility shall be so placed that it is accessible to users;</li> <li>ii.Storage facilities to be set up by municipal authorities or any other agency shall be so designed that wastes stored are not exposed to open atmosphere and shall be aesthetically acceptable and user-friendly;</li> <li>iii.Storage facilities or 'bins' shall have 'easy to operate' design for handling, transfer and transportation of waste. Bins for storage of bio-degradable wastes shall be painted green, those for storage of recyclable wastes shall be printed white and those for storage of other wastes shall be printed black;</li> <li>iv.Manual handling of waste shall be prohibited. If unavoidable due to constraints, manual handling shall be carried out under proper precaution with due care for safety of workers.</li> </ul>
4.	Transportation of municipal solid wastes	<p>Vehicles used for transportation of wastes shall be covered. Waste should not be visible to public, nor exposed to open environment preventing their scattering. The following criteria shall be met, namely:-</p> <ul style="list-style-type: none"> <li>i.The storage facilities set up by municipal authorities shall be daily attended for clearing of wastes. The bins or containers wherever placed shall be cleaned</li> </ul>

		<p>before they start overflowing;</p> <p>ii. Transportation vehicles shall be so designed that multiple handling of wastes, prior to final disposal, is avoided.</p>
5.	Processing of municipal solid wastes	<p>Municipal authorities shall adopt suitable technology or combination of such technologies to make use of wastes so as to minimize burden on landfill. Following criteria shall be adopted, namely:-</p> <p>(i) The biodegradable wastes shall be processed by composting, vermicomposting, anaerobic digestion or any other appropriate biological processing for stabilization of wastes. It shall be ensured that compost or any other end product shall comply with standards as specified in Schedule-IV;</p> <p>(ii) Mixed waste containing recoverable resources shall follow the route of recycling. Incineration with or without energy recovery including pelletisation can also be used for processing wastes in specific cases. Municipal authority or the operator of a facility wishing to use other state-of-the-art technologies shall approach the Central Pollution Control Board to get the standards laid down before applying for grant of authorisation.</p>
6.	Disposal of municipal solid wastes	<p>Land filling shall be restricted to non-biodegradable, inert waste and other waste that are not suitable either for recycling or for biological processing. Land filling shall also be carried out for residues of waste processing facilities as well as pre-processing rejects from waste processing facilities. Land filling of mixed waste shall be avoided unless the same is found unsuitable for waste processing. Under unavoidable circumstances or till installation of alternate facilities, land-filling shall be done following proper norms. Landfill sites shall meet the specifications as given in Schedule –III.</p>

## Schedule III

[see rules 6(1) and (3), 7(2)]

## Specifications for Landfill Sites

## Site Selection

1. In areas falling under the jurisdiction of 'Development Authorities' it shall be the responsibility of such Development Authorities to identify the landfill sites and hand over the sites to the concerned municipal authority for development, operation and maintenance. Elsewhere, this responsibility shall lie with the concerned municipal authority.
2. Selection of landfill sites shall be based on examination of environmental issues. The Department of Urban Development of the State or the Union territory shall co-ordinate with the concerned organisations for obtaining the necessary approvals and clearances.
3. The landfill site shall be planned and designed with proper documentation of a phased construction plan as well as a closure plan.
4. The landfill sites shall be selected to make use of nearby wastes processing facility. Otherwise, wastes processing facility shall be planned as an integral part of the landfill site.
5. The existing landfill sites, which continue to be used for more than five years, shall be improved in accordance of the specifications given in this Schedule.
6. Biomedical wastes shall be disposed off in accordance with the Bio-medical Wastes (Management and Handling) Rules, 1998 and hazardous wastes shall be managed in accordance with the Hazardous Wastes (Management and Handling) Rules, 1989, as amended from time to time.
7. The landfill site shall be large enough to last for 20-25 years.
8. The landfill site shall be away from habitation clusters, forest areas, water bodies monuments, National Parks, Wetlands and places of important cultural, historical or religious interest.
9. A buffer zone of no-development shall be maintained around landfill site and shall be incorporated in the Town Planning Department's land-use plans.
10. Landfill site shall be away from airport including airbase. Necessary approval of airport or airbase authorities prior to the setting up of the landfill site shall be obtained in cases where the site is to be located within 20 km of an airport or airbase.

## Facilities at the Site

11. Landfill site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles or other modes of transportation.
12. The landfill site shall be well protected to prevent entry of unauthorised persons and stray animals.

13. Approach and other internal roads for free movement of vehicles and other machinery shall exist at the landfill site.
14. The landfill site shall have wastes inspection facility to monitor wastes brought in for landfill, office facility for record keeping and shelter for keeping equipment and machinery including pollution monitoring equipments.
15. 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.
16. 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.
17. Safety provisions including health inspections of workers at landfill site shall be periodically made.

#### Specifications for land filling

18. Wastes 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.
19. 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 waste processing facilities for composting or recycling or energy recovery are set up as per Schedule I.
20. Prior to the commencement of monsoon season, an intermediate cover of 40-65 cm thickness of soil shall be placed on the landfill with proper compaction and grading to prevent infiltration during monsoon. Proper drainage berms shall be constructed to divert run-off away from the active cell of the landfill.
21. After completion of landfill, a final cover shall be designed to minimize infiltration and erosion. The final cover shall meet the following specifications, namely: --
  - a. The final cover shall have a barrier soil layer comprising of 60 cms of clay or amended soil with permeability coefficient less than  $1 \times 10^{-7}$  cm/sec.
  - b. On top of the barrier soil layer there shall be a 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.

#### Pollution prevention

22. In order to prevent pollution problems from landfill operations, the following provisions shall be made, namely: -
  - a. Diversion of storm water drains to minimize leachate generation and prevent pollution of surface water and also for avoiding flooding and creation of marshy conditions;

- b. Construction of a 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 a 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.

#### Water Quality Monitoring

23. Before establishing any 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 metres 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 or the Committee. Such monitoring shall be carried out to cover different seasons in a year that is, summer, monsoon and post-monsoon period.
24. Usage of groundwater in and around landfill sites for any purpose (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.	Cyanide	0.05
6.	Lead	0.05
7.	Mercury	0.001
8.	Nickel	-

9.	Nitrate as NO <sub>3</sub>	45.0
10	PH	6.5-8.5
11.	Iron	0.3
12.	Total hardness (as CaCO <sub>3</sub> )	300.0
13.	Chlorides	250
14.	Dissolved solids	500
15.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	0.001
16.	Zinc	5.0
17.	Sulphate (as SO <sub>4</sub> )	200

#### Ambient Air Quality Monitoring

25. Installation of landfill gas control system including gas collection system shall be made at landfill site to minimize odour generation, prevent off-site migration of gases and to protect vegetation planted on the rehabilitated landfill surface.
26. The concentration of methane gas generated at landfill site shall not exceed 25 per cent of the lower explosive limit (LEL).
27. The landfill gas from the collection facility at a landfill site shall be utilized for either direct thermal applications or power generation, as per viability. Otherwise, landfill gas shall be burnt (flared) and shall not be allowed to directly escape to the atmosphere or for illegal tapping. Passive venting shall be allowed if its utilization or flaring is not possible.
28. 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
(i)	Sulphur dioxide	120µg/m <sup>3</sup> (24 hours)
(ii)	Suspended Particulate Matter	500µg/m <sup>3</sup> (24 hours)
(iii)	Methane	Not to exceed 25 per cent of the lower explosive limit (equivalent to 650 mg /m <sup>3</sup> ) (24 hours)
(iv)	Ammonia daily average	0.4mg/m <sup>3</sup> (400 µg/m <sup>3</sup> )

	(sample duration 24 hrs)	
(v)	Carbon monoxide	1 hour average : 2 mg/m <sup>3</sup> 8 hour average : 1 mg/m <sup>3</sup>

29. The ambient air quality monitoring shall be carried out by the concerned authority as per the following schedule, namely:-

- (a) Six times in a year for cities having population of more than fifty lakhs;
- (b) Four times in a year for cities having population between ten and fifty lakhs;
- (c) Two times in a year for town or cities having population between one and ten lakhs.

#### Plantation at Landfill Site

30. A vegetative cover shall be provided over the completed site in accordance with the and following specifications, namely: -

- (a) Selection of locally adopted non-edible perennial plants that are resistant to drought and extreme temperatures shall be allowed to grow;
- (b) The plants grown be such that their roots do not penetrate more than 30 cms. This condition shall apply till the landfill is stabilised;
- (c) Selected plants shall have ability to thrive on low-nutrient soil with minimum nutrient addition;
- (d) Plantation to be made in sufficient density to minimize soil erosion.

#### Closure of Landfill Site and Post-care

31. The post-closure care of landfill site shall be conducted for at least fifteen years and long term monitoring or care plan shall consist of the following, namely :-

- (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 requirements and maintaining ground water quality;
- (d) Maintaining and operating the landfill gas collection system to meet the standards.

32. Use of closed landfill sites after fifteen years of post-closure monitoring can be considered for human settlement or otherwise only after ensuring that gaseous and leachate analysis comply with the specified standards.

Special provisions for hilly areas

33. Cities and towns located on hills shall have location-specific methods evolved for final disposal of solid wastes by the municipal authority with the approval of the concerned State Board or the Committee. The municipal authority shall set up processing facilities for utilization of biodegradable organic wastes. The inert and non-biodegradable waste shall be used for building roads or filling-up of appropriate areas on hills. Because of constraints in finding adequate land in hilly areas, wastes not suitable for road-laying or filling up shall be disposed of in specially designed landfills.

## Schedule IV

[see rules 6(1) and (3), 7(2)]

## Standards for Composting, Treated Leachates and Incineration

1. The waste processing or disposal facilities shall include composting, incineration, pelletisation, energy recovery or any other facility based on state-of-the-art technology duly approved by the Central Pollution Control Board
2. 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.
3. In order to prevent pollution problems from compost plant and other processing facilities, the following shall be complied with, namely :-
  - i. 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;
  - ii. Necessary precautions shall be taken to minimise nuisance of odour, flies, rodents, bird menace and fire hazard;
  - iii. In case of breakdown or maintenance of plant, waste intake shall be stopped and arrangements be worked out for diversion of wastes to the landfill site;
  - iv. 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 site(s).
  - v. 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 per cent slope and circled by lined drains for collection of leachate or surface run-off;
  - vi. Ambient air quality monitoring shall be regularly carried out particularly for checking odour nuisance at down-wind direction on the boundary of processing plant.

- vii. In order to ensure safe application of compost, the following specifications for compost quality shall be met, namely:-

Parameters	Concentration not to exceed * (mg/kg dry basis , except pH value and C/N ratio)
Arsenic	10.00
Cadmium	5.00
Chromium	50.00
Copper	300.00
Lead	100.00
Mercury	0.15
Nickel	50.00
Zinc	1000.00
C/N ratio	20-40
PH	5.5-8.5

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

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

S.No	Parameter	Standards ( Mode of Disposal )		
		Inland surface water	Public sewers	Land disposal
1	Suspended solids, mg/l, max	100	600	200
2	Dissolved solids (inorganic) mg/l, max.	2100	2100	2100
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 <sup>o</sup> 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	1.0	-
11	Cadmium (as Cd), mg/l, max	2.0	1.0	-
12	Total Chromium (as Cr), mg/l, max.	2.0	2.0	-
13	Copper (as Cu), mg/l, max.	3.0	3.0	-
14	Zinc (as Zn), mg/l, max.	5.0	15	-
15	Nickel (as Ni), mg/l, max	3.0	3.0	-
16	Cyanide (as CN), mg/l, max.	0.2	2.0	0.2
17	Chloride (as Cl), mg/l, max.	1000	1000	600
18	Fluoride (as F), mg/l, max	2.0	1.5	-
19	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l, max.	1.0	5.0	-

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.

The incinerators shall meet the following operating and emission standards, namely:-

## A. Operating Standards

- (1) The combustion efficiency (CE) shall be at least 99.00%.
- (2) The combustion efficiency is computed as follows :

$$\text{C.E.} = \frac{\% \text{CO}_2}{\% \text{CO}_2 + \% \text{CO}} \times 100$$

## B. Emission Standards

Parameters	Concentration mg/Nm <sup>3</sup> at (12% CO <sub>2</sub> correction)
(1) Particulate matter	150
(2) Nitrogen Oxides	450
(3) HCl	50
(4) Minimum stack height shall be 30 metres above ground	
(5) Volatile organic compounds in ash shall not be more than 0.01%.	

## Note :

1. Suitably designed pollution control devices shall be installed or retrofitted with the incinerator to achieve the above emission limits, if necessary.
2. Wastes to be incinerated shall not be chemically treated with any chlorinated disinfectants
3. Chlorinated plastics shall not be incinerated.
4. Toxic metals in incineration ash shall be limited within the regulatory quantities as specified in the Hazardous Wastes (Management and Handling) Rules, 1989 as amended from time to time.
5. Only low sulphur fuel like l.d.o., l.s.h.s or diesel shall be used as fuel in the incinerator.

# 710

Form –I

[see rules 4(2) & 6(2)]

Application for obtaining authorization

To  
The Member Secretary

-----  
-----

1.	Name of the municipal authority/Name of the agency appointed by the municipal authority	:	
2.	Correspondence address  Telephone No.  Fax No.	:	
3.	Nodal Officer & designation (Officer authorised by the municipal authority or agency responsible for operation of processing or disposal facility)	:	
4.	Authorization applied for (Please tick mark)	:	(a) Setting up & operation of waste processing facility  (b) Setting up & operation of disposal facility
5.	Detailed proposal of waste processing/disposal facility (to be attached) to include	:	
5.1	Processing of Waste  i. Location of site ii. Name of waste processing technology iii. Details of processing technology iv. Quantity of waste to be processed per day v. Site clearance (from local authority) vi. Details of agreement between municipal authority and operating agency vii. Utilization programme for waste processed (Product utilization)	:	

	<ul style="list-style-type: none"> <li>viii. Methodology for disposal of waste processing rejects (quantity and quality)</li> <li>ix. Measures to be taken for prevention and control of environmental pollution</li> <li>x. Investment on Project and expected returns</li> <li>xi. Measures to be taken for safety of workers working in the plant</li> </ul>		
5.2	<p>Disposal of Waste</p> <ul style="list-style-type: none"> <li>i. Number of sites identified</li> <li>ii. Layout maps of site</li> <li>iii. Quantity of waste to be disposed per day</li> <li>iv. Nature and composition of waste</li> <li>v. Details of methodology or criteria followed for site selection</li> <li>vi. Details of existing site under operation</li> <li>vii. Methodology and operational details of land filling</li> <li>viii. Measures taken to check environmental pollution</li> </ul>	:	
Date		Signature of Nodal Officer	

Form - II

[See rule 4(4)]

Format of Annual Report to be submitted by the Municipal Authority

- i. Name of City / Town:.....
- ii. Population .....
- iii. Name of municipal body:..... and  
Address .....

Telephone No. : .....

Fax : .....

- iv. Name of Incharge dealing with municipal solid wastes .....  
..... with  
designation .....

1. Quantity and composition of solid wastes

- (i) Total quantity of wastes generated per day

-----

- (ii) Total quantity of wastes collected per day

-----

- (iii) Total quantity of wastes processed for :

- a. Composting: .....
- b. Vermiculture: .....
- c. Pellets: .....
- d. Others, if any, please specify.

- (iv) Total quantity of waste disposed by land filling:

-----

- a. No. of landfill sites used :  
.....
- b. Area used: .....
- c. Whether Weigh bridge facilities available : Yes/No
- d. Whether area is fenced : Yes/No
- e. Lighting facility on site : Yes/No

- f. Whether equipment like Bulldozer, Compacters etc. available. (Please specify): -----
- g. Total Manpower available on site: -----
- h. Whether covering is done on daily basis: Yes/No
- i. Whether covering material is used and whether it is adequately available : -----
- j. Provisions for gas venting provided: Available (Yes/No) /Not available
- k. Provision for leachate collection: Provisions made/ Provisions not made

2. Storage facilities

(i) Area covered for collection of wastes : -----

(ii) No. of houses covered : -----

(iii) Whether house-to-house collection is practiced (if yes, whether done by Municipality or through Private Agency or Non-Governmental Organisation) : -----

(iv) Bins : -----

Specifications Proposed	Existing
(Shape & Size) Numbers for future	

a. RCC Bins (Capacity) :

b. Trolleys (Capacity) :

(c) Containers (Capacity) :

d. Dumper Placers

e. Others, please specify

(v) Whether all bins/collection spots are attended for daily lifting of garbage : Yes/No

(vi) Whether lifting of garbage from dustbins is manual or mechanical i.e. for example by using of front-end loaders (Please tick mark) : Manual/Loader/Others, please specify

## 3. Transportation

	Existing number	Actually Required/Proposed
i. Truck :		
ii. Truck-Tipper :		
iii. Tractor-Trailer :		
iv. Refuse-collector :		
v. Dumper-placers		
vi. Animal Cart :		
vii. Tricycle :		
viii. Others (please specify)		

## 4. Whether any proposal has been made to improve solid wastes management practices

---



---



---

## 5. Are any efforts made to call for private firms etc. to attempt for processing of waste utilising technologies like :

	Waste Utilisation Technology	Proposals	Steps taken (Quantity to be processed)
i. Composting :			
ii. Vermiculture :			
iii. Pelletisation :			
iv. Others if any, Please specify:			

## 6. What provisions are available and how these are implemented to check unhygienic operations of :

- i. Dairy related activities:
- ii. Slaughter houses and unauthorised slaughtering :
- iii. Malba (construction debris) lifting :
- iv. Encroachment in Parks, Footpaths etc.:

7. How many slums are identified and whether these are provided with sanitation facilities:

8. Are municipal magistrates appointed for Taking penal action : Yes/No

[If yes, how many cases registered & settled during last three years (give year-wise details)]

9. Hospital waste management

- i. How many Hospitals/Clinics under the control of the Corporation:
- ii. What methods are followed for disposal of bio-medical wastes? :
- iii. Do you have any proposal for setting up of common treatment facility for disposal of bio-medical wastes:
- iv. How many private Nursing Homes, Clinics etc. are operating in the city/town and what steps have been taken to check disposal of their wastes:

Signature of Municipal Commissioner

Dated :

Form -III

[See-rule 6(2)]

Format for Issue of Authorisation

File No.: \_\_\_\_\_

Date: \_\_\_\_\_

To,

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Ref: Your application number \_\_\_\_\_ dt. \_\_\_\_\_

The \_\_\_\_\_ State Pollution Control Board/Pollution Control Committee after examining the proposal hereby authorizes \_\_\_\_\_ having their administrative office at \_\_\_\_\_ to set up and operates waste processing/waste disposal facility at \_\_\_\_\_ on the terms and conditions (including the standards to comply) attached to this authorization letter.

1. The validity of this authorization is till \_\_\_\_\_. After the validity, renewal of authorization is to be sought.
2. The \_\_\_\_\_ State Pollution Control Board/Pollution Control Committees may, at any time, revoke any of the conditions applicable under the authorization and shall communicate the same in writing.
3. Any violation of the provision of the Municipal Solid Wastes (Management and Handling) Rules, 2000 will attract the penal provision of the Environment (Protection) Act, 1986 (29 of 1986).

(Member Secretary)  
State Pollution Control Board/  
Pollution Control Committee

Date:  
Place :

## Form - IV

[see rule 8(1)]

Format of Annual Review Report to be submitted by the State Pollution Control  
Board/Committees to the Central Pollution Control Board

To  
The Chairman,  
Central Pollution Control Board,  
(Ministry of Environment and Forests)  
Government of India,  
'Parivesh Bhawan', East Arjun Nagar,  
DELHI- 110 0032.

1.	Name of the State/Union territory	:	
2.	Name & address of the State Pollution Control	:	
3.	Board/Pollution Control Committee Number of municipal authorities responsible for management of municipal solid wastes in the State/Union territory under these rules	:	
4.	A Summary Statement on progress made by municipal authorities in respect of implementation of Schedule I [rule 4(3)]	:	Please attach as Annexure-I
5.	A Summary Statement on progress made by municipal authorities in respect of implementation of Schedule II [rules 6(1) and (3), 7(1)]	:	Please attach as Annexure-II
6.	A Summary Statement on progress made by municipal authorities in respect of implementation of Schedule III [rules 6(1) and (3), 7(2)]	:	Please attach as Annexure-III
7.	A summary statement on progress made by municipal authorities in respect of implementation of Schedule IV [rules 6(1) and (3), 7(2)]	:	Please attach as Annexure-IV
Date: _____		Chairman or the Member Secretary	
Place : _____		State Pollution Control Board/ Pollution Control Committee	

Form - V

[see rule 9]

## Accident reporting

1.	Date and time of accident	:	
2.	Sequence of events leading to accident	:	
3.	The waste involved in accident	:	
4.	Assessment of the effects of the accidents on human health and the environment	:	
5.	Emergency measures taken	:	
6.	Steps taken to alleviate the effects of accidents	:	
7.	Steps taken to prevent the recurrence of such an accident	:	
Date : .....		Signature : .....	
Place : .....		Designation : .....	

V. Rajagopalan, Jt. Secy.  
[F.No.17-2/95-HSMD]



केन्द्रीय प्रदूषण नियंत्रण बोर्ड  
CENTRAL POLLUTION CONTROL BOARD  
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)  
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

No.B-29012/ESS(CPA)/2015-16/

March 07, 2016

To

The Chairman  
All the State Pollution Control Boards / Pollution Control Committees  
( List Attached)

**SUB: MODIFIED DIRECTIONS UNDER SECTION 18(1)(b) OF THE WATER (PREVENTION & CONTROL OF POLLUTION) ACT, 1974 and THE AIR (PREVENTION & CONTROL OF POLLUTION) ACT, 1981 REGARDING HARMONIZATION OF CLASSIFICATION OF INDUSTRIAL SECTORS UNDER RED / ORANGE / GREEN / WHITE CATEGORIES.**

WHEREAS, under section 16 (2)(b) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(c) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the Central Pollution Control Board (CPCB), constituted under the Water (Prevention and Control of Pollution) Act, 1974, is to coordinate activities of the State Pollution Control Boards ( SPCBs) and Pollution Control Committees (PCCs); and

WHEREAS, under section 16 (2)(c) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(d) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the CPCB is to provide technical assistance and guidance to SPCBs and PCCs; and

WHEREAS, it was brought to the notice of CPCB, that different SPCBs /PCCs were following different criteria for classification of industrial sectors under Red/Orange/ Green category and that classification was being used by the SPCBs/PCCs for grant of consents to industries and for Inventorization / surveillance of industries.

WHEREAS, the issue regarding classification of industries was deliberated upon in the 56<sup>th</sup> Conference of Chairmen & Member Secretaries of CPCB & SPCBs/PCCs held on August 31, 2010 and a working group comprising of representatives from SPCBs & CPCB was constituted to prepare a consolidated list of industrial sectors falling under Red/Orange/Green category to bring uniformity in classification of industrial sectors across the country;

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष/Tel. : 43102030, फ़ैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल/e-mail : cpcb@nic.in वेबसाइट/Website : www.cpcb.nic.in

WHEREAS, the report prepared by the Working Group was discussed in the 57<sup>th</sup> Conference of Chairmen & Member Secretaries of CPCB & SPCBs/PCCs held in Delhi on September 15, 2011, wherein some modifications were proposed;

WHEREAS, the final report of the working group was prepared, incorporating the suggestions/observations made in the 57<sup>th</sup> Conference of Chairmen and Member Secretaries of CPCB & SPCBs/PCCs and in exercise of the powers delegated to the Chairman, CPCB under Section 18(1)(b) of the Water Act, 1974, following directions were issued for compliance to all SPCBs/PCCs to maintain uniformity in categorization of industries as red, orange and green as per list finalized by CPCB, which identified 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green':

a). To maintain uniformity in categorization of industries under Red/ Orange/Green category, the SPCBs /PCCs shall adopt the list as finalized by CPCB based on the recommendations of that Working Group for grant of Consent, inventorization of industries under Red, Orange and Green categories and other related activities.

(b). The SPCBs/PCCs shall revise the list of Red, Orange and Green categories of industries operating in their jurisdiction based on the criteria specified in the final report of that Working Group and submit the same to CPCB within 90 days in hard copy as well as soft copy;

WHEREAS, later-on, it was observed that the process of categorization thus far was primarily based on the size of the industries and consumption of resources and pollution due to discharge of emissions and effluents and its likely impact on health was not considered as primary criteria;

WHEREAS, there have been proposals from the SPCBs / PCCs and industrial associations for categorization of the industrial sectors in a more pragmatic manner. The issue was discussed during the national level conference of the Environment Ministers of the States, held in New Delhi during April 06-07, 2015 and also during the Conference of the Chairmen and Member Secretaries of CPCB and SPCBs/PCCs held in New Delhi on April 08, 2015. Accordingly, a 'Working Group' comprising of the Members from Central Pollution Control Board and State Pollution Control Boards representing the States of Andhra Pradesh, Punjab, Tamilnadu, West Bengal, Madhya Pradesh and Maharashtra, was constituted to revisit the criteria of categorization of industries and suggest rationale based on pollution potential for categorization of industrial sectors and adopting it for implementation of pollution control plan;

WHEREAS, the Working Group has developed the criteria of categorization of industrial sectors based on the concept of Pollution Index which is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and consumption of resources. For this purpose the references are taken from the the Water (Prevention and Control

of Pollution ) Cess (Amendment) Act, 2003, Standards so far prescribed for various pollutants under Environment (Protection) Act , 1986 and Doon Valley Notification, 1989 issued by MoEFCC. The Pollution Index (PI) of any industrial sector is a number from 0 to 100 and the increasing value of PI denotes the increasing degree of pollution load from the industrial sector;

WHEREAS , based on the series of consultations with SPCBs, different Government / Non-government Institutions including industries and MoEFCC , the following criteria on 'Range of Pollution Index 'for the purpose of categorization of industrial sectors has been finalized:

- o Industrial Sectors having Pollution Index score of 60 and above - Red category
- o Industrial Sectors having Pollution Index score of 41 to 59 -Orange category
- o Industrial Sectors having Pollution Index score of 21 to 40 -Green category
- o Industrial Sectors having Pollution Index score incl. & upto 20 -White category

WHEREAS, based on the revised criteria, the 'Final Report on Revised Categorization of Industrial Sectors under Red/Orange/Green/White' has been evolved. The 'Categorization' is based on the relative pollution potential of the industrial sectors and grouping of the industrial sectors based on the use of raw materials, manufacturing process adopted and pollutants likely to be generated;

WHEREAS, based on relative Pollution Index, the number of industries in various categories are as under :

- i. The Red category of industrial sectors: 60
- ii. The Orange category of industrial sectors: 83
- iii. The Green category of industrial sectors: 63 and
- iv. The Newly introduced White category: 36

WHEREAS, there shall be no necessity of obtaining the Consent to Operate" for White category of industries and an intimation to concerned SPCB / PCC shall suffice;

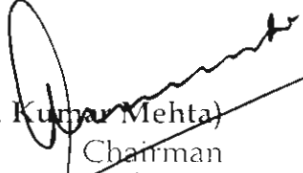
WHEREAS, the purpose of categorization is to ensure that the industry is established in a manner consistent with the environmental objectives and to prompt industrial sectors to adopt cleaner technologies, ultimately resulting in generation of no or minimum pollutants.

WHEREAS the new categorization system shall also facilitate in self-assessment by industries;

Now, therefore, in exercise of the powers delegated to the Chairman, CPCB under Section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and Section 18(1)(b) of the Air (Prevention & Control of Pollution), Act , 1981 the earlier Directions issued in June 2012 in the context of categorisation of industries as Red, Orange & Green are withdrawn with immediate effect and following 'Directions' are hereby issued for compliance by all SPCBs and PCCs :

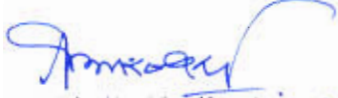
1. That the SPCBs and PCCs shall adopt the Revised Criteria of categorization of industrial sectors as detailed in table nos. F1, F2, F3 and F4 and Revised Lists of Red, Orange, Green and White categories of industrial sectors, presented at table no. G2, G3, G4 and G5 respectively, in the 'Final Report' as attached herewith immediately.
2. That all pending applications for consideration of 'Consent to Establish' and 'Consent to Operate' and future such applications shall be processed as per revised criteria.
3. That the SPCBs and PCCs will provide the list of industries identified in each category existing in the State which have been considered for grant of consents. SPCBs/PCCs will forward the list of such industries before 31.05.2016 and the same will be uploaded on the websites of respective SPCB/PCC.
4. That the 'Revised Lists of Red, Orange, Green and White category of industrial sectors' shall be used by the SPCBs and PCCs for Consent Management and inventorization of industries under Red, Orange, Green and White categories. Siting of industries shall be only in conforming areas. SPCBs / PCCs shall evolve sector specific plans for control of pollution and industrial surveillance for verifying compliance.
5. That the SPCBs and PCCs shall revise /prepare the inventory of Red, Orange, Green and White categories of industries operating in their jurisdiction based on the revised criteria specified in the Final Report and submit the same to CPCB within 90 days i.e., before 30.05.2016 in hard copy as well as soft copy.
6. That the listed category of industries or those identified later-on under different categories shall not be linked to sanction of loan / finance or bank proceedings.
7. That any further addition of any new or left-over industrial sector and their categorization which is not listed in the revised list of Red, Orange, Green and White industrial sectors, shall be done at the level of concerned SPCB /PCC following revised criteria & guidelines as detailed in the attached document and no concurrence of CPCB shall normally be required. It is further clarified that while categorizing the industries, fractional numbers shall be rounded off to nearest integer.

The SPCBs/PCCs shall acknowledge the receipt of directions and submit the 'Action Taken Report' in compliance with these directions to CPCB before 15.04.2016.

  
(Arun Kumar Mehta)  
Chairman  
7/3/16

Copy to:

1. The Chief Secretary of all the States and UTs
2. The Secretary ,  
Ministry of Micro, Small and Medium Entrepreneurs  
Udyog Bhawan, Rafi Marg, New Delhi - 110 011
3. The Secretary ,  
Ministry of Heavy Industries  
Udyog Bhawan, Rafi Marg, New Delhi - 110 011
4. The Secretary,  
Ministry of New and Renewable Energy  
Block-14, CGO Complex,  
Lodhi Road, New Delhi-110 003,
5. The Advisor(CP Division)  
Ministry of Environment ,Forests and Climate Change  
Indira Paryavaran Bhawan  
Jor Bagh Road, New Delhi - 110 003
6. All Zonal Offices of CPCB

  
(A. B. Akolkar) 7.3.16  
Member Secretary

Final Document  
on  
Revised  
Classification  
of  
Industrial Sectors  
Under

**Red, Orange, Green and White Categories**  
(February 29, 2016)



**Central Pollution Control Board**  
Delhi

## Executive Summary

### Categorization of Industrial Sectors under Red, Orange, Green and White Category

The Ministry of Environment, Forest and Climate Change (MoEFCC) had brought out notifications in 1989, with the purpose of prohibition/ restriction of operations of certain industries to protect ecologically sensitive Doon Valley. The notification introduced the concept of categorization of industries as " Red", "Orange "and "Green" with the purpose of facilitating decisions related to location of these industries. Subsequently, the application of this concept was extended in other parts of the country not only for the purpose of location of industries, but also for the purpose of Consent management and formulation of norms related to surveillance / inspection of industries.

The concept of categorization of industries continued to evolve and as different State Pollution Control Boards interpreted it differently, a need arose to bring about necessary uniformity in its application across the country. In order to harmonize the 'Criteria of categorization', Directions were issued by CPCB under Section 18(1)(b) of the Water ( Prevention & Control of Pollution) , Act, 1974 to all SPCBs/PCCs to maintain uniformity in categorization of industries as red, green and orange as per list finalized by CPCB, which identified 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green'.

The process of categorization thus far was primarily based on the size of the industries and consumption of resources. The pollution due to discharge of emissions & effluents and its likely impact on health was not considered as primary criteria. There was demand from the SPCBs / PCCs and industrial associations for categorization of the industrial sectors in a more transparent manner. Accordingly, the issue was discussed thoroughly during the national level conference of the Environment Ministers of the States, held in New Delhi during April 06-07, 2015 and a 'Working Group' comprising of the members from CPCB, APPCB, TNPCB, WBPCB, PPCB, MPPCB and Maharashtra PCB is constituted to revisit the criteria of categorization of industries and recommend measures for making the system transparent and rational.

The Working Group has developed the criteria of categorization of industrial sectors based on the Pollution Index which is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and consumption of resources. For this purpose the references are taken from the the Water (Prevention and Control of Pollution ) Cess (Amendment) Act, 2003, Standards so far prescribed for various pollutants under Environment (Protection) Act , 1986 and Doon Valley Notification, 1989 issued by MoEFCC. The Pollution Index PI of any industrial sector is a number from 0 to 100 and the increasing value of PI denotes the increasing degree of pollution load from the industrial sector. Based on the series of brain storming sessions among CPCB, SPCBs and MoEFCC , the following criteria on 'Range of Pollution Index 'for the purpose of categorization of industrial sectors is finalized.

- |   |                  |
|---|------------------|
| ○ Industrial Sectors having Pollution Index score of 60 and above | - Red category   |
| ○ Industrial Sectors having Pollution Index score of 41 to 59     | -Orange category |
| ○ Industrial Sectors having Pollution Index score of 21 to 40     | -Green category  |
| ○ Industrial Sectors having Pollution Index score incl.&upto 20   | -White category  |

The newly introduced White category of industries pertains to those industrial sectors which are practically non-polluting such as Biscuit trays etc. from rolled PVC sheet (using automatic vacuum forming machines), Cotton and woolen hosiers making (Dry process only without any dyeing/washing operation), Electric lamp (bulb) and CFL manufacturing by assembling only, Scientific and mathematical instrument manufacturing, Solar power generation through photovoltaic cell, wind power and mini hydel power (less than 25 MW).

The salient features of the 'Re-categorization' Exercise are as follows :

- Due importance has been given to relative pollution potential of the industrial sectors based on scientific criteria . Further, wherever possible, splitting of the industrial sectors is also considered based on the use of raw materials, manufacturing process adopted and in-turn pollutants expected to be generated.
- The Red category of industrial sectors would be 60.
- The Orange category of industrial sectors would be 83.
- The Green category of industrial sectors would be 63.
- Newly introduced White category contains 36 industrial sectors which are practically non-polluting.
- There shall be no necessity of obtaining the Consent to Operate'' for White category of industries. An intimation to concerned SPCB / PCC shall suffice.
- No Red category of industries shall normally be permitted in the ecologically fragile area / protected area.

The purpose of categorization is to ensure that the industry is established in a manner which is consistent with the environmental objectives. The new criteria will prompt industrial sectors willing to adopt cleaner technologies, ultimately resulting in generation of fewer pollutants. Another feature of the new categorization system lies in facilitating self-assessment by industries as the subjectivity of earlier assessment has been eliminated. This 'Re-categorization' is a part of the efforts, policies and objective of present government to create a clean & transparent working environment in the country and promote the Ease of Doing Business.

Other similar efforts include installation of Continuous Online Emissions/ Effluent Monitoring Systems in the polluting industries, Revisiting of the CEPI (Comprehensive Environment Pollution Index) concept for assessment of polluted industrial clusters, Revision of existing industrial Emission/Effluent discharge standards, initiation of special drive on pollution control activities in Ganga River basin and many more in coming future.

-----

## Revised Criteria of Categorization of Industries

“Securing industrial pollution control in accordance with the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 by linking with categorization of industries, consent management and vigilance – ‘In context of Red, Orange, Green and White categories of industries”

### A: Genesis of Categorization:

- The Ministry of Environment, Forest and Climate Change (MoEFCC) had brought out notifications, which inter-alia refers to Prohibition/ Restriction on operation of industries to protect ecologically sensitive areas or areas of specific importance. This has for the first time brought the concept of categorization of industries to “Red”, “Orange “and “Green” and restrict their operation in certain areas of importance. Therefore, it is at-once interpreted that Red, Orange and Green categorization is linked with location specific needs.
- The notification of MoEF was first brought on 2<sup>nd</sup> February,1989 in case of “Restriction on location of industries, mining operations and other developmental activities in Doon Valley in “Uttarakhand” and thereafter another notification on 24<sup>th</sup> February 1999 regarding restriction on the setting up of industries in Dahanu Taluka in Maharashtra. The categorization had been made mainly on the basis of size of the industries, man power and consumption of resources.
- However, in other parts of the country, there have been variations in context to the classification of industries under Red, Orange and Green categories. SPCBs / PCCs were following their own criteria in different States thereby creating confusion.
- In order to harmonize the ‘Criteria of categorization’, a ‘Working Group’ was formed as per resolution passed during the 57<sup>th</sup> Conference of the Chairmen & Member Secretaries of CPCB and SPCBs. Based on the recommendations of the Working Group, Directions dated 4/6/2012 under Section 18(1)(b) of the Water

(Prevention & Control of Pollution), Act, 1974 were issued to all SPCBs/PCCs with the effects to maintain uniformity in categorization of industries as red, green and orange as per list finalized by the Working Group. This indicative list included 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green'. However, these identified categories have not been assigned with scores as per existing criteria/ or any new criteria

**B: Categorization criteria used by SPCBs/PCCs:**

SPCBs and PCCs use the criteria of Red, Orange and Green categories for consent management and vigilance purposes for carrying out inspections to verify compliance to the stipulated standards. However the above categorization do not emphasize on sector-specific plan for control of pollution in accordance with priority based on pollution index.

**C: Gap in the process:**

1. The categorization has been made mainly on the basis of size of the industries and consumption of resources. The pollution due to discharge of emissions & effluents and its impact on health was not considered as primary criteria.
2. Categorization was on random basis, no scoring system was adopted.

**D: Resolutions made during National Level Conferences**

The issue was discussed thoroughly during the following national level conferences held in New Delhi:

- Conference of the Environment Ministers of Central Government and State Governments during April 06-07, 2015
- 59<sup>th</sup> Conference of Chairmen & Member Secretaries of Pollution Control Boards / Pollution Control Committees held on April 08, 2015

Accordingly following resolutions were made during the Conferences:

1. A 'Working Group' comprising of the members from CPCB, APPCB, TNPCB, WBPCB, PPCB, MPPCB and Maharashtra PCB is constituted.
2. This WG shall revisit the categorization of industries that is based on pollution index criteria & environmental issues such as generation of emission, effluent and hazardous wastes.
3. The categorization will be done on the basis of composite score (0-100 marks) of Pollution Index given in accordance with the following weightage.

Air Pollution Score based on parameters namely PM, CO, NO <sub>x</sub> , SO <sub>x</sub> , HMs, Benzene, Ammonia and other toxic parameters relevant to the industry.	40 Marks
Water Pollution Score based on parameters namely pH, TSS, NH <sub>3</sub> -N, BOD, Phenol and other toxic pollutants relevant to the industry.	40 Marks
Hazardous wastes (land fillable, incinerable, recyclable) as generated by the industry.	20 Marks
<p>Note :</p> <ul style="list-style-type: none"> <li>• Parameters to be decided on the basis of the nature of the wastes generating from the industrial sector.</li> <li>• Industries having only either water pollution or air pollution, the score will be normalized wrt 100.</li> </ul>	

4. Based on the score of the Pollution Index, following categorization be made :
  - Type of industries, if scores 60 and above be categorized as Red
  - Type of industries, if scores from 30 to 59 be categorized as Orange
  - Type of industries, if scores from 15 to 29 be categorized as Green
  - Type of industries, if less than 15 be categorized as White or non-polluting industry.
5. SPCBs/PCCs may issue consent to the industries
  - Red category of industries for 5 years.
  - Orange category of industries for 10 years.
  - Green category of industries for 15 years.
  - No necessity of consent for non-polluting industries.
6. No red categories of industries will be permitted to establish in eco-sensitive areas and protected areas.

### **E: Follow-up Actions made on the Resolutions :-**

- Accordingly, a Committee comprising the Chairmen of CPCB, APPCB, TNPCB, MPPCB, MPCB, PPCB, WBPCB and MS, CPCB was constituted vide CPCB OM dated

23.04.2015 to review & classify industrial sectors into different categories based on criteria of respective pollution potential.

- The categorization is made on the basis of following:
  - Quality of emissions (air pollutants) generated
  - Quality of effluents ( water pollutants) generated
  - Types of hazardous wastes generated
  - Consumption of resources
  
- Reference is taken from the following :
  - The Water (Prevention and Control of Pollution ) Cess Act, 1977
  - Standards so far prescribed for various pollutants under the Environment (Protection) Act , 1986
  - Doon Valley Notification, 1989 issued by MoEF.

#### **F : Scoring Methodology :**

The details on the scoring methodology in respect of the aforesaid 3 components is presented in the following tables F-1 to F-4 .

**Table F-1 : Water Pollution Scoring Methodology**

Sl. No.	Activity / Types of Discharges	Score
Part A : Score W1 : Score based on types of expected criteria water-pollutants present in industrial processes waste waters. <b>Maximum of the following seven categories is to be taken.</b>		
W11	Waste-water which is polluted and the pollutants are - <ul style="list-style-type: none"> <li>• not easily biodegradable ( very high strength waste waters having BOD &gt; 5000 mg/l ); or</li> <li>• toxic; or</li> <li>• both toxic and not easily biodegradable.</li> </ul> (Presence of criteria water pollutants having prescribed standard limits up-to 10 mg/l or having BOD > 5000 mg/l). For details appendix 1 may be referred)	30
W12	Non-toxic high strength polluted waste-water having BOD in the range of 1000-5000 mg/l and the pollutants are biodegradable. <p>(Presence of criteria water pollutants having prescribed standard limits from 11 mg/l to 250 mg/l and having BOD strength in the range of 1000-5000 mg/l) . For details appendix 1 may be referred)</p>	25
W13	Non toxic- polluted waste-water having BOD below 1000 mg/l and the pollutants are easily biodegradable. <p>(Presence of criteria water pollutants having prescribed standard limits from 11mg/l to 250 mg/l and having BOD strength below 1000 mg/l) . For details appendix 1 may be referred)</p>	20
W14	Waste-water generated from the chemical processes and which is polluted due to presence of high TDS ( total dissolved solids) of inorganic nature. <p>(Presence of criteria water pollutants having prescribed standard limits more than 250 mg/l. For details appendix 1 may be referred)</p>	15
W15	Waste-water generated from the physical unit operations / processes and which is polluted due to presence of TDS (total dissolved solids) of inorganic nature and of natural origin like fresh-water RO rejects, boiler blow-downs, brine solution rejects etc. <p>(Presence of criteria water pollutants having prescribed standard limits more than 250 mg/l. For details appendix 1 may be referred)</p>	12
W16	Non-toxic polluted waste-water from those units which are: <ul style="list-style-type: none"> <li>• Having the overall waste-water generation less than 10 KLD and</li> <li>• The pollutants are easily bio-degradable having BOD below 200 mg/l which can be easily treated in a single stage ASP (activated</li> </ul>	12

	sludge process) based Effluent Treatment Plant. Note : This is a special category and is applicable to only those units having over-all liquid waste generation less than 10 KLD with low strength organic load.	
W17	Waste-water from cooling towers and cooling-re-circulation processes	10
Part B : Score W2 : Score based on huge discharges of any kind (Penalty Clause)		
W2	Industry having overall liquid waste generation of 100 KLD or more including industrial & domestic waste-water.	10
Overall Water Pollution Score $W = W1+W2$		

- **Water Pollutants covered under Group W11:**
  - ✓ Free available Chlorine , Total residual chlorine, Fluoride (as F), Sulphide (as S), Free Ammonical Nitrogen, Dissolved phosphates (as P), Free ammonia (as NH<sub>3</sub>), Nitrate Nitrogen, Mercury (As Hg), Selenium (as Se), Hexa-valent chromium (as Cr + 6), Lead (as Pb), Tin , Vanadium (as V), Cadmium (as Cd), Manganese (as Mn), Total chromium (as Cr), Copper (as Cu), Iron (as Fe), Nickel (as Ni), Zinc (as Zn), Benzene, Arsenic (as As), Benzo-a-pyrene, Cyanide (as CN), Phenolic compounds (as C<sub>6</sub>H<sub>5</sub>OH) , Adsorbable Organic Halogens (AOX), Boron and /or
  - ✓ BOD strength of waste water > 5000 mg/l
- **Water Pollutants covered under Group W12:**
  - ✓ Sodium Absorption Ratio (SAR) , Biochemical oxygen demand (3 days at 27°C), Total Kjeldahl nitrogen (TKN), Ammonical nitrogen (as N), Suspended solids, Total nitrogen (as N), Chemical oxygen demand, Oils & grease and
  - ✓ BOD strength of waste water is in the range of 1000-5000 mg/l
- **Water Pollutants covered under Group W13:**
  - ✓ Sodium Absorption Ratio (SAR), Biochemical oxygen demand (3 days at 27°C), Total Kjeldahl nitrogen (TKN), Ammonical nitrogen (as N), Suspended solids, Total nitrogen (as N), Chemical oxygen demand and
  - ✓ BOD strength of waste water is below 1000 mg/l
- **Water Pollutants covered under Group W14 and W15:**

Chlorides as Cl, Colour , Total dissolved solids (TDS - Inorganic)
- **Water Pollutants covered under Group W16**
  - ✓ BOD strength of waste water is below 200 mg/l and overall discharge is less than 10 KLD.

Table F-2 : Air Pollution Score

Sl. No.	Air Pollutants Group	'Range of Prescribed Standard' of criteria pollutants	Marks
Part 1 : Score A1 = Score based on types of expected criteria Air Pollutants present in the emissions . Maximum of the following seven categories is to be taken. For details appendix 2 may be referred.			
1	Group A1A	Presence of criteria air pollutants having prescribed standard limits up to 2 mg/Nm <sup>3</sup>	30
2	Group A1B	Presence of criteria air pollutants having prescribed standard from 3 to 10 mg/Nm <sup>3</sup>	25
3	Group A1C	Presence of criteria air pollutants having prescribed standard from 11 to 50 mg/Nm <sup>3</sup>	20
4	Group A1D	Presence of criteria air pollutants having prescribed standard from 51 to 250 mg/Nm <sup>3</sup>	15
5	Group A1E	Presence of criteria air pollutants having prescribed standard from 251 mg/Nm <sup>3</sup> & above.	10
6	Group A1F	<ul style="list-style-type: none"> <li>• Generation of fugitive emissions of Particulate Matters which are:               <ul style="list-style-type: none"> <li>○ Not generated as a result of combustion of any kind of fossil-fuel.</li> <li>○ Generated due to handling / processing of materials without involving the use of any kind of chemicals.</li> <li>○ Which can be easily contained / controlled with simple conventional methods</li> </ul> </li> </ul>	10
7	Group A1G	<ul style="list-style-type: none"> <li>• Generation of Odours which are :               <ul style="list-style-type: none"> <li>○ Generated due to application of binding gums / cements / adhesives / enamels</li> <li>○ Which can be easily contained / controlled with simple conventional methods</li> </ul> </li> </ul>	10
Part 2 : Score A2 = Score based on consumption of fuels and technologies required for air pollution control :			
6	Group A2F1	<ul style="list-style-type: none"> <li>• All such industries in which the daily consumption of coal/fuel is more than 24 MT/day and the particular (Particulate/gaseous/process) emissions from which can be controlled only with high level equipments / technology like ESPs, Bag House Filters, High Efficiency chemical wet scrubbers etc.</li> </ul>	10
7	Group A2F2	<ul style="list-style-type: none"> <li>• All such industries in which the daily consumption of coal/fuel is from 12 MT/day to 24 MT/day and the particular (Particulate/gaseous/process) emissions from which can be controlled with suitable proven technology.</li> </ul>	5
Overall Air Pollution Score - A = A1 + A2			

- Air pollutants covered under Group A1A:  
Cd+Th, Dioxins & Furans, Mercury, Asbestos
- Air Pollutants covered under Group A1B:  
HF, Nickel+ Vanadium, HBr, Manganese, Lead, H<sub>2</sub>S, P<sub>2</sub>O<sub>5</sub> as H<sub>3</sub>PO<sub>4</sub>
- Air Pollutants covered under Group A1C:  
Chlorine, Pesticide compounds, CH<sub>3</sub>Cl, TOC, Total Fluoride, Hydrocarbons, NH<sub>3</sub>, HCL vapour & Mist, H<sub>2</sub>SO<sub>4</sub> Mist, SO<sub>2</sub>
- Air Pollutants covered under Group A1D:  
CO, PM, CO, NO<sub>x</sub>
- Air Pollutants covered under Group A1E:  
NO<sub>x</sub> with liquid-fuel, SO<sub>2</sub> with liquid-fuel

**Table F-3: Hazardous Waste Generation Score**

Sl.No.	Types of Hazardous Waste Generated as per Schedule 1 / Schedule 2 of Hazardous Waste ( Management, Handling & Trans-boundary Movement) Rules , 2008 . <b>Maximum of the following four categories is to be taken</b>	Score
HW1	<ul style="list-style-type: none"> <li>• Land disposable HW which require special care &amp; treatment for stabilization before disposal.</li> </ul>	20
HW2	<ul style="list-style-type: none"> <li>• Incinerable HW</li> </ul>	15
HW3	<ul style="list-style-type: none"> <li>• Land disposable HW which doesn't require treatment &amp; stabilization before disposal.</li> <li>• High volume low effect wastes such as fly-ash, phspho-gypsum, red-mud, slags from pyro-metallurgical operations, mine tailings and ore beneficiation rejects)</li> </ul>	10
HW4	<ul style="list-style-type: none"> <li>• Recyclable HW, which are easily recyclable with proven technologies.</li> </ul>	10

**Table F-4 : Calculation Sheet**  
Industrial Sector - .....

1. Water Pollution Score (W)			
Scores	Waste Water Category	Value	
Score on W1			
Score on W2			
Water Pollution Score = W1+W2			
2. Air Pollution Score (A)			
Scores	Air Pollutant Category	Value	
Score on A1			
Score on A2	-	-	
Air Pollution Score = A1+A2			
3. Hazardous Waste Score (HW)			
Score	HW Category	Value	
HW			
Grand Total = W + A + HW			

Note :

- Any of the industrial sector having only either air pollution (A) or water pollution (W) , the score will be normalized to 100 as per the following formula -

$$\text{Normalized Score} = \{100 \times W \text{ ( or A)}\} / 40$$

- Any of the industrial sector having air pollution (A) and water pollution (W) both but no hazardous waste generation (H) , the joint score of air & water pollution will be normalized to 100 as per the following formula -

$$\text{Normalized Score} = \{100 \times (W+A)\} / 80$$

- Any of the industrial sector having air pollution (A) & hazardous waste generation (H) but no water pollution (W), the joint score of air pollution & hazardous waste generation will be normalized to 100 as per the following formula -

$$\text{Normalized Score} = \{100 \times (A+H)\} / 60$$

- Any of the industrial sector having water pollution (W) and hazardous waste generation (H) but no air pollution (A), the joint score of water pollution & hazardous waste generation will be normalized to 100 as per the following formula -

$$\text{Normalized Score} = \{100 \times (W+H)\} / 60$$

## G : Developments :

- i. The existing Red ( 85 sectors) , Orange ( 73 sectors) and Green ( 86 sectors) i.e a total of 244 industrial sectors have been assessed as per the proposed formula by the Working Group. For this purpose, concerned Engineers / Scientists from the Member SPCBs were also involved & consulted during May 28-29, 2015.
- ii. After careful examination and consideration of the suggestions of concerned stake-holders the “Draft Document on Revised Concept of Categorization of Industrial Sectors “ was prepared by the Committee and circulated to all the SPCBs, PCCs and concerned Ministries for their information & comments. The ‘ Draft Document ’ was uploaded on the website of CPCB also for information & comments of one & all.
- iii. The matter was discussed during the 170<sup>th</sup> Board Meeting also and issues raised by the Board Members pertaining to some of the industrial sectors were clarified.
- iv. Responses were received from various concerned Ministries, SPCBs, Industrial Associations including individuals.
- v. Based on the above, final meeting was convened by the Secretary , MoEFCC with CPCB and senior officers of MoEFCC on January 06, 2016 to resolve the issues appropriately and finalize the ‘Re-categorization’. Accordingly , following modifications in the ‘Range of Pollution Index ‘for the purpose of categorization of industrial sectors were suggested :
  - Industrial Sectors having Pollution Index score of 60 and above – Red category
  - Industrial Sectors having Pollution Index score of 41 to 59 –Orange category
  - Industrial Sectors having Pollution Index score of 21 to 40 –Green category
  - Industrial Sectors having Pollution Index score incl.& upto 20 –White category
- vi. Based on the final criteria as described in v above , the final categorization is as follows :

Category of Industrial Sector	Existing Categorization	Proposed (New) categorization
Red	85	60
Orange	73	83
Green	86	63
White	---	36
Total	244	242

- vii. In the proposed categorization, some of the industrial sectors have been either deleted due to duplication or merged with similar type of sectors on account of same

characteristics of pollution generation. In a similar way, some of the industrial sectors are split into more sectors on account of variation in the raw materials / manufacturing process. As a result final totals of the existing and proposed categorization are different.

- viii. The industrial sector which doesn't fall under any of the above four categories ( Red, Orange, Green and White) , decision with regard to its categorization will be taken at the level of concerned SPCB/PCC by a committee headed by the Member Secretary , SPCB/PCC and comprising of two senior cadre Engineers / Scientists of the SPCB / PCC in accordance with the scoring-criteria specified in this document.
- ix. The summary is presented in the following Table G-1 and final lists of Red, Orange, Green and White categories of industries are presented in Tables G-2, G-3, G-4 and G-5 respectively, which are self explanatory.

Table G-1: Final Summary Table Red , Orange, Green and White Categories of Industries (16-01-16)

Sl No.	Original Categorization	Initial Nos.	Addition by Splitting into further classes	Deletion/ Shifting to foot-note due to vague term / Merger / other reasons	Re-categorization to Red	Re-categorization to Orange	Re-categorization to Green	Re-categorization to White	Check
					1	2	3	4	
									(1+2) = (3 to 7)
1	Red	85	11	7	60	26	3	Nil	96=96
2	Orange	73	2	3	Nil	51	19	2	75=75
3	Green	86	Nil	3+2=5	Nil	6	41	34	86=86
<b>Final Categorization</b>		244	13	15	<b>60 (Red )</b>	<b>83 (Orange)</b>	<b>63 (Green)</b>	<b>36 (White)</b>	<b>257 =257 (Total categories including in foot-note)</b>

Table G-2 : Final List of Red Category of Industrial Sectors

Sl No.	Orgnl Sl.No	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised Category	REMARKS
1.	38	Isolated storage of hazardous chemicals (as per schedule of manufacturing, storage of hazardous chemicals rules ,1989 as amended)									R-R	As per provisions of Rules, to be kept under Red category especially for safety purposes.
2.	4	Automobile Manufacturing (integrated facilities)	30	-	30	20	-	20	10	60	R-R	i. Such types of plants are having either one or combinations of polluting activities viz. washing, metal surface finishing operations, pickling, plating, electro-plating , phosphating, painting , heat treatment etc. ii. Some of such plants may outsource some /all of the polluting activities. In such cases, after thorough inspection of such units by concerned SPCB, re-categorization of the industry shall be made accordingly.
3.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Spent cleared metal catalyst containing copper,, Spent cleared metal catalyst containing zinc,,	30	-	30	20	-	20	10	60	R-R	All the three types of pollutants are expected.
4.	44	Manufacturing of lubricating oils ,grease and petroleum based products	20	-	20	20	-	20	20	60	R-R	Generates all sorts of pollution.
5.	66 E	DG Set of capacity > 5 MVA	-	-	-	20	5	25	-	62.5	R-R	i. Mainly air polluting. ii. DG sets consume the diesel @ 0.21 litres/hr/KVA at full load. iii. Average running is taken @ 12 hrs / day although many of the DG sets run for more than this period.
6.	31	Industrial carbon including electrodes and graphite blocks, activated carbon, carbon black	10	-	-	20	5	25	10	62.5	R-R	Mainly air polluting. Air pollution score is normalized to 100.

7.	39	Lead acid battery manufacturing(excluding assembling and charging of lead-acid battery in micro scale)	10	-	10	25	-	25	10	62.5	<b>R-R</b>	<p>i. Mainly air polluting. Air pollution scores are normalized to 100.</p> <p>ii. Lead Acid Battery manufacturing consists of various stages which broadly involve (after producing or receiving lead oxide): Paste Mixing , Grid Casting , Grid Pasting &amp; Curing , Hydro-setting, parting &amp; enveloping , Stacking, grouping &amp; inter-cell welding ,Formation.</p> <p>iii. Exposure of workmen to lead during all or any of the processes outlined above exceeds the prescribed standards if appropriate equipment in this respect is not installed at any Battery Manufacturing Unit.</p> <p>iv. All of the above processes, some more than others, involve release of lead particles or fumes into the environment. Pollution from the above processes can be grouped into two possible types, viz: (a) Lead Oxide becomes airborne and there is Particulate Pollution (b) Fumes are generated and there is Gaseous Pollution</p>
8.	62	Phosphate rock processing plant	30	-	30	20	-	20	-	62.5	<b>R-R</b>	<p>i. The separation of phosphate rock from impurities and non-phosphate materials for use in fertilizer manufacture consists of beneficiation, drying or calcining at some operations, and grinding. Phosphate rock from the mines is first sent to beneficiation units to separate sand and clay and to remove impurities. Steps used in beneficiation depend on the type of rock.</p> <p>ii. The water &amp; air pollution scores are normalized to 100.</p>

9.	66	Power generation plant [except Wind and Solar renewable power plants of all capacities and Mini Hydel power plant of capacity <25MW]	10	-	10	15	10	25		62.5	R-R	1. Mainly air polluting. It uses a mixture of biomass (agro based) and coal ( < 10 %) as a fuel. Almost, round the year operation. 2. In case of DG sets of 5 MVA & more and emissions of SO2 will take place due to use of liquid fuel. Air pollution score will be =20 + 10 = 30, Normalized score will be 75. 3. In case of 'Waste to Energy Plants' , water will be used for cooling and air score will be - 30+10 = 40.
10.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Spent catalyst containing nickel, cadmium, Zinc, copper, arsenic, vanadium and cobalt,	30	-	30	25	-	25	10	65	R-R	All the three types of pollutants are expected.
11.	67	Processes involving chlorinated hydrocarbons	30	-	30	20	-	20	15	65	R-R	Chlorinated hydrocarbons are used in the manufacture of insecticides, pesticides and organo chloro pesticides. Effluents & emissions are toxic in nature.
12.	74	Sugar ( excluding Khandsari)	20	10	30	15	10	25	10	65	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Sugar mills generate all sorts of pollution problems.
13.	22	Fibre glass production and processing (excluding moulding)	-	-	-	20	-	20	20	67	R-R	i. The use of styrene in most methods of fiberglass production causes hazardous air pollution that is harmful to breathe at excessive levels. ii. It is mainly air polluting & HW generating industry. The air pollution & HW scores are normalized to 100. iii. In case of lead containing glass, the score of A1 will be 25 and final normalized score will be 75 and shall be categorized as Red.
14.	23	Fire crackers manufacturing and bulk storage facilities	-	-	-	20	-	20	20	67	R-R	i. This is the normalized score based on air pollution & HW generation. ii. Various hazardous chemicals are used in the manufacturing process. iii. These chemicals are namely Potassium Nitrate , Potassium per-chlorate, Barium Nitrate, Aluminium compounds, Copper Chloride etc.

												iv. These chemicals are highly hazardous and cause serious diseases among the workers. especially ability of blood to carry oxygen leading to headaches, methemoglobinemia and kidney problems , skin problems, thyroid metal fume etc.
15.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Dismantlers Recycling Plants -- Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.	-	-	-	30	0	30	10	67	R-R	Mainly air polluting and hazardous waste generating. Air & HW pollution scores are jointly normalized to 100.
16.	47	Milk processes and dairy products(integrated project)	20	10	30	20	5	25	-	68.75	R-R	i. Water as well as air polluting due to use of boilers. ii. Water & air pollution scores are normalized to 100.
17.	63	Phosphorous and its compounds	30	-	30	25	-	25	-	68.75	R-R	Water pollution & air pollution containing compounds of phosphorous are expected
18.	61	Pulp & Paper ( waste paper based without bleaching process to manufacture Kraft paper)	20	10	30	15	10	25	0	68.75	R-R	Mainly water & air polluting . Water & air pollution scores are normalized to 100.
19.	13	Coke making , liquefaction, coal tar distillation or fuel gas making	30	-	30	20	-	20	20	70	R-R	It is a kind of petrochemical industry.

20.	41	Manufacturing of explosives, detonators, fuses including management and handling activities	30	-	30	20	-	20	20	70	R-R	<ul style="list-style-type: none"> <li>i. Explosives manufacture and use contribute some measure of hazardous waste to the environment.</li> <li>ii. Nitroglycerin produces several toxic byproducts such as acids, caustics, and oils contaminated with heavy metals. These must be disposed of properly by neutralization or stabilization and transported to a hazardous waste landfill.</li> <li>iii. The use of explosives creates large amounts of dust and particulate from the explosion, and, in some cases, releases asbestos, <b>lead</b>, and other hazardous materials into the atmosphere.</li> </ul>
21.	45	Manufacturing of paints varnishes, pigments and intermediate (excluding blending/mixing)	30	-	30	25	-	25	15	70	R-R	<ul style="list-style-type: none"> <li>i. The process may cause considerable emissions of volatile organic compounds (VOC). VOC contribute to the creation of ozone in the lower layers of the atmosphere (photochemical air pollution) and can present danger to health.</li> <li>ii. Dust and odour may also be a problem.</li> <li>iii. Washing of vessels will contribute waste-waters.</li> <li>iv. Large quantity of HWs are also produced.</li> </ul>
22.	56	Organic Chemicals manufacturing	30	-	30	20	-	50	20	70	R-R	Such types of industrial sectors generate all sorts of pollution.
23.	1	Airports and Commercial Air Strips	20	10	30	-	-	-	10	75	R-R	<ul style="list-style-type: none"> <li>i. The Airports are generating mainly the waste-waters.</li> <li>ii. This is the water pollution normalized score for airports having discharge more than 100 KLD.</li> <li>iii. The airports / strips having discharge less than 100 KLD will have score of 50 and hence orange category.</li> <li>iv. If the score is normalized wrt water + HW both, then all the airports will come under Orange category (score - 58.33).</li> </ul>
24.	3	Asbestos and asbestos based industries	-	-	-	30	-	30	10	75	R-R	<ul style="list-style-type: none"> <li>i. This is mainly air polluting industry.</li> <li>ii. Final score is based on air pollution score only.</li> <li>iii. Asbestos is carcinogenic and banned in many countries.</li> </ul>
25.	5	Basic chemicals and electro chemicals and its derivatives including manufacturing of acid	30	-	30	-	-	-	10	75	R-R	<ul style="list-style-type: none"> <li>i. Standards prescribed for Inorganic Chemicals are adopted.</li> <li>ii. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable.</li> </ul>

												<p>iii. Water pollution score normalized to 100 is undertaken.</p> <p>iv. The earlier Red category industrial sector namely "Hydrocyanic acid and its derivatives" is also merged under this industrial sector.</p>
26.	7	Cement	-	-	-	20	10	30	-	75	R-R	This is mainly air polluting industry & hence normalized air pollution score.
27.	9	Chlorates, per-chlorates & peroxides	30	-	30	-	-	-	-	75	R-R	<p>i. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable.</p> <p>ii. Water pollution score normalized to 100 is undertaken.</p>
28.	10	Chlorine, fluorine, bromine, iodine and their compounds	30	-	30	-	-	-	-	75	R-R	<p>i. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable.</p> <p>ii. Water pollution score normalized to 100 is undertaken.</p>
29.	16	Dyes and Dye- Intermediates	30	-	30	20	5	25	20	75	R-R	<p>i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'.</p> <p>ii. Such types of industrial sectors generate all sorts of pollution.</p>
30.	26	Health-care Establishment ( as defined in BMW Rules)	20	10	30	-	-	-	-	75	R-R	<p>i. Mainly water polluting.</p> <p>ii. The water pollution score is normalized to 100 &amp; valid for Hospitals having total waste-water generation &gt; 100 KLD.</p> <p>iii. The hospitals with incinerator will be categorized as Red irrespective of the quantity of the waste-water generation.</p> <p>iv. The hospitals having total waste-water generation less than 100 KLD and without incinerator, the normalized water pollution score will be 50 and will be categorized as Orange category.</p>
31.	29	Hotels having overall waste-water generation @ 100 KLD and more.	20	10	30	15	-	15	-	75	R-R	<p>i. Mainly water polluting. Small boiler may be installed.</p> <p>ii. The water pollution score is normalized to 100 &amp; valid for Hotels having waste-water generation &gt; 100 KLD.</p> <p>iii. The hotels having more than 20 rooms and waste-water generation less than 100 KLD and having a coal / oil fired boiler , the pollution score will be 35/40 &amp; are categorized as Orange.</p> <p>iv. The hotels having more than 20 rooms and waste-water generation less than 10 KLD and</p>

												having no-boiler & no hazardous waste generation, the pollution score will be 20 & are categorized as Green.
32.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Lead acid battery plates and other lead scrap/ashes/residues not covered under Batteries (Management and Handling) Rules, 2001. [ * Battery scrap, namely: Lead battery plates covered by ISRI, Code word "Rails" Battery lugs covered by ISRI, Code word "Rakes". Scrap drained/dry while intact, lead batteries covered by ISRI, Code word "rains".	30	-	30	25	--	25	20	75	R-R	All the three types of pollutants are generated.
33.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Integrated Recycling Plants -- Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.	30	-	30	25	-	25	20	75	R-R	All the three types of pollutants are expected.
34.	43	Manufacturing of glue and gelatin	30	10	40	20	-	20	-	75	R-R	Highly water polluting & obnoxious air polluting.
35.	49	Mining and ore beneficiation	30	10	40	15	5	20	-	75	R-R	Both air and water polluting. Score is normalized with air & water pollution.

36.	52	Nuclear power plant	10	-	10	30	-	30	15	75	R-R	<ul style="list-style-type: none"> <li>i. Mainly air polluting due to incinerator. Others - cooling water.</li> <li>ii. Air pollution score is normalized to 100.</li> </ul>
37.	58	Pesticides (technical) (excluding formulation)	30	-	30	25	-	25	20	75	R-R	<ul style="list-style-type: none"> <li>i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'.</li> <li>ii. Such types of industrial sectors generate all sorts of pollution.</li> </ul>
38.	64	Photographic film and its chemicals	30	-	30	-	-	-	-	75	R-R	<ul style="list-style-type: none"> <li>i. Silver salts and other chemicals are used in preparation. Slight quantity of effluents is generated.</li> <li>ii. Water pollution scores are normalized to 100.</li> </ul>
39.	68	Railway locomotive workshop/Integrated road transport workshop/Authorized service centers	20	10	30	-	-	-	10	75	R-R	<ul style="list-style-type: none"> <li>i. Mainly water polluting industry. Water is used in the washing of locomotives, road transport vehicles during servicing.</li> <li>ii. This score is valid for those Centers having discharge more than 100 KLD.</li> <li>iii. Service Centers having waste-water generation &lt; 100 KLD, the normalized score will be = (100*20)/40= 50.</li> </ul>
40.	84	Yarn / Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing and colouring	30	10	40	15	-	15	20	75	R-R	In this sector all sorts of pollution are generated.
41.	8	Chlor Alkali	30	10	40	20	10	30	10	80	R-R	<ul style="list-style-type: none"> <li>i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'.</li> <li>ii. Chlor-alkali units are having different section like NaOH, Cl<sub>2</sub>, SBP etc which are having toxic effluents. Additionally, fuel consumption is also on higher-side.</li> </ul>
42.	70	Ship Breaking Industries	30	-	30	30	-	30	20	80	R-R	<ul style="list-style-type: none"> <li>i. The ship-breaking industry creates numerous hazards for the coastal and marine environment.</li> <li>ii. Ship-breaking releases a large number of dangerous pollutants, including toxic waste, oil, poly-chlorinated biphenyls, and heavy metals, into the waters and sea bed.</li> <li>iii. While most of the oil is removed before a ship is scrapped, sand used to mop up the remaining oil is thrown into the sea. High concentrations of oil and grease are then found in the coastal waters, choking marine life.</li> </ul>

												iv. Solid waste strewn on the shore, 45 tonnes on any given day according to a study by the Central Pollution Control Board, also finds its way into the sea. v. Adding to the stress on coastal waters, the organic load from the thousands of workers living in cramped conditions with little or no sanitary facilities results in unacceptably high levels of BOD.
43.	53	Oil and gas extraction including CBM (offshore & on-shore extraction through drilling wells)	30	-	30	-	-	-	20	83	R-R	i. Mainly water polluting & hazardous waste generating. ii. The water pollution & HW generation scores are normalized to 100.
44.	36	Industry or process involving metal surface treatment or process such as pickling/ electroplating/paint stripping/ heat treatment using cyanide bath/ phosphating or finishing and anodizing / enamellings/ galvanizing	30	-	30	-	-	-	20	83	R-R	Mainly water polluting & toxic hazardous waste generating industry. Scores are normalized to 100.
45.	80	Tanneries	30	-	30	-	-	-	20	83	R-R	Mainly water polluting & hazardous waste generating industry. Scores are normalized to 100.
46.	65	Ports and harbour, jetties and dredging operations	30	10	40	15	10	25	20	85	R-R	This category contain all sorts of pollution.
47.	77	Synthetic fibers including rayon ,tyre cord, polyester filament yarn	30	10	40	25	10	35	10	85	R-R	This sector generates all sorts of pollution problems.
48.	81	Thermal Power Plants	30	10	40	20	10	30	15	85	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. TPP generate all sorts of pollution problems.
49.	71	Slaughter house (as per notification S.O.270(E)dated 26.03.2001)and meat processing industries, bone mill, processing of animal horn, hoofs and other body parts	25	10	35	-	-	-	-	87.5	R-R	Mainly water polluting and obnoxious odour generating industry. The water pollution score is normalized to 100
50.	2	Aluminium Smelter	30	10	40	20	10	30	20	90	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. This sector is generating all sorts of pollution i.e. air, water and HW.
51.	12	Copper Smelter	30	10	40	20	10	30	20	90	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Integrated Copper Smelters contain all sorts of

													pollution.
52.	20	Fertilizer (basic) (excluding formulation)	30	10	40	20	10	30	20	90	R-R		i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Generates all sorts of pollution.
53.	37	Iron & Steel (involving processing from ore/ integrated steel plants) and or Sponge Iron units	30	10	40	20	10	30	20	90	R-R		i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution.
54.	61	Pulp & Paper ( waste paper based units with bleaching process to manufacture writing & printing paper)	25	10	35	25	10	35	20	90	R-R		Waste paper based Pulp & Paper mills with bleaching process generate all sorts of pollution.
55.	85	Zinc Smelter	30	10	40	20	10	30	20	90	R-R		i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Integrated Zinc smelter generates all sorts of pollution problems.
56.	55	Oil Refinery (mineral Oil or Petro Refineries)	30	10	40	25	10	35	20	95	R-R		i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution.
57.	59	Petrochemicals Manufacturing ( including processing of Emulsions of oil and water )	30	10	40	25	10	35	20	95	R-R		i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution. iii. The earlier red category industrial sector namely "Processing of Emulsions of Oil & Water " is merged with this industrial sector.
58.	60	Pharmaceuticals	30	10	40	30	5	35	20	95	R-R		i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution.
59.	61	Pulp & Paper ( Large-Agro + wood) , Small Pulp & Paper ( agro based-wheat straw/rice husk)	30	10	40	25	10	35	20	95	R-R		i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Large /Small Agro based Pulp & Paper mills contribute all sorts of pollution problems.
60.	15	Distillery ( molasses / grain / yeast based)	30	10	40	-	-	-	-	100	R-R		Mainly water polluting industry. Final score is the normalized water pollution score.

Note :

i. Under the column Revised Category, the full forms of the abbreviations are as follows :

- a. R-R means original category was Red and revised category is also Red
- b. R-O means original category was Red and revised category is Orange
- c. O-O means original category was Orange and revised category is also Orange
- d. O-G means original category was Orange and revised category is Green
- e. O-W means original category was Orange and revised category is White
- f. G-O means original category was Green and revised category is Orange
- g. G-G means original category was Green and revised category is also Green
- h. G-W means original category was Green and revised category is White

ii. There are specific remarks in respect of some of the industrial sectors. These sectors are either merged with other relevant sectors or deleted due to duplication. The overall details are as follows :

Sl No.	Original Sl No.	Industry Sector	Original Category	Remarks
1	14	Common treatment and disposal facilities (CETP, TSDF, E-waste recycling, CBMWTF, effluent conveyance project, incinerator, solvent/acid recovery plant, MSW sanitary land fill site)	R	i. All such facilities are classified as Red but special category projects as these are parts of pollution control facilities. ii. In case of CETP, the categorization will depend upon the category of member industries being served.
2	18	Processing of Emulsions of Oil & Water		It is a part of Petrochemical industries. Transferred and merged with the industrial sector namely 'Petrochemicals' at Sl. No. 54.
3	27	Heavy engineering including ship building (with investment on Plant & Machineries more than Rs 10 crores)	R	Most of the pollution generating processes / operations under this category are similar to the industry category namely "Automobile Manufacturing (integrated facilities)" at Sl. No. 1 and may be referred accordingly.
4	30	Hydrocyanic acid and its derivatives	R	Have been merged with the red category industrial sector namely "Basic chemicals and electro chemicals and its derivatives including manufacturing of acid" at Sl. No. 24
5	32	Industrial estates/ parks / complexes/ areas/ export processing zones/ SEZs/ Biotech parks/ leather complex	R	The classification will depend upon the category(ies) of the industries operating / proposed to be permitted in the area. In this context, guidelines prescribed in EIA Notification, 2006 shall be followed.
6	33	Industrial inorganic gases namely- a) Chemical gas- Acetylene, hydrogen, chlorine, fluorine, ammonia, sulphur dioxide, ethylene, hydrogen-sulphide, phosphine b) Hydrocarbon gases- Methane, ethane, propane	R	These gases are generally secondary products and produced alongwith other main products. To be classified as per the main parent plant.
7	69	Reprocessing of used oils & waste oils	R	i. The industry generates mainly the air pollution and oil bearing hazardous wastes. The normalized (air pollution & HW generation score is 58.33). ii. To be deleted as already covered under HW Recyclers / Re-processors ( Used oils / Waste Oils) under Orange Category

Table G-3 : Final List of Orange Category of Industrial Sectors

Final Sl. No.	Orgnl S.No	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised category	Remarks
1.	20	Dismantling of rolling stocks ( wagons/ coaches)	--	--	--	15	--	15	10	41.67	O-O	Emissions of dust and generation of waste oils take place during dismantling. Air pollution & HW generation scores (15+10=25) are normalized to 100.
2.	5	Bakery and confectionery units with production capacity > 1 TPD. ( With ovens / furnaces)	20	--	20	15	--	15	--	43.75	O-O	
3.	10	Chanachur and ladoo from puffed and beaten rice( muri and shira) using husk fired oven	20	--	20	15	--	15	--	43.75	O-O	Normal water and air polluting.
4.	23	Coated electrode manufacturing	15	0	15	20	0	20	0	43.75	G-O	Preparation of core wire / rod, preparation of dry mix, preparation of wet mix, application of coating by extrusion, baking of coated electrodes
5.	24	Compact disc computer floppy and cassette manufacturing / Reel manufacturing	15	0	15	20	0	20	0	43.75	G-O	Generates waste-water and process emissions.
6.	24	Flakes from rejected PET bottle	20	-	20	15	-	15	-	43.75	R-O	Normal water & air pollutions are generated.
7.	30	Food and food processing including fruits and vegetable processing	20	--	20	15	--	15	--	43.75	O-O	Normal water and air polluting.
8.	40	Jute processing without dyeing	20	--	20	15	--	15	--	43.75	O-O	CPCB has notified standards for this category. Both air and water pollutions are generated.
9.	56	Manufacturing of silica gel	15	0	15	20	0	20	0	43.75	G-O	Waste-waters containing TDS and emissions of H <sub>2</sub> SO <sub>4</sub> are generated.

10.	45	Manufacturing of tooth powder, toothpaste, talcum powder and other cosmetic items	20	--	20	15	--	15	--	43.75	O-O	Both air and water pollution are generated.
11.	55	Printing or etching of glass sheet using hydrofluoric acid	15	--	15	20	--	20	--	43.75	O-O	Both air and water pollution are generated.
12.	65	Silk screen printing, sari printing by wooden blocks	20	--	20	15	--	15	--	43.75	O-O	Wash-water and PM emissions from boilers .
13.	76	Synthetic detergents and soaps(excluding formulation)	20	-	20	15	-	15	-	43.75	R-O	i. This is the score for units having generation of waste-waters less than 100 KLD. ii. The units having waste-water generation more than 100 KLD will become mainly water polluting and accordingly normalized water pollution score will be 75 and be categorized as Red.
14.	71	Thermometer manufacturing	15	--	15	20	--	20	--	43.75	O-O	Process - making glass bulb, forming reservoir in the glass tube for fluid, inserting fluid, scale marking. Use of fuel to heat the glass tubes and hydrofluoric acid to seal the scaling. Small quantities of spent acids are generated.
15.	14	Cotton spinning and weaving ( medium and large scale)	--	--	--	15	--	37.5	10	47.5	O-O	Mainly air polluting industry. Sources of air pollution (PM) are the fine particles of cotton from spinning process. Air pollution score is normalized to 100.
16.	1	Almirah, Grill Manufacturing (Dry Mechanical Process )	--	--	--	20	--	20	--	50	O-O	Air pollution due to spray painting (emissions of VOCs). Units without painting operations shall be categorized as White.

17.	2	Aluminium & copper extraction from scrap using oil fired furnace (dry process only)	--	--	--	20	--	20	10	50	O-O	i. Normalized Air pollution score. ii. Significant air pollution due to melting (emissions of SO <sub>2</sub> , PM).
18.	3	Automobile servicing, repairing and painting (excluding only fuel dispensing)	20	--	20	20	--	20	10	50	O-O	Normal water & air polluting and recyclable waste oil generating. If the waste water generation is more than 100 KLD, it will become mainly water polluting and Red category unit.
19.	4	Ayurvedic and homeopathic medicine	20	--	20	15	--	15	15	50	O-O	
20.	7	Brickfields ( excluding fly ash brick manufacturing using lime process)	--	--	--	20	--	20	--	50	O-O	Significantly air polluting.
21.	8	Building and construction project more than 20,000 sq. m built up area	20	--	20	20	--	20	--	50	O-O	1. In the pre-construction stage , it is mainly air polluting due to generation of dust ( PM ) emissions. 2. After construction, it is mainly water polluting. If the discharge is more than 100 KLD, it will be having the normalized score of 75 and be categorized as Red.
22.	6	Ceramics and Refractories	-	-	-	20	-	20	-	50	R-O	i. Mainly air polluting industry. ii. This score is for the units having coal consumption < than 12 MT/day. iii. For the units having coal consumption > 12 MT /day, the normalized air pollution score will be 62.5 and shall be categorized as Red.

23.	11	Coal washeries	15	10	25	15	-	15	-	50	R-O	<p>i. Wet washeries are mainly water polluting industry generating effluents which are having inorganic SS &amp; TDS. Additionally, air pollution due to PM emissions is also generated.</p> <p>ii. Water &amp; air pollution scores are jointly normalized to 100.</p>
24.	16	Dairy and dairy products (small scale)	20	--	20	20	--	20	--	50	O-O	Water and air polluting both.
25.	18	DG set of capacity >1MVA but < 5MVA	--	--	--	20	--	20	--	50	O-O	Mainly air polluting . air pollution score is normalized to 100.
26.	17	Dry coal processing, mineral processing, industries involving ore sintering, pelletising, grinding & pulverization	-	-	-	20	-	20	-	50	R-O	Mainly air polluting industry. Final score is the normalized air pollution score.
27.	19	Fermentation industry including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol)	20	-	20	-	-	-	-	50	R-O	<p>i. Mainly water polluting industry. This is the normalized water pollution score for units having discharge &lt; 100 KLD.</p> <p>ii. For the units having discharge &gt; 100 KLD, the normalized water pollution score will be 75 and shall be accordingly categorized as Red.</p>
28.	21	Ferrous and Non-ferrous metal extraction involving different furnaces through melting, refining, re-processing, casting and alloy-making	-	-	-	15	5	20	10	50	R-O	<p>i. Mainly air polluting.</p> <p>ii. This score is applicable to secondary production of ferrous &amp; non-ferrous metals (excluding lead) up-to 1 MT/hour production.</p>

												<p>iii. For lead, the normalized air pollution score will be = <math>(100 \times 25) / 40 = 62.5</math> and is categorized as Red.</p> <p>iv. For Induction Furnace clubbed with AOD furnace - separate calculation shall be made based on the capacity of the furnaces. In such industries, the molten metal from induction furnace is transferred to AOD furnace where other metals like manganese and nickel are added to get the metal of desired constituents. The lime and silicon are also added for reduction of the metal oxides to the base metal. the normalized air pollution score will be = <math>(100 \times 25) / 40 = 62.5</math> and is categorized as Red.</p>
29.	26	Fertilizer (granulation / formulation / blending only)	--	--	--	20	--	20	--	50	O-O	Air polluting.
30.	27	Fish feed, poultry feed and cattle feed	--	--	--	20	--	20	--	50	O-O	Obnoxious odour , H2S etc. AP score is normalized to 100
31.	28	Fish processing and packing (excluding chilling of fishes)	20	--	20	--	--	--	--	50	O-O	Mainly water polluting. WP score is normalized to 100.

32.	31	Forging of ferrous and non- ferrous metals ( using oil and gas fired furnaces)	--	--	--	20	--	20	--	50	O-O	Heating furnace. Mainly air polluting.
33.	32	Formulation/pelletization of camphor tablets, naphthalene balls from camphor/ naphthalene powders.	--	--	--	20	--	20	--	50	O-O	Mainly air polluting. Emissions of Benzene, HC are expected.
34.	33	Glass ceramics, earthen potteries and tile manufacturing using oil and gas fired kilns, coating on glasses using cerium fluorides and magnesium fluoride etc.	--	--	--	20	--	20	--	50	O-O	Mainly air polluting. Emissions of SO2 are expected.
35.	35	Gravure printing, digital printing on flex, vinyl	20	--	20	20	--	20	10	50	O-O	Waste waters , emissions of VOCs
36.	36	Heat treatment using oil fired furnace ( without cyaniding)	--	--	--	20	--	20	--	50	O-O	Mainly air polluting and noise generating. AP Score is normalized to 100.
37.	28	Hot mix plants	-	-	-	20	-	20	-	50	R-O	Mainly air polluting. Air pollution scores are normalized to 100.
38.	37	Hotels (< 3 star) or hotels having > 20 rooms and less than 100 rooms.	20	--	20	20	--	20	--	50	O-O	Mainly water polluting. WP score is normalized to 100.
39.	38	Ice cream	20	--	20	20	--	20	--	50	O-O	Wash-water and boilers / oven for pasteurization.
40.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Paint and ink Sludge/residues	-	-	-	20	0	20	0	50	R-O	Mainly air polluting. Air pollution score is normalized to 100
41.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Brass Dross ,, Copper Dross,, Copper Oxide Mill Scale,, Copper Reverts, Cake & Residues,, Waste Copper and copper alloys in	10	-	10	20	-	20	10	50	R-O	Mainly air polluting.

		dispersible form,, Slags from copper processing for further processing or refining ,, Insulated Copper Wire,, Scrap/copper with PVC sheathing including ISRI-code material namely "Druid" ,, Jelly filled Copper cables ,, Zinc Dross-Hot dip Galvanizers SLAB,, Zinc Dross-Bottom Dross,, Zinc ash/Skimming arising from galvanizing and die casting operations,, Zinc ash/Skimming/other zinc bearing wastes arising from smelting and refining,, Zinc ash and residues including zinc alloy residues in dispersible from,,											
42.	35	Industry or processes involving foundry operations	-	-	-	20	-	20	-	50	R-O	<ul style="list-style-type: none"> <li>i. This score is valid for the foundries having capacity &lt; 5 MT/hr as such units require the coal/coke @ &lt; 500 kg/hr.</li> <li>ii. The units having capacity of 5 MT/hr and more, the coal/coke consumption will be more than 500 kg/hr and the normalized score will be 62.5 and classified accordingly as Red.</li> </ul>	
43.	40	Lime manufacturing (using lime kiln)	-	-	-	20	-	20	-	50	R-O	Mainly air polluting	
44.	41	Liquid floor cleaner, black phenyl, liquid soap, glycerol mono-stearate manufacturing	20	--	20	20	--	20	--	50	O-O	Both air and water pollution are generated.	

45.	42	Manufacturing of glass	10	-	-	20	-	20	-	50	R-O	<p>i. Mainly air polluting ( melting at 1500°C and refining .</p> <p>ii. In case of lead glass , the score of A1 will be 25 and accordingly the normalized scores will be 62.5 i.e. Red .</p>
46.	43	Manufacturing of iodized salt from crude/ raw salt	12	--	12	20	--	20	--	50	O-O	Boiling in Evaporators (multiple effect evaporators), centrifuging, iodization with KIO3 mixing . Mainly air polluting. Air pollution score is normalized to 100.
47.	42	Manufacturing of mirror from sheet glass	--	--	--	20	--	20	--	50	O-O	Evaporator & furnace for heating the metal to be applied as reflector on mirror. Mainly air polluting.
48.	44	Manufacturing of mosquito repellent coil	--	--	--	20	--	20	--	50	O-O	Mainly air polluting. Toxic fumes are expected.
49.	46	Manufacturing of Starch/Sago	25	-	25	15	-	15	-	50	R-O	<p>i. Water and air polluting industry. Boiler is used for steam generation.</p> <p>ii. Water &amp; air pollution scores are normalized to 100</p>
50.	46	Mechanized laundry using oil fired boiler	20	--	20	20	--	20	--	50	O-O	Both air and water pollution are generated.
51.	47	Modular wooden furniture from particle board, MDF< swan timber etc, Ceiling tiles/ partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making ( With boiler)	--	--	--	20	--	20	--	50	O-O	1. Mainly air polluting. Boiler as well as VOCs from use of adhesives. 2. Without boiler, it will be a Green category industry.
52.	50	New highway construction project	-	-	-	20	-	20	-	50	R-O	Mainly air polluting project.

53.	51	Non-alcoholic beverages(soft drink) & bottling of alcohol/non alcoholic products	20	-	20	15	5	20	-	50	R-O	i. Both air and water polluting. Score is normalized with air & water pollution. This score is valid for industries having waste-water generation < 100 KLD. ii. For the units having waste-water generation > 100 KLD the , normalized score would be 62.5 and categorized as Red.
54.	49	Paint blending and mixing (Ball mill)	20	--	20	20	--	20	10	50	O-O	Both air and water pollution are generated.
55.	62	Paints and varnishes (mixing and blending)	20	0	0	20	0	20	0	50	G-O	Waste-waters as well as fumes of VOCs due to solvents, pigments, varnishes.
56.	51	Ply-board manufacturing( including Veneer and laminate) with oil fired boiler/ thermic fluid heater(without resin plant)	0	--	0	20	--	20	--	50	O-O	Mainly air polluting because of use of boiler. AP score is normalized to 100
57.	52	Potable alcohol ( IMFL) by blending, bottling of alcohol products	20	--	20	--	--	--	--	50	O-O	Mainly water polluting. WP score is normalized to 100.
58.	54	Printing ink manufacturing	20	--	20	20	--	20	--	50	O-O	1. Pigments, binders and solvents are used. 2. Boiler is also used. 3. Emissions of VOCs take place.
59.	70	Printing press	20	0	20	20	0	20	0	50	G-O	Colored waste-waters containing dyes and VOC emissions are generated.
60.	59	Reprocessing of waste plastic including PVC	20	--	20	20	--	20	--	50	O-O	Large quantities of wash-water and fugitive emissions are generated.
61.	61	Rolling mill (oil or coal fired) and cold rolling mill	10	--	10	20	--	20	--	50	O-O	Mainly air polluting. Air pollution score is normalized to 100. Others - cooling water and recyclable waste oils etc. are generated.
62.	67	Spray painting, paint baking, paint shipping	--	--	--	20	--	20	10	50	O-O	Mainly air polluting. Emissions of VOCs and HC are generated.

63.	72	Steel and steel products using various furnaces like blast furnace /open hearth furnace/induction furnace/arc furnace/submerged arc furnace /basic oxygen furnace /hot rolling reheated furnace	10	-	10	20	-	20	10	50	R-O	i. Mainly air polluting. In the emissions, oxides of manganese, nickel etc. are also present. ii. Air pollution score is normalized to 100.
64.	73	Stone crushers	-	-	-	20	-	20	-	50	R-O	Mainly air polluting. Air pollution score is normalized to 100.
65.	75	Surgical and medical products including prophylactics and latex	20	-	20	20	-	20	-	50	R-O	Both air as well as water polluting. Air and water pollution scores are normalized to 100.
66.	85	Tephlon based products	0	0	0	20	0	20	0	50	<b>G-O</b>	Due to spraying applications, emissions (HC) are generated
67.	70	Thermocol manufacturing ( with boiler)	--	--	--	20	--	20	--	50	O-O	Polystyrene is heated. Mainly air polluting with boiler.
68.	82	Tobacco products including cigarettes and tobacco/opium processes	20	-	20	20	-	20	-	50	R-O	Such industries generate both air as well as water pollution. These scores are normalized to 100.
69.	72	Transformer repairing/ manufacturing ( dry process only)	--	--	--	20	--	20	10	50	O-O	Mainly air polluting because of ovens, shot-blasting etc.
70.	73	Tyres and tubes vulcanization/ hot retreating	10	--	10	20	--	20	--	50	O-O	Mainly air polluting . Emissions of PM, VOCs and obnoxious odour are generated.
71.	83	Vegetable oil manufacturing including solvent extraction and refinery /hydrogenated oils	20	-	20	15	5	20	10	50	R-O	i. All sorts of pollution are generated. ii. This score is valid for plants having waste-water generation < 100 KLD. iii. If the waste-water generation is more than 100 KLD, the unit shall be classified as Red.
72.	74	Wire drawing and wire netting	20	--	20	--	--	--	--	50	O-O	Mainly water polluting. WP score is normalized to 100.

73.	21	Dry cell battery ( excluding manufacturing of electrodes ) and assembling & charging of a lead battery on micro scale	30	--	30	15	--	15	10	55	O-O	Water and air polluting both.
74.	50	Pharmaceutical formulation and for R & D purpose ( For sustained release/ extended release of drugs only and not for commercial purpose)	20	--	20	20	--	20	15	55	O-O	i. All sorts of pollution are generated. ii. R&D activities are to be shifted to Red category.
75.	78	Synthetic resins	20	-	20	20	-	20	15	55	R-O	All sorts of pollution are generated.
76.	79	Synthetic rubber excluding molding	20	-	20	20	-	20	15	55	R-O	i. Most synthetic rubber is created from two materials, styrene and butadiene. Both are currently obtained from petroleum. ii. Process is similar to a part of Petrochemical plants.
77.	9	Cashew nut processing	25	--	25	20	--	20	--	56	O-O	Normal water and air polluting.
78.	12	Coffee seed processing	25	--	25	20	--	20	--	56	O-O	Normal water & air polluting industry.
79.	57	Parboiled Rice Mills	25	-	25	20	-	20	-	56	R-O	i. Rice Mills are generating both air and water pollution. Waste-waters are having high strength in respect of BOD. ii. This is the normalized air & water pollution score for units having waste-water generation < 100 KLD and fuel consumption less than 12 MTD. iii. For units having waste-water generation > 100 KLD or fuel consumption > 12 MTD or both , the unit shall be classified as Red.

80.	29	Foam manufacturing	--	--	--	20	--	20	15	58	O-O	<p>i. Raw material is polyurethane, latex etc.</p> <p>ii. Emissions of VOCs and HAPs. CH<sub>3</sub>Cl<sub>2</sub> and similar compounds as blowing agents.</p> <p>iii. Outdated raw materials and spoiled slots are discarded as HW.</p>
81.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Used Oil – As per specifications prescribed from time to time.	10	0	10	20	0	20	15	58.33	R-O	Mainly air polluting and hazardous waste generating industry. Air pollution & HW scores are normalized to 100
82.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW( M, H& TBM) rules, 2008 - Items namely - Waste Oil ---As per specifications prescribed from time to time.	-	-	-	20	0	20	15	58.33	R-O	Mainly air polluting and hazardous waste generating industry. Air pollution & HW scores are normalized to 100.
83.	56	Producer gas plant using conventional up drift coal gasification ( linked to rolling mills glass and ceramic industry refractories for dedicated fuel supply)	--	--	--	20	--	20	15	58.33	O-O	Mainly air polluting & tar (HW) generating. SO <sub>2</sub> , CO, NO <sub>x</sub> are generated. Tar is the by-product and utilized by other industries in co-processing.

Note :

- i. Under the column Revised Category, the full forms of the abbreviations are as follows :
- R-R means original category was Red and revised category is also Red
  - R-O means original category was Red and revised category is Orange
  - O-O means original category was Orange and revised category is also Orange
  - O-G means original category was Orange and revised category is Green
  - O-W means original category was Orange and revised category is White
  - G-O means original category was Green and revised category is Orange
  - G-G means original category was Green and revised category is also Green
  - G-W means original category was Green and revised category is White

ii. There are specific remarks in respect of some of the industrial sectors. These sectors are either merged with other relevant sectors or deleted due to duplication / vague category. The overall details are as follows:

<i>Sl No .</i>	<i>Origin al Sl No.</i>	<i>Industry Sector</i>	<i>Original Categor y</i>	<i>Remarks</i>
1	24	<i>Excavation of sand from the river bed (excluding manual excavation)</i>	<i>0</i>	<i>Since such types of activities cause ecological disturbances, the instructions issued by the government from time to time be followed. To be categorized by MoEF&amp;CC.</i>
2	39	<i>Infrastructure Development Project</i>	<i>0</i>	<i>Vast variety of such projects come under such category. This is to be decided by the concerned SPCB in line of EIA Notification , 2006.</i>
3	53	<i>Power press</i>	<i>0</i>	<i>Very vague term hence deleted. Such types of general engineering units have already been covered.</i>

Table G-4 : Final List of Green Category of Industrial Sectors

Sl. No.	Orgnl Sl. No.	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised Category	Remarks
1.	2	Aluminium utensils from aluminium circles by pressing only (dry mechanical operation)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor air pollution due to some fugitive PM emissions from buffing operations.
2.	6	Ayurvedic and homeopathic medicines (without boiler)	10	--	10	--	--	--	--	25	<b>G-G</b>	Small quantities of waste-waters are generated from washing operations.
3.	8	Bakery /confectionery /sweets products (with production capacity <1tpd (with gas or electrical oven)	10	--	10	--	--	--	--	25	<b>G-G</b>	Small quantities of waste-waters are generated from washing operations.
4.	6	Bi-axially oriented PP film along with metalizing operations	10	--	10	--	--	--	--	25	<b>O-G</b>	Mainly extrusion process involving Cooling water recirculation
5.	10	Biomass briquettes (sun drying) without using toxic hazardous wastes	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor air pollution due to some fugitive PM emissions from pulverization / mixing operations.
6.	13	Blending of melamine resins & different powder, additives by physical mixing	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor air pollution due to some fugitive PM emissions from pulverization / mixing operations.
7.	15	Brass and bell metal utensils manufacturing from circles(dry mechanical operation without re-rolling facility)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor air pollution due to some fugitive PM emissions from buffing operations.
8.	16	Candy	10	--	10	10	--	10	--	25	<b>G-G</b>	Small quantities of waste-water and minor

												PM emissions are generated.
9.	17	Cardboard or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)	--	--	--	10	--	10	--	25	<b>G-G</b>	This score is valid with Small gas / electricity operated oven / furnace for making glue.
10.	18	Carpentry & wooden furniture manufacturing (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor air pollution due to some fugitive PM emissions from cutting operations.
11.	19	Cement products (without using asbestos / boiler / steam curing) like pipe ,pillar, jafri, well ring, block/tiles etc.(should be done in closed covered shed to control fugitive emissions)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor air pollution due to some fugitive PM emissions from mixing operations.
12.	20	Ceramic colour manufacturing by mixing & blending only (not using boiler and wastewater recycling process)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor air pollution due to some fugitive PM emissions.
13.	11	Chilling plant, cold storage and ice making	10	--	10	--	--	--	--	25	<b>O-G</b>	Cooling water recirculation only.
14.	13	Coke briquetting ( sun drying)	--	--	--	10	--	10	--	25	<b>O-G</b>	Mainly air polluting industry. Sources of air pollution (PM) are pulverizes and mixers. Air pollution score is normalized to 100.
15.	28	Cotton spinning and weaving (small scale)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor PM emissions from spinning process.
16.	17	Dal Mills	--	--	--	10	--	10	--	25	<b>O-G</b>	Some fugitive emissions of PM.

17.	29	Decoration of ceramic cups and plates by electric furnace	--	--	--	10	--	10	--	25	<b>G-G</b>	Fumes of enamels. Minor air pollution.
18.	19	Digital printing on PVC clothes	--	--	--	10	--	10	--	25	<b>O-G</b>	Minor emissions / odour generations are expected.
19.	25	Facility of handling, storage and transportation of food grains in bulk	--	--	--	10	--	10	--	25	<b>O-G</b>	Some fugitive emissions of PM during handling of grains.
20.	36	Flour mills (dry process)	--	--	--	10	--	10	--	25	<b>G-G</b>	Fugitive dust emissions.
21.	41	Glass , ceramic, earthen potteries, tile and tile manufacturing using electrical kiln or not involving fossil fuel kiln	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor fugitive emissions only.
22.	34	Glue from starch (physical mixing) with gas / electrically operated oven /boiler.	--	--	--	10	--	10	--	25	<b>O-G</b>	Some fugitive emissions of PM during mixing of raw materials.
23.	42	Gold and silver smithy (purification with acid smelting operation and sulphuric acid polishing operation) (using less or equal to 1 litre of sulphuric acid/ nitric acid per month)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor fumes from cleaning process.
24.	36	Heat treatment with any of the new technology like ultrasound probe , induction hardening , ionization beam, gas carburizing etc.	10	--	10	10	--	10	--	25	<b>O-G</b>	<ul style="list-style-type: none"> <li>• Cooling waters and minor heat fumes.</li> <li>• Finalization of categorization subject to field verification.</li> </ul>
25.	46	Insulation and other coated papers (excluding paper or pipe manufacturing)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor fumes due to application of poly-urethane
26.	49	Leather foot wear and leather products (excluding tanning and hide processing except cottage scale)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor fumes due to use of adhesives / gums.

27.	50	Lubricating oil, greases or petroleum based products (only blending at normal temperature)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor fumes at the time of transfers from one container to other.
28.	54	Manufacturing of pasted veneers using gas fired boiler or thermic fluid heater and by sun drying	--	--	--	10	--	10	--	25	<b>G-G</b>	1. Minor fumes due to application of gums / adhesives / pastes etc. 2. This score is valid only for gas fired boiler. 3. The units having coal fired boilers shall be categorized as Orange.
29.	59	Oil mill Ghani and extraction ( no hydrogenation / refining)	10	--	10	--	--	--	--	25	<b>G-G</b>	Small quantities of floor washings & equipments washings are generated.
30.	48	Packing materials manufacturing from non asbestos fibre, vegetable fibre yarn	--	--	--	10	--	10	--	25	<b>O-G</b>	Some fugitive emissions of PM are expected.
31.	65	Phenyl/toilet cleaner formulation and bottling	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor fumes of VOCs in the work zone
32.	67	Polythene and plastic processed products manufacturing (virgin plastic)	10	--	10	10	--	10	--	25	<b>G-G</b>	Cooling water & emissions due to mixing of raw materials.
33.	68	Poultry, Hatchery and Piggery	--	--	--	10	--	10	--	25	<b>G-G</b>	Obnoxious odour containing H <sub>2</sub> S, CH <sub>4</sub> etc. and fugitive PM emissions
34.	69	Power looms (without dye and bleaching)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor emissions of PM.
35.	71	Puffed rice (muri) (using gas or electrical heating system)	--	--	--	10	--	10	--	25	<b>G-G</b>	Minor emissions of PM.
36.	57	Pulverization of bamboo and scrap wood	--	--	--	10	--	10	--	25	<b>O-G</b>	Some fugitive emissions of PM are expected.
37.	72	Ready mix cement concrete	--	--	--	10	--	10	--	25	<b>G-G</b>	PM emissions.
38.	73	Reprocessing of waste cotton	--	--	--	10	--	10	--	25	<b>G-G</b>	PM emissions.
39.	60	Rice mill (Rice hullers only)	--	--	--	10	--	10	--	25	<b>O-G</b>	PM emissions are generated. Mainly air

													polluting. AP score is normalized to 100
40.	62	Rolling mill ( gas fired) and cold rolling mill	10	--	10	10	--	10	--	25	<b>O-G</b>		Mainly air polluting. AP score is normalized to 100
41.	75	Rubber goods industry (with gas operated baby boiler)	--	--	--	10	--	10	--	25	<b>G-G</b>		Some PM emissions and obnoxious odour.
42.	63	Saw mills	--	--	--	10	--	10	--	25	<b>O-G</b>		Mainly air polluting. PM and noise are generated.
43.	77	Soap manufacturing (hand made without steam boiling / boiler)	10	--	10	--	--	--	--	25	<b>G-G</b>		Small quantities of waste-water are generated.
44.	80	Spice grinding (upto-20 HP motor)	--	--	--	10	--	10	--	25	<b>G-G</b>		Small quantities of fugitive emissions of raw materials.
45.	66	Spice grinding (>20 hp motor)	--	--	--	10	--	10	--	25	<b>O-G</b>		Mainly air polluting. Fugitive emissions of PM.
46.	81	Steel furniture without spray painting	--	--	--	10	--	10	--	25	<b>G-G</b>		Obnoxious gases from welding as well as noise pollution.
47.	82	Steeping and processing of grains	10	--	10	--	--	--	--	25	<b>G-G</b>		Washing waters are generated.
48.	86	Tyres and tube retreating (without boilers)	--	--	--	10	--	10	--	25	<b>G-G</b>		Due to applications of binding gum / adhesives / cement, some obnoxious fumes may generate.
49.	22	Chilling plant and ice making without using ammonia	12	--	12	--	--	--	--	30	<b>G-G</b>		Cooling water and brine water circuits. Spillages / blow down may take place
50.	26	CO2 recovery	12	--	12	--	--	--	--	30	<b>G-G</b>		Normal water pollution from scrubbing action
51.	32	Distilled water ( without boiler) with electricity as source of heat	12	--	12	--	--	--	--	30	<b>G-G</b>		TDS as distillation residues

52.	45	Hotels (up to 20 rooms and without boilers)	12	--	12	--	--	--	--	30	G-G	This score is valid for hotels having overall waste-water generation less than 10 KLD.
53.	53	Manufacturing of optical lenses (using electrical furnace)	12	--	12	--	--	--	--	30	G-G	Small quantities of waste-waters containing TDS, SS are generated.
54.	58	Mineralized water	12	--	12	--	--	--	--	30	G-G	RO Rejects.
55.	68	Tamarind powder manufacturing	12	--	12	15	--	15	--	33.75	O-G	<ul style="list-style-type: none"> <li>Dried tamarind fruits - cleaned and after soaking them in water they are boiled in steam jacketed kettle for about 40-45 minutes. Then pulp is extracted in pulper and dried in drum type drier and on cooling, the final product is packed.</li> <li>Generates small quantities of waste waters and air emissions. Joint score is normalized to 100.</li> </ul>
56.	15	Cutting, sizing and polishing of marble stone	15	--	15	--	--	--	--	37.5	O-G	Mainly water polluting . Water pollution score is normalized to 100.
57.	22	Emery powder ( fine dust of sand) manufacturing	--	--	--	15	--	15	--	37.5	O-G	Air polluting. PM emissions take place during various stages of grindings of naturally occurring minerals.
58.	25	Flyash export, transport & disposal facilities	-	-	-	15	-	15	-	37.5	R-G	<ul style="list-style-type: none"> <li>This is mainly air polluting activity.</li> <li>This is the normalized score based on air pollution.</li> </ul>
59.	48	Mineral stack yard / Railway sidings	15	-	15	15	-	15	-	37.5	R-G	<ul style="list-style-type: none"> <li>Mainly air pollution due to loading, unloading, storage and transportation of the minerals.</li> </ul>

													<ul style="list-style-type: none"> <li>Waste-water generation mainly during rains only.</li> </ul>
60.	54	Oil and gas transportation pipeline	-	-	-	10	5	15	-	37.5	R-G	<ul style="list-style-type: none"> <li>Contains small gas based power plants up-to 5 MWs.</li> <li>Air pollution score is normalized to 100.</li> <li>In case , if these power plants are bigger / liquid fuel / oil based, scores will be calculated accordingly.</li> </ul>	
61.	64	Seasoning of wood in steam heated chamber	--	--	--	15	--	15	--	37.5	O-G	<p>Air pollution due to use boiler for supply of steam. Air pollution score is normalized to 100.</p>	
62.	84	Synthetic detergent formulation	--	--	--	15	--	15	--	37.5	<b>G-G</b>	<ul style="list-style-type: none"> <li>This score is valid for the industries which are not manufacturing LABSA. It is procured from outside.</li> <li>Small quantities of emissions are generated from mini boiler.</li> <li>Air pollution score is normalized to 100.</li> </ul>	
63.	69	Tea processing ( with boiler)	--	--	--	15	--	15	--	37.5	O-G	<p>With boiler, it is an orange category industry. Without boiler, it will be green category industry.</p>	

## Note :

- i. Under the column Revised Category, the full forms of the abbreviations are as follows :
- R-R means original category was Red and revised category is also Red
  - R-O means original category was Red and revised category is Orange
  - O-O means original category was Orange and revised category is also Orange
  - O-G means original category was Orange and revised category is Green
  - O-W means original category was Orange and revised category is White
  - G-O means original category was Green and revised category is Orange
  - G-G means original category was Green and revised category is also Green
  - G-W means original category was Green and revised category is White
- ii. There are specific remarks in respect of some of the industrial sectors. These sectors are either merged with other relevant sectors or deleted due to duplication. The overall details are as follows :

Sl No .	Origin al Sl No.	Industry Sector	Original Categor y	Remarks
1	47	Jobbing and Machining	G	Vague category to be deleted, as such activities have already been covered in other categories.
2	66	Reel manufacturing	G	Already covered in other categories. Hence, deleted
3	1	Assembling of acid lead batteries (up to 10 batteries per day excluding lead plate casting)	G	Already covered in Orange category. Hence, deleted
4	5	Automobile fuel outlets (only dispensing)	G	Minor air pollution due to some fugitive emissions during fuel filling operations. May be exempted from the purview of Consent management.
5	30	Diesel generator sets (15 KVA to 1 MVA)	G	<ul style="list-style-type: none"> <li>Normal operation – 12 hrs a day.</li> <li>Consumption of diesel = 1680 litres for 1 MVA DG set at full load @ 0.21 litres / KVA / hr.</li> <li>Stand-alone DG Sets having total capacity 1 MVA or less and equipped with acoustic enclosures alongwith adequate stack height may be exempted from the purview of Consent management. Higher capacity DG sets have already been covered under Red / Orange categories .</li> </ul>

Table G-5: Final List of White Category of Industries

Sl. No.	Orgnl Sl. No.	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised Category
1.	3	Assembly of air coolers /conditioners ,repairing and servicing	--	--	--	--	--	--	--	--	G-W
2.	4	Assembly of bicycles ,baby carriages and other small non motorizing vehicles	--	--	--	--	--	--	--	--	G-W
3.	7	Bailing (hydraulic press)of waste papers	--	--	--	--	--	--	--	--	G-W
4.	9	Bio fertilizer and bio-pesticides without using inorganic chemicals	--	--	--	--	--	--	--	--	G-W
5.	11	Biscuits trays etc from rolled PVC sheet (using automatic vacuum forming machines)	--	--	--	--	--	--	--	--	G-W
6.	12	Blending and packing of tea	--	--	--	--	--	--	--	--	G-W
7.	14	Block making of printing without foundry (excluding wooden block making)	--	--	--	--	--	--	--	--	G-W
8.	21	Chalk making from plaster of Paris ( only casting without boilers etc. ( sun drying / electrical oven)	--	--	--	--	--	--	--	--	G-W
9.	25	Compressed oxygen gas from crude liquid oxygen ( without use of any solvents and by maintaining pressure & temperature only for separation of other gases)	--	--	--	--	--	--	--	--	G-W
10.	27	Cotton and woolen hosiers making ( Dry process only without any dyeing / washing operation)	--	--	--	--	--	--	--	--	G-W
11.	31	Diesel pump repairing and servicing ( complete mechanical dry process)	--	--	--	--	--	--	--	--	G-W
12.	33	Electric lamp ( bulb) and CFL manufacturing by assembling only	--	--	--	--	--	--	--	--	G-W

13.	34	Electrical and electronic item assembling ( completely dry process)	--	--	--	--	--	--	--	--	<b>G-W</b>
14.	23	Engineering and fabrication units (dry process without any heat treatment / metal surface finishing operations / painting)	--	--	--	--	--	--	--	--	<b>O-W</b>
15.	35	Flavoured betel nuts production/ grinding ( completely dry mechanical operations)	--	--	--	--	--	--	--	--	<b>G-W</b>
16.	37	Fly ash bricks/ block manufacturing	--	--	--	--	--	--	--	--	<b>G-W</b>
17.	38	Fountain pen manufacturing by assembling only	--	--	--	--	--	--	--	--	<b>G-W</b>
18.	39	Glass ampules and vials making from glass tubes	--	--	--	--	--	--	--	--	<b>G-W</b>
19.	40	Glass putty and sealant ( by mixing with machine only)	--	--	--	--	--	--	--	--	<b>G-W</b>
20.	43	Ground nut decortivating	--	--	--	--	--	--	--	--	<b>G-W</b>
21.	44	Handloom/ carpet weaving ( without dying and bleaching operation)	--	--	--	--	--	--	--	--	<b>G-W</b>
22.	48	Leather cutting and stitching (more than 10 machine and using motor)	--	--	--	--	--	--	--	--	<b>G-W</b>
23.	51	Manufacturing of coir items from coconut husks	--	--	--	--	--	--	--	--	<b>G-W</b>
24.	52	Manufacturing of metal caps containers etc	--	--	--	--	--	--	--	--	<b>G-W</b>
25.	55	Manufacturing of shoe brush and wire brush	--	--	--	--	--	--	--	--	<b>G-W</b>
26.	57	Medical oxygen	--	--	--	--	--	--	--	--	<b>G-W</b>
27.	60	Organic and inorganic nutrients ( by physical mixing)	--	--	--	--	--	--	--	--	<b>G-W</b>
28.	61	Organic manure (manual mixing)	--	--	--	--	--	--	--	--	<b>G-W</b>
29.	63	Packing of powdered milk	--	--	--	--	--	--	--	--	<b>G-W</b>
30.	64	Paper pins and u clips	--	--	--	--	--	--	--	--	<b>G-W</b>
31.	58	Repairing of electric motors and generators ( dry mechanical process)	--	--	--	--	--	--	--	--	<b>O-W</b>
32.	74	Rope (plastic and cotton)	--	--	--	--	--	--	--	--	<b>G-W</b>

33.	76	Scientific and mathematical instrument manufacturing	--	--	--	--	--	--	--	--	<b>G-W</b>
34.	78	Solar module non conventional energy apparatus manufacturing unit	--	--	--	--	--	--	--	--	<b>G-W</b>
35.	79	Solar power generation through solar photovoltaic cell, wind power and mini hydel power (less than 25 MW)	--	--	--	--	--	--	--	--	<b>G-W</b>
36.	83	Surgical and medical products assembling only (not involving effluent / emission generating processes)	--	--	--	--	--	--	--	--	<b>G-W</b>

Note : Under the column Revised Category, the full forms of the abbreviations are as follows :

- a. R-R means original category was Red and revised category is also Red
- b. R-O means original category was Red and revised category is Orange
- c. O-O means original category was Orange and revised category is also Orange
- d. O-G means original category was Orange and revised category is Green
- e. O-W means original category was Orange and revised category is White
- f. G-O means original category was Green and revised category is Orange
- g. G-G means original category was Green and revised category is also Green
- h. G-W means original category was Green and revised category is White





**केन्द्रीय प्रदूषण नियंत्रण बोर्ड**  
**CENTRAL POLLUTION CONTROL BOARD**  
 (पर्यावरण एवं वन मंत्रालय, भारत सरकार)  
 (MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

No. B-29012/ESS/CPA/2015-16

19.08.2015

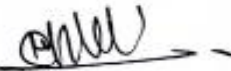
**Sub: "Harmonization of Classification of industries under Red / Orange / Green / White Categories".**

During the Conference of the Environment Ministers of States held in New Delhi during April 06-07, 2015, it was resolved to adopt pollution potential criteria for categorization of Red, Orange & Green categories of industries and that a Committee be constituted with State representatives. Further, in the 59<sup>th</sup> Conference of Chairmen & Member Secretaries of Pollution Control Boards/PCCs held in New Delhi on April 08, 2015, it was agreed to constitute a Committee to look into categorization system of industries based on their respective pollution potential index.

2. Accordingly, a Committee comprising the Chairmen of CPCB, APPCB, TNPCB, MPPCB, MPCB, PPCB, WBPCB and MS, CPCB was constituted vide CPCB OM dated 23.04.2015 to review & classify industrial sectors into different categories based on criteria of respective pollution potential indices.
3. The existing Red ( 85 sectors) , Orange ( 73 sectors) and Green ( 86 sectors) industrial sectors have been assessed as per the proposed formula by a group of Scientists from CPCB . For this purpose , concerned Engineers / Scientists from the Member SPCBs of the Committee were also involved & consulted during May28-29, 2015.
4. After careful examination and consideration of the suggestions of concerned stake-holders the "Draft Document on Revised Concept of Categorization of Industrial Sectors " is prepared by the Committee .

In this context, the Undersigned is directed to forward a copy of the " Draft Document on Revised Concept of Categorization of Industrial Sectors to all the SPCBs, PCCs and concerned Ministries for their comments. Accordingly, the same is enclosed herewith and all the SPCBs, PCCs and concerned Ministries are, hereby requested to provide their comments by 04.09.2015. The comments may kindly be sent through hard copy as well as soft copy at e-mail: [nkgupta.cpcb@nic.in](mailto:nkgupta.cpcb@nic.in) , [nkgpcb@hotmail.com](mailto:nkgpcb@hotmail.com) .

Encl : As above



[N.K. Gupta]  
Incharge - ESS

To:

1. All the State Pollution Control Boards / Pollution Control Committees
2. The Secretary, Ministry of Micro Small and Medium Enterprises, New Delhi
3. The Secretary, Ministry of Heavy Industries & Public Enterprises, New Delhi
4. The Advisor & Incharge , CP Division, MoEFCC, New Delhi
5. CPCB Website

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष / Tel. : 43102030, फैक्स / Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल / e-mail : [cpcb@nic.in](mailto:cpcb@nic.in) वेबसाइट / Website : [www.cpcb.nic.in](http://www.cpcb.nic.in)

# 777 MAHARASHTRA POLLUTION CONTROL BOARD

Phone No. 24010437 / 24020781  
Visit us at : <http://mpcb.gov.in>  
Email : rohq@mpcb.gov.in



"Your Service is our Duty"

Kalptaru Point 2<sup>nd</sup> floor,  
Sion Matunga Scheme Road  
No. 8, Infant of Sion Cercal,  
Sion (E),  
Mumbai – 400 022.

No. MPCB/RO(HQ)/SWM-Circular/1773

Date- 06/09/2021

## Circular

**Sub:** Policy decision regarding consent management for solid waste processing plants / facilities.

**Ref:** 1. CPCB's modified directions on harmonization of classifications of industrial sectors issued on Dtd. 07/03/2016, 30/04/2020, 10/07/2020 and 12/01/2021.  
2. VC conducted by CPCB on Joint Consultation issues related to Solid and Plastic Waste Management on 20.07.2020.  
3. Board resolution on consent management for solid waste processing plants / facilities in the 176<sup>th</sup> Board meeting held on 25/02/2021.

.....

CPCB has issued modified directions on harmonization of classifications of industrial sectors - under "Red", "Orange", "Green" and "White" categories based on pollution index vide 1 above. As per the modified categorization, some of the activities such as waste to energy plants(R-9), Biomass Briquettes (G-5), Reprocessing of waste plastic including PVC (O-60) and Compressed/refined biogas production from biodegradable waste (O-86) are covered under consent regime which are part of Solid waste Management.

MSW treatment includes various processes / plants such as composting plants (aerobic and vermi), biogas / bio-methanation plants, Material recovery facility (MRF), Refused Derived Fuel plant (RDF), Plastic recycling / reprocessing plants, plastic to fuel plants, waste to energy plants, Dead animal incineration plant, incinerator for sanitary waste etc. and Sanitary Landfill (SLF) site. All these plants / facilities are installed either in isolation / decentralized or in integrated manner.

The Meeting was convened through Video Conferencing held on July 20, 2020 scheduled by CPCB to deliberate upon the issues related to Solid Waste Management (SWM) & Plastic Waste Management (PWM) and instructed to Classify or categorize Solid Waste processing facilities into Red, Orange and Green category, which have not been included in CPCB's modified directions on categorization of industries issued time to time.

Board is receiving applications from Solid Waste Management Facilities and ULBs for grant of consent for installation and operation of the facility. As there is no comprehensive categorization of all Solid Waste processing operations/activities in modified CPCB categorization for Solid Waste

Management, Board is not granting the consent for Solid Waste Management Facility/operations/activities.

Presently, Board is granting authorization under The Solid Waste Management rules, 2016, for setting up and operation of solid waste management facilities.

The Board in its 176<sup>th</sup> meeting held on 25/02/2021 passed resolution on consent management for solid waste processing plants / facilities and decided to grant Consent to Establish/ Operate for Solid Waste Management facilities.

The Consent fees is charged as per Env. Dept. GoM GR dated 25.8.2011 to individual / Integrated Solid Waste Management facility depending upon type of ULB. The term of consent for Red, Orange, and Green category of Industry is one, two and three years respectively.

Local Bodies to pay the consent fees to the Board as per the statement given below.

• **Urban Local Bodies-**

Sr. No.	Urban Local Body	Fees
1.	Municipal Corporation	Rs.1,00,000/-
2.	Municipal Council Class-A	Rs.50,000/-
3.	Municipal Council Class-B	Rs.5,000/-
4.	Municipal Council Class-C	Rs.2,000/-

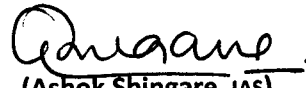
• **Other than Local Body-**

Individual Operator/ Industry installing MSW based processing plant.	Based on gross capital investment as per prevailing rules for industries.
--	---

- Delegation of powers to various authorities for grant of consent will be as per "revised delegation of powers for consent Management" issued vide Office Order No. 12, Dated- 23/12/2020.

Therefore, all Ros and SROs are hereby directed to communicate all local Bodies/ Cantonment Boards of Concern area of jurisdiction for submission of application to obtain Consent to Establish/ Operate for setting up and operation of existing as well as proposed solid waste management facilities.

This Circular will be in force with immediate effect.

  
(Ashok Shingare, IAS)  
Member Secretary

Copy Submitted for information to: -

Hon'ble Chairman, MPC Board, Mumbai.

Copy to:

1. JD (WPC)/ JD(APC)/ AS(T)/ PSO/ RO(HQ)/LO(P & L)Div- I & II, MPCB, Mumbai.
2. All Regional Officers/ All Sub Regional Officers, MPCB- for information and necessary action.
3. ASO/ EIC- for uploading on MPCB Website.